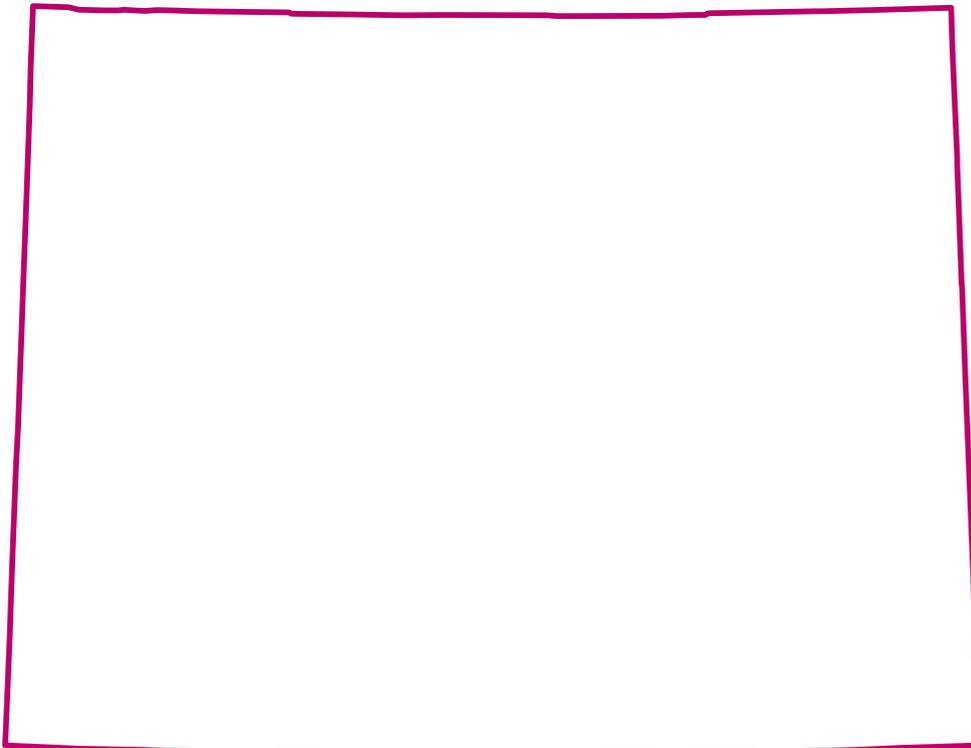


# Water Resources Data Wyoming Water Year 2002

Volume 1. Surface Water

Water-Data Report WY-02-1



# CALENDAR FOR WATER YEAR 2002

2001

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OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3							1
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8
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28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29
														30	31					

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2002

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JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30
																				31

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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JULY							AUGUST							SEPTEMBER						
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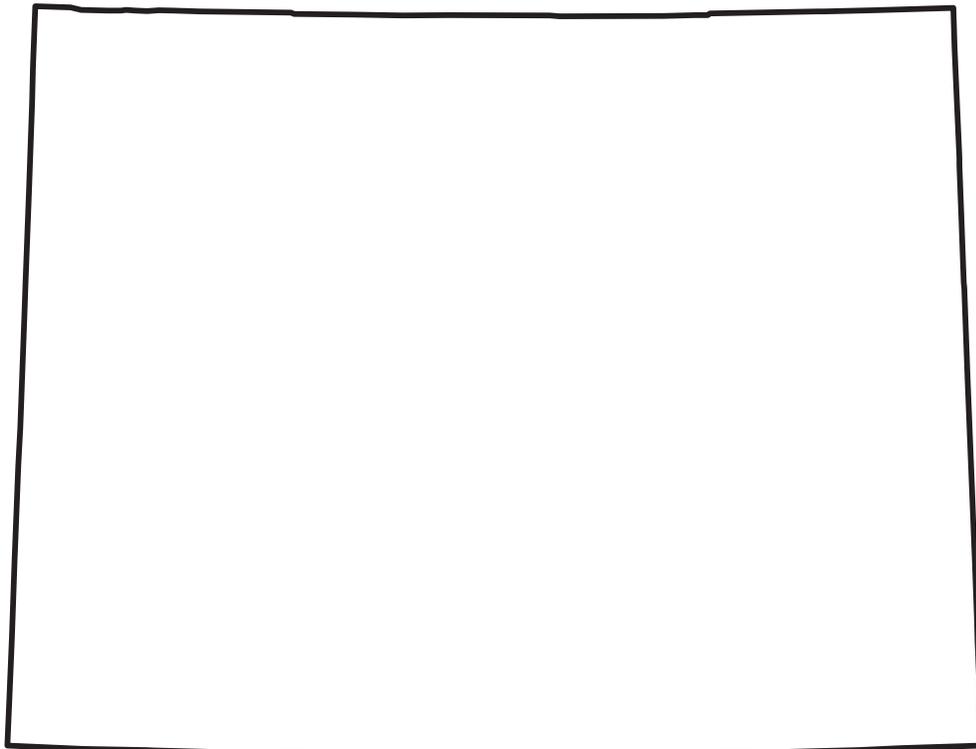
U.S. Department of the Interior  
U.S. Geological Survey

# Water Resources Data Wyoming Water Year 2002

## Volume 1. Surface Water

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

Water-Data Report WY-02-1



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



UNITED STATES DEPARTMENT OF THE INTERIOR

GALE A. NORTON, Secretary

GEOLOGICAL SURVEY

Charles G. Groat, Director

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Cheyenne, Wyoming 82001-5662

2003

## 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 administering, developing, and managing our Nation's land and water resources. These records 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 District who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the 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 Headquarters, R.E. Woodruff, Chief and from the Riverton Field Headquarters, G.A. Laidlaw, Chief. The following personnel are recognized for their significant contributions to this report:

B.M. Adams	N. Friday	K.A. Miller	P.A. Spatz
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D.C. Brost	T.J. Leman	W.J. Sadler	K.R. Watson
			J.D. Wheeler

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. The following Wyoming State Engineer's Office personnel are recognized for their significant contributions to this report:

E. Boe	W. Knapp	T. Nelson	M.L. Smalley
D. Deutz	H. Jensen	D.R. Oliver	L. Smith
D. Englert	C. LoGuidice	A. Prado	D.L. Sprangers

L. Littau and K. R. Watson typed and assembled the report; S.C. Roberts provided the illustrations.

This report was prepared under the general supervision of Myron H. Brooks, District Chief, Wyoming, and in cooperation with the State of Wyoming and with other agencies.

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## CONTENTS

	Page
Preface .....	iii
List of gaging stations, in downstream order, for which records are published .....	vi
List of discontinued and active surface-water discharge, water-quality, sediment, and biological stations ....	x
Introduction .....	1
Cooperation .....	3
Summary of hydrologic conditions .....	4
Precipitation .....	4
Streamflow .....	5
Floods .....	8
Chemical quality of stream water .....	8
Special networks and programs .....	10
Explanation of the records .....	11
Station identification numbers .....	11
Downstream order system .....	11
Latitude-longitude system .....	12
Records of stage and water discharge .....	12
Data collection and computation .....	13
Data presentation .....	13
Station manuscript .....	14
Data table of daily mean values .....	15
Statistics of monthly mean data .....	15
Summary statistics .....	15
Identifying estimated daily discharge .....	16
Accuracy of the records .....	16
Other records available .....	17
Records of surface-water quality .....	17
Classification of records .....	17
Onsite measurement and sample collection .....	17
Water temperature .....	18
Sediment .....	18
Laboratory analysis .....	19
Presentation of water-quality records .....	19
Remark codes .....	20
Quality-control samples .....	20
Blank samples .....	20
Replicate samples .....	20
Spike samples .....	21
Access to water data .....	21
Selected References .....	21
Definition of terms .....	22
Techniques of water-resources investigations of the U.S. Geological Survey .....	39
Station records, surface water .....	44
Discharge at miscellaneous sites .....	489
Annual maximum discharge at miscellaneous sites .....	489
Discharge measurements made at miscellaneous sites .....	490
Analysis of samples collected at special study and miscellaneous sites .....	492
Fremont County Weed and Pest District study .....	492
Grand Teton National Park, Eastern tributaries .....	493
Kendrick Irrigation study .....	507
National water-quality assessment program .....	509
Wyoming drought synoptic .....	517
Index .....	520

## ILLUSTRATIONS

Figure 1. Location of surface-water streamflow-gaging stations, water-quality stations, reservoir station, and stage-discharge stations, 2002 water year .....	2
2. Water year 2002 and 1971-2000 average precipitation by climate division (modified from Western Region Climate Center, 2003) .....	4
3. Twenty-four month standardized precipitation index (SPI) by climate divisions for Wyoming, October 2000 through September 2002 (modified from National Climatic Data Center, 2003b) .....	5
4a. Average annual discharge for water year 2002, and median and maximum annual average discharge for period of record for seven long-term index gaging stations in Wyoming .....	6
4b. Average monthly and annual discharge for water year 2002, and median and maximum monthly and average discharge for period of record for seven long-term index gaging stations in Wyoming .....	7
5. System for assigning identification numbers to miscellaneous sites using latitude and longitude .....	12
6. Location of surface-water sampling sites in the Yellowstone River Basin NAWQA study unit, Montana, North Dakota, and Wyoming .....	509

## TABLES

Table 1. Summary of snowpack conditions in seven major river divisions in Wyoming for water year 2002 (modified from Natural Resources Conservation Service, 2003) .....	4
2. Statistical summary of specific conductance measurements for discrete water samples at selected locations for the 2002 and 1992-2001 water years .....	9

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

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

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

	Station Number	Page
<b>MISSOURI RIVER BASIN</b>		
MADISON RIVER BASIN		
MADISON RIVER NEAR WEST YELLOWSTONE, MT (D) .....	06037500	44
GALLATIN RIVER BASIN		
GALLATIN RIVER NEAR GALLATIN GATEWAY, MT (DT) .....	06043500	46
YELLOWSTONE RIVER BASIN		
YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK (D) .....	06186500	50
SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT (D) .....	06187915	52
SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK (D) .....	06187950	54
LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK (D) .....	06188000	56
GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK (D) .....	06191000	58
YELLOWSTONE RIVER AT CORWIN SPRINGS, MT (D) .....	06191500	60
CLARKS FORK YELLOWSTONE RIVER AT MONTANA-WYOMING STATE LINE, NEAR COOKE CITY, MT (c) .....	06205450	62
CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT (D) .....	06207500	64
WIND RIVER NEAR DUBOIS, WY (D) .....	06218500	66
WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY (Dcsm) .....	06220800	68
DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY (D) .....	06221400	72
UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY (D) .....	06222100	74
DRY CREEK NEAR BURRIS, WY (D) .....	06222500	76
DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY (D) .....	06222510	78
WIND RIVER ABOVE CROW CREEK, NEAR LENORE, WY (csm) .....	06222600	80
WILLOW CREEK NEAR CROWHEART, WY (D) .....	06223500	82
BULL LAKE CREEK ABOVE BULL LAKE, WY (Dcsm) .....	06224000	84
BULL LAKE CREEK NEAR LENORE, WY (Dcsm) .....	06225000	89
WIND RIVER NEAR CROWHEART, WY (D) .....	06225500	93
WYOMING CANAL NEAR LENORE, WY (D) .....	06226000	95
WIND RIVER BELOW WYOMING CANAL DIVERSION, NEAR LENORE, WY (csm) .....	06226100	97
JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEAR, WY (D) .....	06227596	99
WIND RIVER NEAR KINNEAR, WY (Dcsm) .....	06227600	101
LEFTHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY (D) .....	06227810	105
WIND RIVER AT RIVERTON, WY (Dcsm) .....	06228000	107
LITTLE WIND RIVER:		
SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY (D) .....	06228350	111
SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY (D) .....	06228450	113
RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY (D) .....	06228510	115
NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY (D) .....	06228800	117
TROUT CREEK NEAR FORT WASHAKIE, WY (D) .....	06229900	119
POPO AGIE RIVER AT HUDSON SIDING, NEAR LANDER, WY (cm) .....	06232600	121
LITTLE POPO AGIE RIVER NEAR LANDER, WY (D) .....	06233000	122
POPO AGIE RIVER NEAR ARAPAHOE, WY (csm) .....	06233900	124
LITTLE WIND RIVER NEAR RIVERTON, WY (Dcsm) .....	06235500	126
WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY (Dscm) .....	06236100	130
FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY (D) .....	06244500	135
FIVEMILE CREEK NEAR SHOSHONI, WY (D) .....	06253000	137
WIND RIVER BELOW BOYSEN RESERVOIR, WY (Dcsm) .....	06259000	139
WIND RIVER AT WEDDING OF WATER, NEAR THERMOPOLIS, WY (csm) .....	06259050	143
BIGHORN RIVER:		
SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY (D) .....	06260400	145
BIGHORN RIVER AT LUCERNE, WY (csm) .....	06264700	147
COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY (D) .....	06265337	148
BIGHORN RIVER AT BASIN, WY (Dcsm) .....	06274300	150
GREYBULL RIVER AT MEETEETSE, WY (Dcsm) .....	06276500	153
SHELL CREEK ABOVE SHELL RESERVOIR, WY (D) .....	06278300	156
SHELL CREEK NEAR SHELL, WY (D) .....	06278500	158
BIGHORN RIVER AT KANE, WY (Dcsm) .....	06279500	160
NORTH FORK SHOSHONE RIVER BASIN:		
CROW CREEK AT MOUTH, AT PAHASKA, WY (DCSTOPc) .....	06279795	164
NORTH FORK SHOSHONE RIVER AT WAPITI, WY (D) .....	06279940	173
SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY (D) .....	06280300	175
SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY (D) .....	06281000	177
SHOSHONE RIVER ABOVE DEMARIS SPRINGS, NEAR CODY, WY (c) .....	06281700	179
SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY (D) .....	06282000	180
BITTER CREEK NEAR GARLAND, WY (cm) .....	06284500	182
SHOSHONE RIVER NEAR LOVELL, WY (Dcm) .....	06285100	183
BIGHORN RIVER NEAR ST. XAVIER, MT (D) .....	06287000	186
LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT (D) .....	06289000	188

MISSOURI RIVER BASIN--Continued

## YELLOWSTONE RIVER--Continued

## BIGHORN RIVER--Continued

## LITTLE BIGHORN RIVER--Continued

## PASS CREEK:

WEST PASS CREEK NEAR PARKMAN, WY (D) .....	06289600	190
EAST PASS CREEK NEAR DAYTON, WY (D) .....	06289820	192
PASS CREEK NEAR WYOLA, MT (D) .....	06290000	194

## TONGUE RIVER:

HIGHLINE DITCH NEAR DAYTON, WY (D) .....	06297500	196
TONGUE RIVER NEAR DAYTON, WY (D) .....	06298000	198
WOLF CREEK AT WOLF, WY (D) .....	06299500	200
EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY (D) .....	06300500	202

## WEST FORK BIG GOOSE CREEK:

CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY (D) .....	06301480	204
CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY (D) .....	06301495	206
WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY (D) .....	06301500	208
BIG GOOSE CREEK ABOVE PK DITCH, IN CANYON, NEAR SHERIDAN, WY (D) .....	06301850	210
LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY (D) .....	06303500	212
LITTLE GOOSE CREEK AT SHERIDAN, WY (cm) .....	06304500	214
GOOSE CREEK BELOW SHERIDAN, WY (cm) .....	06305500	216
GOOSE CREEK NEAR ACME, WY (D) .....	06305700	218
PRAIRIE DOG CREEK NEAR ACME, WY (Dc) .....	06306250	220
TONGUE RIVER AT STATE LINE, NEAR DECKER, MT (DCcs) .....	06306300	224
MIDDLE FORK POWDER RIVER NEAR BARNUM, WY (D) .....	06309200	230
NORTH FORK POWDER RIVER NEAR HAZELTON, WY (D) .....	06311000	232
NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY (D) .....	06311400	234
SALT CREEK NEAR SUSSEX, WY (c) .....	06313400	236
POWDER RIVER AT SUSSEX, WY (c) .....	06313500	238
POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY (c) .....	06313605	240
DEAD HORSE CREEK NEAR BUFFALO, WY (c) .....	06313700	242
CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY (DCTcs) .....	06316400	243
POWDER RIVER AT ARVADA, WY (Dc) .....	06317000	249
WILDHORSE CREEK NEAR ARVADA, WY (Dc) .....	06317020	254

## CLEAR CREEK:

ROCK CREEK NEAR BUFFALO, WY (D) .....	06320000	257
CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY (cm) .....	06320210	259
SOUTH PINEY CREEK AT WILLOW PARK, WY (D) .....	06320500	261
PINEY CREEK AT KEARNY, WY (D) .....	06323000	263
CLEAR CREEK NEAR ARVADA, WY (c) .....	06324000	265
POWDER RIVER AT MOORHEAD, MT (DCcs) .....	06324500	267
LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (Dcs) .....	06324970	273

## CHEYENNE RIVER BASIN

ANTELOPE CREEK (HEAD OF CHEYENNE RIVER), NEAR TECKLA, WY (c) .....	06364700	278
BLACK THUNDER CREEK NEAR HAMPSHIRE, WY (c) .....	06376300	280
CHEYENNE RIVER AT RIVERVIEW, WY (c) .....	06386400	282
BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY (D) .....	06392900	284
STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY (D) .....	06392950	286
CHEYENNE RIVER AT EDGEMONT, SD (D) .....	06395000	288
BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY (Dc) .....	06425720	290
CABALLO CREEK AT MOUTH, NEAR PINEY, WY (c) .....	06425900	293
DONKEY CREEK NEAR GILLETTE (D) .....	06426130	295
STONEPILE CREEK AT MOUTH NEAR GILLETTE, WY (D) .....	06426160	297
DONKEY CREEK NEAR MOORCROFT, WY (c) .....	06426400	299
BELLE FOURCHE RIVER BELOW MOORCROFT, WY (Dcm) .....	06426500	301
BELLE FOURCHE RIVER BELOW HULETT, WY (cm) .....	06428050	305
BELLE FOURCHE RIVER NEAR ALVA, WY (D) .....	06428200	307
BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE (D) .....	06428500	309

## REDWATER CREEK:

COLD SPRINGS CREEK AT BUCKHORN, WY (D) .....	06429500	311
SAND CREEK NEAR RANCH A, NEAR BEULAH, WY (D) .....	06429905	313
MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE (D) .....	06429997	315
REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE (D) .....	06430500	317

## PLATTE RIVER BASIN

NORTH PLATTE RIVER NEAR NORTHGATE, CO (D) .....	06620000	319
NORTH BRUSH CREEK NEAR SARATOGA, WY (D) .....	06622700	321
SOUTH BRUSH CREEK NEAR SARATOGA, WY (D) .....	06622900	323
ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY (D) .....	06623800	325
ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY (D) .....	06625000	327
JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY (D) .....	06627800	329
PASS CREEK NEAR ELK MOUNTAIN, WY (D) .....	06628900	331

	Station Number	Page
<b>MISSOURI RIVER BASIN--Continued</b>		
PLATTE RIVER BASIN--Continued		
NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY (Dcm) .....	06630000	333
MEDICINE BOW RIVER:		
ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY (D) .....	06632400	335
LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY (D) .....	06634620	337
MEDICINE BOW RIVER ABOVE SEMINOE RESERVOIR, NEAR HANNA, WY (D) .....	06635000	339
SWEETWATER RIVER NEAR ALCOVA, WY (D) .....	06639000	341
NORTH PLATTE RIVER BELOW CASPER, WY (c) .....	06645000	343
DEER CREEK IN CANYON, NEAR GLENROCK, WY (D) .....	06646000	346
BOX ELDER CREEK AT BOXELDER, WY (D) .....	06647500	348
NORTH PLATTE RIVER AT ORIN, WY (D) .....	06652000	350
NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY (D) .....	06652800	352
NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY (D) .....	06657000	354
LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY (D) .....	06659500	356
SAND CREEK AT COLORADO-WYOMING STATE LINE (D) .....	06659580	358
LITTLE LARAMIE RIVER NEAR FILMORE, WY (D) .....	06661000	360
LARAMIE RIVER NEAR BOSLER, WY (D) .....	06661585	362
SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY (D) .....	06664400	364
SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY (D) .....	06665790	366
WHEATLAND CREEK BELOW WHEATLAND, WY (cm) .....	06669050	368
LARAMIE RIVER NEAR FORT LARAMIE, WY (D) .....	06670500	370
NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE (Dcs) .....	06674500	372
SOUTH PLATTE RIVER:		
CROW CREEK AT 19TH STREET, AT CHEYENNE, WY (D) .....	06755960	376
CROW CREEK NEAR ARCHER, WY (cm) .....	06756060	378
<b>COLORADO RIVER BASIN</b>		
GREEN RIVER BASIN		
GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY (D) .....	09188500	380
NEW FORK RIVER:		
PINE CREEK ABOVE FREMONT LAKE, WY (D) .....	09196500	382
PINE CREEK BELOW FREMONT LAKE, WY (D) .....	09197000	384
NEW FORK RIVER NEAR BIG PINEY, WY (D) .....	09205000	386
GREEN RIVER NEAR LA BARGE, WY (D) .....	09209400	388
FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY (D) .....	09210500	390
GREEN RIVER BELOW FONTENELLE RESERVOIR, WY (Dc) .....	09211200	392
BIG SANDY RIVER NEAR FARSON, WY (D) .....	09213500	396
BIG SANDY RESERVOIR NEAR FARSON, WY (V) .....	09213700	398
BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY (D) .....	09216050	400
GREEN RIVER NEAR GREEN RIVER, WY (Dc) .....	09217000	402
GREEN RIVER BELOW GREEN RIVER, WY (c) .....	09217010	405
BLACKS FORK NEAR ROBERTSON, WY (D) .....	09217900	406
EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY (D) .....	09220000	408
BLACKS FORK NEAR LYMAN, WY (cms) .....	09222000	410
HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY (D) .....	09223000	411
HAMS FORK NEAR DIAMONDVILLE, WY (cm) .....	09224050	413
BLACKS FORK NEAR LITTLE AMERICA, WY (Dc) .....	09224700	414
HENRYS FORK NEAR MANILA, UT (D) .....	09229500	417
GREEN RIVER NEAR GLENDALE, UT (D) .....	09234500	419
YAMPA RIVER:		
LITTLE SNAKE RIVER NEAR SLATER, CO (D) .....	09253000	421
BATTLE CREEK:		
WEST FORK BATTLE CREEK:		
HAGGARTY CREEK ABOVE BELVIDERE DITCH, NEAR ENCAMPMENT, WY (c) .....	09253455	423
WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY (c) .....	09253465	424
SLATER FORK NEAR SLATER, CO (D) .....	09255000	425
LITTLE SNAKE RIVER BELOW BAGGS, WY (cs) .....	09259050	427
<b>GREAT SALT LAKE BASIN</b>		
BEAR RIVER BASIN		
BEAR RIVER NEAR UTAH-WYOMING STATE LINE (D) .....	10011500	428
BEAR RIVER AT EVANSTON, WY (D) .....	10016900	430
BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT (Dcsm) .....	10020100	432
BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT (D) .....	10020300	435
TWIN CREEK AT SAGE, WY (cs) .....	10027000	437
BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY (D) .....	10028500	438
SMITHS FORK NEAR BORDER, WY (D) .....	10032000	440
SMITHS FORK AT COKEVILLE, WY (cs) .....	10035000	442
BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY (Dcsm) .....	10038000	443
BEAR RIVER AT BORDER, WY (D) .....	10039500	446

MISSOURI RIVER BASIN--Continued

## YELLOWSTONE RIVER--Continued

## BIGHORN RIVER--Continued

## LITTLE BIGHORN RIVER--Continued

## PASS CREEK:

WEST PASS CREEK NEAR PARKMAN, WY (D) .....	06289600	190
EAST PASS CREEK NEAR DAYTON, WY (D) .....	06289820	192
PASS CREEK NEAR WYOLA, MT (D) .....	06290000	194

## TONGUE RIVER:

HIGHLINE DITCH NEAR DAYTON, WY (D) .....	06297500	196
TONGUE RIVER NEAR DAYTON, WY (D) .....	06298000	198
WOLF CREEK AT WOLF, WY (D) .....	06299500	200
EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY (D) .....	06300500	202

## WEST FORK BIG GOOSE CREEK:

CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY (D) .....	06301480	204
CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY (D) .....	06301495	206
WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY (D) .....	06301500	208
BIG GOOSE CREEK ABOVE PK DITCH, IN CANYON, NEAR SHERIDAN, WY (D) .....	06301850	210
LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY (D) .....	06303500	212
LITTLE GOOSE CREEK AT SHERIDAN, WY (cm) .....	06304500	214
GOOSE CREEK BELOW SHERIDAN, WY (cm) .....	06305500	216
GOOSE CREEK NEAR ACME, WY (D) .....	06305700	218
PRAIRIE DOG CREEK NEAR ACME, WY (Dc) .....	06306250	220
TONGUE RIVER AT STATE LINE, NEAR DECKER, MT (DCcs) .....	06306300	224
MIDDLE FORK POWDER RIVER NEAR BARNUM, WY (D) .....	06309200	230
NORTH FORK POWDER RIVER NEAR HAZELTON, WY (D) .....	06311000	232
NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY (D) .....	06311400	234
SALT CREEK NEAR SUSSEX, WY (c) .....	06313400	236
POWDER RIVER AT SUSSEX, WY (c) .....	06313500	238
POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY (c) .....	06313605	240
DEAD HORSE CREEK NEAR BUFFALO, WY (c) .....	06313700	242
CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY (DCTcs) .....	06316400	243
POWDER RIVER AT ARVADA, WY (Dc) .....	06317000	249
WILDHORSE CREEK NEAR ARVADA, WY (Dc) .....	06317020	254

## CLEAR CREEK:

ROCK CREEK NEAR BUFFALO, WY (D) .....	06320000	257
CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY (cm) .....	06320210	259
SOUTH PINEY CREEK AT WILLOW PARK, WY (D) .....	06320500	261
PINEY CREEK AT KEARNY, WY (D) .....	06323000	263
CLEAR CREEK NEAR ARVADA, WY (c) .....	06324000	265
POWDER RIVER AT MOORHEAD, MT (DCcs) .....	06324500	267
LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY (Dcs) .....	06324970	273

## CHEYENNE RIVER BASIN

ANTELOPE CREEK (HEAD OF CHEYENNE RIVER), NEAR TECKLA, WY (c) .....	06364700	278
BLACK THUNDER CREEK NEAR HAMPSHIRE, WY (c) .....	06376300	280
CHEYENNE RIVER AT RIVERVIEW, WY (c) .....	06386400	282
BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY (D) .....	06392900	284
STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY (D) .....	06392950	286
CHEYENNE RIVER AT EDGEMONT, SD (D) .....	06395000	288
BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY (Dc) .....	06425720	290
CABALLO CREEK AT MOUTH, NEAR PINEY, WY (c) .....	06425900	293
DONKEY CREEK NEAR GILLETTE (D) .....	06426130	295
STONEPILE CREEK AT MOUTH NEAR GILLETTE, WY (D) .....	06426160	297
DONKEY CREEK NEAR MOORCROFT, WY (c) .....	06426400	299
BELLE FOURCHE RIVER BELOW MOORCROFT, WY (Dcm) .....	06426500	301
BELLE FOURCHE RIVER BELOW HULETT, WY (cm) .....	06428050	305
BELLE FOURCHE RIVER NEAR ALVA, WY (D) .....	06428200	307
BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE (D) .....	06428500	309

## REDWATER CREEK:

COLD SPRINGS CREEK AT BUCKHORN, WY (D) .....	06429500	311
SAND CREEK NEAR RANCH A, NEAR BEULAH, WY (D) .....	06429905	313
MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE (D) .....	06429997	315
REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE (D) .....	06430500	317

## PLATTE RIVER BASIN

NORTH PLATTE RIVER NEAR NORTHGATE, CO (D) .....	06620000	319
NORTH BRUSH CREEK NEAR SARATOGA, WY (D) .....	06622700	321
SOUTH BRUSH CREEK NEAR SARATOGA, WY (D) .....	06622900	323
ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY (D) .....	06623800	325
ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY (D) .....	06625000	327
JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY (D) .....	06627800	329
PASS CREEK NEAR ELK MOUNTAIN, WY (D) .....	06628900	331

	Station Number	Page
<b>MISSOURI RIVER BASIN--Continued</b>		
PLATTE RIVER BASIN--Continued		
NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY (Dcm) .....	06630000	333
MEDICINE BOW RIVER:		
ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY (D) .....	06632400	335
LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY (D) .....	06634620	337
MEDICINE BOW RIVER ABOVE SEMINOE RESERVOIR, NEAR HANNA, WY (D) .....	06635000	339
SWEETWATER RIVER NEAR ALCOVA, WY (D) .....	06639000	341
NORTH PLATTE RIVER BELOW CASPER, WY (c) .....	06645000	343
DEER CREEK IN CANYON, NEAR GLENROCK, WY (D) .....	06646000	346
BOX ELDER CREEK AT BOXELDER, WY (D) .....	06647500	348
NORTH PLATTE RIVER AT ORIN, WY (D) .....	06652000	350
NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY (D) .....	06652800	352
NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY (D) .....	06657000	354
LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY (D) .....	06659500	356
SAND CREEK AT COLORADO-WYOMING STATE LINE (D) .....	06659580	358
LITTLE LARAMIE RIVER NEAR FILMORE, WY (D) .....	06661000	360
LARAMIE RIVER NEAR BOSLER, WY (D) .....	06661585	362
SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY (D) .....	06664400	364
SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY (D) .....	06665790	366
WHEATLAND CREEK BELOW WHEATLAND, WY (cm) .....	06669050	368
LARAMIE RIVER NEAR FORT LARAMIE, WY (D) .....	06670500	370
NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE (Dcs) .....	06674500	372
SOUTH PLATTE RIVER:		
CROW CREEK AT 19TH STREET, AT CHEYENNE, WY (D) .....	06755960	376
CROW CREEK NEAR ARCHER, WY (cm) .....	06756060	378
<b>COLORADO RIVER BASIN</b>		
GREEN RIVER BASIN		
GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY (D) .....	09188500	380
NEW FORK RIVER:		
PINE CREEK ABOVE FREMONT LAKE, WY (D) .....	09196500	382
PINE CREEK BELOW FREMONT LAKE, WY (D) .....	09197000	384
NEW FORK RIVER NEAR BIG PINEY, WY (D) .....	09205000	386
GREEN RIVER NEAR LA BARGE, WY (D) .....	09209400	388
FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY (D) .....	09210500	390
GREEN RIVER BELOW FONTENELLE RESERVOIR, WY (Dc) .....	09211200	392
BIG SANDY RIVER NEAR FARSON, WY (D) .....	09213500	396
BIG SANDY RESERVOIR NEAR FARSON, WY (V) .....	09213700	398
BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY (D) .....	09216050	400
GREEN RIVER NEAR GREEN RIVER, WY (Dc) .....	09217000	402
GREEN RIVER BELOW GREEN RIVER, WY (c) .....	09217010	405
BLACKS FORK NEAR ROBERTSON, WY (D) .....	09217900	406
EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY (D) .....	09220000	408
BLACKS FORK NEAR LYMAN, WY (cms) .....	09222000	410
HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY (D) .....	09223000	411
HAMS FORK NEAR DIAMONDVILLE, WY (cm) .....	09224050	413
BLACKS FORK NEAR LITTLE AMERICA, WY (Dc) .....	09224700	414
HENRYS FORK NEAR MANILA, UT (D) .....	09229500	417
GREEN RIVER NEAR GLENDALE, UT (D) .....	09234500	419
YAMPA RIVER:		
LITTLE SNAKE RIVER NEAR SLATER, CO (D) .....	09253000	421
BATTLE CREEK:		
WEST FORK BATTLE CREEK:		
HAGGARTY CREEK ABOVE BELVIDERE DITCH, NEAR ENCAMPMENT, WY (c) .....	09253455	423
WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY (c) .....	09253465	424
SLATER FORK NEAR SLATER, CO (D) .....	09255000	425
LITTLE SNAKE RIVER BELOW BAGGS, WY (cs) .....	09259050	427
<b>GREAT SALT LAKE BASIN</b>		
BEAR RIVER BASIN		
BEAR RIVER NEAR UTAH-WYOMING STATE LINE (D) .....	10011500	428
BEAR RIVER AT EVANSTON, WY (D) .....	10016900	430
BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT (Dcsm) .....	10020100	432
BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT (D) .....	10020300	435
TWIN CREEK AT SAGE, WY (cs) .....	10027000	437
BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY (D) .....	10028500	438
SMITHS FORK NEAR BORDER, WY (D) .....	10032000	440
SMITHS FORK AT COKEVILLE, WY (cs) .....	10035000	442
BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY (Dcsm) .....	10038000	443
BEAR RIVER AT BORDER, WY (D) .....	10039500	446

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

Station  
Number Page

COLUMBIA RIVER BASIN

SNAKE RIVER BASIN		
SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY (Dcs) .....	13010065	4348
SNAKE RIVER NEAR MORAN, WY (D) .....	13011000	453
PACIFIC CREEK AT MORAN, WY (D) .....	13011500	455
BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY (D) .....	13011900	457
SNAKE RIVER AT MOOSE, WY (DCTOPcs) .....	13013650	459
GROS VENTRE BASIN		
GROS VENTRE RIVER AT ZENITH, WY (D) .....	13015000	468
FISH CREEK BASIN		
GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY (D) .....	13016305	470
FISH CREEK AT WILSON, WY (D) .....	13016450	472
FLAT CREEK BASIN		
CACHE CREEK NEAR JACKSON, WY (D) .....	13018300	474
FLAT CREEK BELOW CACHE CREEK NEAR JACKSON, WY (D) .....	13018350	476
SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY (D) .....	13018750	478
SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY (D) .....	13022500	480
GREYS RIVER BASIN		
GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY (D) .....	13023000	482
SALT RIVER BASIN		
SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY (Dcsm) .....	13027500	484
HENRYS FORK BASIN		
FALLS RIVER:		
BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY (D) .....	13046680	487

**DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS**

The following surface-water, water-quality, sediment, and biological stations have been operated in and adjacent to Wyoming. The listing includes both discontinued and currently (2002) active stations. Reservoir stations also are included. Records have been collected and published for the period of record, expressed in calendar years, shown for each station. The listing is limited to those stations that have been part of systematic data-collection monitoring networks. Miscellaneous sites are not included. [--, drainage area not determined or no record available]

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b>							
<b>MADISON RIVER BASIN</b>							
Firehole River (head of Madison River) near West Yellowstone, Mont .....	06036905	282	1983-95.	--	1983-93.	1988-93.	--
Gibbon River below Canyon Creek, near West Yellowstone, Mont .....	06036950	--	--	--	--	2000.	--
Gibbon River near West Yellowstone, Mont .....	06037000	118	1913-16;1983-95.	--	1983-93.	1988-93.	--
Gibbon River at Grand Loop Road Bridge at Madison Junction, Yellowstone National Park .....	06037100	126	2001.	--	--	2001.	--
Madison River near West Yellowstone, Mont .....	06037500	420	1913-73;1983-86;1988-	--	1983-86; 1989-95.	1989-95.	--
<b>GALLATIN RIVER BASIN</b>							
Gallatin (West Gallatin) River near Gallatin Gateway (Bozeman), Mont .....	06043500	825	1889-94;1930-81;1984-	--	2001-	--	--
<b>YELLOWSTONE RIVER BASIN</b>							
Yellowstone Lake at Bridge Bay (Lake Hotel), Yellowstone National Park .....	06186000	1,006	1921a-82a.	--	--	--	--
Yellowstone River at Yellowstone Lake outlet, Yellowstone National Park .....	06186500	1,006	1922-86;1988-	--	--	--	--
Tower Creek at Tower Falls, Yellowstone National Park .....	06187500	50.4	1922-43.	--	--	--	--
Yellowstone River at Tower Junction, near Yellowstone National Park .....	06187550	1,342	1983-86.	--	--	--	--
Soda Butte Creek at Yellowstone National Park boundary, at Silver Gate, Mont .....	06187915	28.2	1999-	--	1999-2001.	1999-2001.	2000-01.
Soda Butte Creek near Lamar Ranger Station, Yellowstone National Park .....	06187950	99.0	1988-	--	1988-89.	1988-89.	--
Lamar River near Tower Falls Ranger Station, Yellowstone National Park .....	06188000	660	1922-69;1985-86;1988-	--	1985-86; 1988-92.	1988-92.	--
Blacktail Deer Creek:							
East Fork Blacktail Deer Creek near Mammoth, Yellowstone National Park .....	06188500	10.3	1937-41.	--	--	--	--
Blacktail Deer Creek near Mammoth, Yellowstone National Park .....	06189000	14.3	1937-45;1988-93.	--	1988-89.	1988-89.	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Gardner River:							
Lava Creek:							
Lupine Creek near Mammoth, Yellowstone National Park .....	06190000	4.67	1937-41.	--	--	--	--
Gardner River above Mammoth Springs outflow, near Mammoth, Yellowstone National Park.....	06190370	--	--	--	1988-93.	--	--
Mammoth Springs outflow at Mammoth, Yellowstone National Park .....	06190415	--	--	--	1988-94.	--	--
Gardner River at Mammoth (Hotel) (near Mammoth Hot Springs), Yellowstone National Park.....	06190500	200	1922-38.	--	--	--	--
Gardner River Sinkhole Diversion near Mammoth, Yellowstone National Park .....	06190525	--	--	--	1988-92.	--	--
Hot River:							
Clematic Creek at Mammoth, Yellowstone National Park .....	06190530	--	--	--	1990-92.	--	--
Hot River at Mammoth, Yellowstone National Park	06190540	--	1988-95.	--	1988-94.	--	--
Gardner River near Mammoth, Yellowstone National Park .....	06191000	202	1938-72;1984-	--	1984-85; 1987-93.	1988-93.	--
LaDuke (Corwin) Hot Springs near Corwin Springs, Mont.....	06191400	--	--	--	1987-94.	--	--
Yellowstone River at Corwin Springs (Horr), Mont .....	06191500	2,623	1889-93;1910-	--	1988-92; 1999-2001.	1985-92; 1999-2001.	2000-01.
Clarks Fork Yellowstone River at Montana-Wyoming State line, near Cooke City, Mont.....	06205450	--	--	--	1975-77; 1990-	1975-77.	--
Clarks Fork Yellowstone River (Clarks Fork) above Squaw Creek, near Painter .....	06205500	194	1945-51.	--	--	--	--
Crandall Creek:							
Lodgepole Creek at mouth, near Painter .....	06205950	8.51	1989.	--	--	--	--
Clarks Fork Yellowstone River (Clarks Fork) below							
Crandall Creek, near Painter .....	06206000	446	1929-32;1949-57.	--	--	--	--
Sunlight Creek near Painter.....	06206500	135	1929-32;1945-71.	--	--	--	--
Clarks Fork Yellowstone River above Paint Creek, near Clark.....	06206600	--	--	--	1975-77.	1975-77.	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Clarks Fork Yellowstone River (Clarks Fork) near Clark.....	06207000	912	1918-24.	--	--	--	--
Clarks Fork Yellowstone River (Clarks Fork) near Belfry (at Chance), Mont .....	06207500	1,154	1921-	--	1965-88.	1965; 1970-71; 1984.	--
Big Sand Coulee above State ditch, near Badger Basin .....	06207507	98.3	1973-77.	--	1977.	1973-77.	--
Big Sand Coulee at Wyoming-Montana State line ....	06207510	134	1973-81.	--	1976-81.	1973-81.	--
Silver Tip Creek near Belfry, Mont .....	06207540	88.0	1967-75.	--	--	--	--
Wind River (head of Bighorn River) near Dubois .....	06218500	232	1945-92; 2001-	--	1947-50; 1953; 1965-86.	1970;1980.	1973-82.
Wagon Gulch near Dubois .....	06218700	4.89	--	1961-84.	--	--	--
Warm Spring Creek near Dubois .....	06219000	85.8	1911-12a.	--	1965.	--	--
Horse Creek at Dubois .....	06219500	120	1910-12.	--	--	--	--
Wind River at Dubois.....	06220000	486	1910-12.	--	1948-49.	--	--
East (North) Fork Wind River near Dubois .....	06220500	427	1950-57;1975-97.	--	1975-86; 1990.	1975-86.	--
Wind River above Red Creek, near Dubois .....	06220800	1,073	1990-	--	1986-92; 2000-02.	2000-02.	2000-02.
Red Creek near Dubois .....	06221000	--	1909a.	--	--	--	--
Wind River tributary near Burris .....	06221200	4.71	--	1961-72.	--	--	--
Dinwoody Creek above lakes, near Burris .....	06221400	88.2	1957-78;1988-	--	1988-92.	1970.	--
Dinwoody Creek near Burris (Crowheart, Lenore)....	06221500	100	1909;1918-30; 1950-58.	--	--	--	--
Wind River near Burris .....	06222000	1,236	1946-53.	--	--	--	--
Upper Wind River A Canal at Headworks, near Burris	06222100	--	1997-99;2001-	--	--	--	--
Dry Creek near Burris, (at Crowheart) (near Lenore)	06222500	53.7	1909a;1921-40;1988-	--	1990.	--	--
Dry Creek Canal at headgate, near Burris .....	06222510	--	1989-99;2001-	--	1992.	1990.	--
Wind River near Burris above Crow Creek, near Lenore.....	06222600	--	--	--	2001-02.	2001-02.	2001-02.
Crow Creek near Tipperary.....	06222700	30.2	1962-93.	--	1974-93.	--	--
Meadow Creek near Lenore (near J. K. Ranch Post Office).....	06223000	41.7	1909a;1921-23.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Wind River--continued							
Willow Creek near Crowheart (at J. K. Ranch Post Office) (near Lenore) .....	06223500	55.4	1909;1921-23; 1925-40;1988-	--	1990.	--	--
Sand Draw near Crowheart .....	06223700	12.8	--	1961-77.	--	--	--
Wind River above Bull Lake Creek, near Crowheart ...	06223750	--	--	--	1990-91.	1990-91.	--
Wind River tributary No. 2 near Crowheart.....	06223800	3.16	--	1961-81.	--	--	--
Bull Lake Creek above Bull Lake (Bull Lake Reservoir).....	06224000	187	1941-53;1966-	--	1974-	2001-02.	2001-02.
Bull Lake (Bull Lake Reservoir) near Lenore.....	06224500	b210	1938-2001a.	--	--	--	--
Bull Lake Creek near Lenore .....	06225000	b213	1918-	--	1990; 2001-02.	2001-02.	2001-02.
Wind River near Crowheart .....	06225500	1,891	1945-	--	1976;1978; 1987-92.	1970-82; 1990-93.	--
Wyoming Canal near Lenore .....	06226000	--	1941-45;1949-82;1988-	--	1988.	1974-82; 1988.	--
Wind River below Wyoming Canal Diversion near Lenore.....	06226100	--	--	--	2001-02.	2001-02.	2001-02.
Dry Creek:							
Little Dry Creek near Crowheart.....	06226200	10.5	--	1961-81.	--	--	--
Dry Creek near Crowheart .....	06226300	97.9	--	1959; 1961-81.	--	--	--
Pilot Canal:							
Pilot wasteway near Morton .....	06226500	--	1949-53.	--	--	--	--
Pilot Canal near Morton .....	06227000	--	1949-53.	--	1977.	--	--
Wyoming Canal below Pilot diversion, near Morton	06227500	--	1949-53.	--	--	1975-82.	--
Johnstown Ditch at Headworks, near Kinnear .....	06227596	--	1991-99;2001-	--	--	--	--
Wind River near Kinnear .....	06227600	2,194	1974-79;1991-	--	1985-92; 2000-02.	1990-93; 2000-02.	2000-02.
LeClair Canal near Riverton .....	06227700	--	--	--	--	1976-77.	--
Lefthand Ditch at Headworks, near Riverton.....	06227810	--	1991-99; 2001-	--	--	--	--

WATER RESOURCES DATA - WYOMING, 2002

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN</b> --continued								
<b>YELLOWSTONE RIVER BASIN</b> --continued								
Yellowstone River--continued								
Wind (Big Wind) River at (near) Riverton (near Arapahoe Agency) .....	06228000	2,309	1906-08;1911-	--	1947-50; 1965-95; 2000-02.	1949-51; 1959-65; 1971;1977; 1985-95; 2000-02.	1973-78; 1986-95; 2000-02.	
South Fork Little Wind River above Washakie Reservoir, near Fort Washakie.....	06228350	90.3	1976-	--	1976-92.	--	--	
South Fork Little Wind River below Washakie Reservoir, near Fort Washakie.....	06228450	93.5	1988-	--	1990.	--	--	
(South Fork) Little Wind River near Fort Washakie..	06228500	117	1921-40.	--	--	--	--	
Ray Canal at headworks, near Fort Washakie.....	06228510	--	1989-99; 2001-	--	--	--	--	
North Fork Little Wind River near Fort Washakie.	06228800	112	1988-	--	1990.	--	--	
North Fork Little Wind River at Fort Washakie.....	06229000	128	1921-40.	--	--	--	--	
Little Wind River at Fort Washakie .....	06229500	249	1908-09.	--	--	--	--	
Sage Creek above Norkok Meadows Creek, near Fort Washakie.....	06229680	118	1990-95.	--	1990.	--	--	
Norkok Meadows Creek near Fort Washakie.....	06229700	15.4	--	1965-81.	--	--	--	
Sand Draw near Fort Washakie .....	06229800	.99	--	1961-81.	--	--	--	
Trout Creek near Fort Washakie .....	06229900	16.1	1990-	1961-68; 1970-84.	1990.	--	--	
Trout Creek at Wind River .....	06230000	33.6	1909.	--	--	--	--	
Mill Creek above Ray Lake outlet canal, near Fort Washakie .....	06230190	15.8	1990-96.	--	1990.	--	--	
Ray Lake near outlet, near Fort Washakie .....	06230300	--	--	--	1960-70.	--	--	
Little Wind River near Arapahoe .....	06230500	618	1950-53.	--	1992.	--	1992.	
Little Wind River tributary near Hudson.....	06230800	2.98	--	1961-71.	--	--	--	
Little Wind River above Arapahoe (Agency) .....	06231000	660	1906-09;1911-18; 1979-95.	--	1966-92.	--	1973-77; 1989-92.	
Middle (Middle Fork) Popo Agie River (Popo Agie River) near Lander.....	06231500	86.5	1911-12;1918-24.	--	--	--	--	
Middle Popo Agie River below The Sinks, near Lander.....	06231600	87.5	1959-68.	1969-74.	--	1965.	--	
Baldwin Creek below Dickinson Creek, at Lander.....	06231930	--	--	--	1989-98.	1989-98.	--	

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Wind River--continued							
Little Wind River--continued							
Middle Popo Agie River--continued							
Little Dickinson Creek at Lander (formerly Baldwin Creek at Lander).....	06231950	--	--	--	1981.	--	1981.
North Popo Agie River near Milford.....	06232000	98.4	1945-63.	--	1990.	--	--
North (North Fork) Popo Agie River near Lander	06232500	134	1938-53.	--	--	--	--
Popo Agie River at Hudson Siding, near Lander ...	06232600	--	--	--	1983-	--	1983-89; 1992-
Little Popo Agie River near Atlantic City .....	06232800	5.99	1957-73.	--	--	--	--
Little Popo Agie River near Lander .....	06233000	125	1946-	--	--	--	--
Government Draw:							
Monument Draw at upper station, near Hudson .....	06233340	5.50	--	1965-72.	--	--	--
Monument Draw at lower station, near Hudson .....	06233360	8.38	--	1965-84.	--	--	--
Coal Mine Draw:							
Coal Mine Draw tributary near Hudson .....	06233440	.63	--	1965-72.	--	--	--
Little Popo Agie River at Hudson .....	06233500	384	1907-09;1911-17; 1938-53.	--	--	--	--
Popo Agie River at Hudson.....	06233600	--	--	--	1966-69; 1984.	--	--
Popo Agie River near Arapahoe.....	06233900	796	1979-95.	--	1980-92; 2000-02.	2000-02.	1983; 1989; 2000-02.
Little Wind (Popo Agie) River below Arapahoe (Agency) .....							
Beaver Creek near Lander .....	06234000	1,464	1906-09;1911-18.	--	--	--	--
Beaver Creek near Lander .....	06234500	113	1938-41.	--	--	--	--
South Fork Hall Creek near Lander.....	06234700	3.88	--	1960-72.	--	--	--
Big Sand Draw:							
Bobcat Draw near Sand Draw .....	06234800	b2.89	--	1969; 1971-81.	--	--	--
Beaver Creek near Arapahoe.....	06235000	354	1950-53.	--	1951; 1967-81; 1985-92.	1989-91.	--

WATER RESOURCES DATA - WYOMING, 2002

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Wind River--continued							
Little Wind River (Popo Agie River) near Riverton..	06235500	1,904	1941-	--	1953-54; 1965-	1959-65; 1971; 1989-93; 2000-02.	1987; 1999-
Haymaker Creek near Riverton.....	06235700	9.52	--	1961-64; 1966-73.	--	--	--
Kirby Draw near Riverton.....	06236000	129	1951-53.	1961-84.	--	--	--
Wind River above Boysen Reservoir, near Shoshoni...	06236100	4,390	1990-	--	1973-93; 2000-02.	1991-95; 2000-02.	1974-89; 2000-02.
Muskrat Creek:							
Lower Fraser diversion reservoir (on Fraser Draw)	06236500	27.4	1953-67c.	--	--	--	--
Mahoney Reservoir (on Mahoney Draw).....	06237000	9.82	1952-57d.	--	--	--	--
Conant Creek:							
Horseshoe Creek:							
Signor Reservoir (on Signor Draw).....	06237500	7.15	1952-60d.	--	--	--	--
Rongis Reservoir (on Logan Draw) .....	06238000	37.0	1954-60d;1961-70c.	--	--	--	--
Rongis Reservoir Canal.....	06238500	--	1953-67c.	--	--	--	--
Dry Cheyenne Creek:							
West Fork Dry Cheyenne Creek at upper station, near Riverton .....	06238760	.69	--	1965-84.	--	--	--
West Fork Dry Cheyenne Creek tributary near Riverton .....	06238780	1.85	--	1965-72.	--	--	--
West Fork Dry Cheyenne Creek near Riverton...	06238790	3.52	--	1965-70.	--	--	--
Muskrat Creek near Shoshoni .....	06239000	733	1950-73.	--	--	1950;1961; 1964; 1967-68; 1971-73.	--
Maverick Springs Draw (head of Fivemile Creek):							
Coal Draw:							
Reservoir No. 9 (on Paintrock Draw) .....	06239500	.64	1953-60d.	--	--	--	--
Reservoir No. 8 .....	06240000	1.00	1953-60d.	--	--	--	--
Reservoir No. 7 .....	06240500	4.57	1952-56d.	--	--	--	--
Reservoir No. 10 .....	06241000	.13	1954-60d.	--	--	--	--
Reservoir No. 6 .....	06241500	5.07	1954-57d.	--	--	--	--
Reservoir No. 5 .....	06242000	5.14	1954-60d.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Wind River--continued							
Fivemile Creek--continued							
Coal Draw--continued							
Reservoir No. 4 .....	06242500	5.77	1954-57d.	--	--	--	--
Reservoir No. 3 .....	06243000	5.84	1952-57d.	--	--	--	--
Reservoir No. 1 .....	06243500	5.91	1954-57d.	--	--	--	--
Fivemile Creek Reservoir.....	06244000	72.8	1956-70c.	--	--	--	--
Lower Teapot Reservoir (on Teapot Draw) .....	06244200	13.5	1954-65c.	--	--	--	--
Fivemile Creek above Wyoming Canal, near Pavillion .....	06244500	118	1949-75;1988-	--	1949-51; 1969; 1974-75; 1987-92.	1949-51; 1960-61; 1964-68; 1970-75; 1989-90.	--
Fivemile Creek near Pavillion.....	06245000	118	1948-49.	--	--	--	--
Powerline wasteway near Pavillion.....	06245500	--	1949-50.	--	--	1950.	--
Pavillion drain near Pavillion .....	06246000	--	1948-50.	--	1988.	1949-50; 1988.	--
Ocean drain at Ocean Lake outlet, near Pavillion ..	06246500	--	1948-53;1978-83.	--	1950-51; 1978-83; 1986;1988.	1950-51.	--
Ocean drain near Midvale .....	06246800	--	1979-82.	--	--	1979-82.	--
Ocean drain near Pavillion .....	06247000	--	1948-53.	--	--	1949-50.	--
Dudley wasteway near Pavillion .....	06247500	--	1949-50.	--	--	--	--
Kellett drain near Pavillion.....	06248000	--	1948-50.	--	--	1950.	--
Dewey drain near Pavillion .....	06248500	--	1948-50.	--	--	--	--
Fivemile 76 drain near Riverton.....	06249000	--	1949-50.	--	--	--	--
Sand Gulch drain and wasteway near Riverton.....	06249500	--	1949-50.	--	--	--	--
Fivemile Creek near Riverton .....	06250000	b356	1949-65.	--	1950-51.	1949-51; 1959-61; 1963-65.	--
Lost Wells Butte drain near Riverton.....	06250500	--	1949-50.	--	--	--	--
Coleman drain near Shoshoni.....	06251000	--	1948-50.	--	--	1950.	--
Sand Gulch near Shoshoni.....	06251500	18.6	1948-53.	--	1988.	1949-50; 1988.	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Wind River--continued							
Fivemile Creek--continued							
Eagle drain near Shoshoni .....	06252000	--	1948-50.	--	--	--	--
Lateral P-34.9 wasteway near Shoshoni.....	06252500	--	1949-50.	--	--	--	--
Fivemile Creek near Shoshoni .....	06253000	b418	1941-42;1948-83; 1988-	--	1948-51; 1953; 1965-86; 1988.	1949-51; 1959-61; 1963-68; 1972; 1974-75; 1978-85; 1988.	--
Lateral P-36.8 wasteway near Shoshoni.....	06253500	--	1949-50.	--	--	--	--
Poison Creek:							
Graham Draw:							
East Fork Reservoir .....	06254000	.81	1949-60d.	--	--	--	--
West Fork Reservoir.....	06254500	.38	1947-60d.	--	--	--	--
Graham Reservoir.....	06255000	3.12	1947-60d.	--	--	--	--
Dead Man Gulch:							
Dead Man Gulch tributary near Lysite .....	06255160	.54	--	--	1965-68; 1970-72.	--	--
Dead Man Gulch near Lysite .....	06255190	4.11	--	--	1965-73.	--	--
Dead Man Gulch near Moneta .....	06255200	4.46	--	--	1958-69.	--	1966.
Poison Creek tributary near Shoshoni .....	06255300	.39	--	--	1959-81.	--	--
Poison Creek near Shoshoni.....	06255500	500	1949-53;1955-56.	--	1961-68.	1951.	1949-51; 1964.
Badwater Creek at Lybyer Ranch, near Lost Cabin ...	06256000	131	1948-68.	--	--	--	--
Badwater Creek at Lost Cabin .....	06256500	166	1945-48.	--	--	--	--
Alkali Creek:							
E-K Creek:							
E-K Creek tributary near Arminto .....	06256550	.14	--	--	1960-68.	--	--
Red Creek near Arminto.....	06256600	7.15	--	--	1963-81.	--	1965.
Badwater Creek at Lysite .....	06256650	415	1965-73.	--	--	--	1966-68; 1970-73.
Badwater Creek tributary near Lysite.....	06256670	5.86	--	--	1966-73.	--	--
Bridger Creek:							
South Bridger Creek near Lysite .....	06256700	10.0	--	--	1960-81.	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Wind River--continued							
Badwater Creek--continued							
Bridger Creek near Lysite.....	06256800	182	1965-73.	--	--	1966-68; 1970-73.	--
Dry Creek near Bonneville.....	06256900	52.6	1965-80.	--	1976-81.	1967-68; 1970-81.	--
Badwater Creek at Bonneville.....	06257000	808	1947-73.	--	--	1949-51; 1960-61; 1963-68; 1970-73.	--
Muddy Creek:							
Holland Creek:							
Warm Springs Creek near Pavillion.....	06257200	5.44	--	1961-69.	--	--	--
Shotgun Creek:							
Shotgun Creek tributary near Pavillion.....	06257300	2.57	--	1961-81.	--	--	--
Muddy Creek near Pavillion.....	06257500	267	1949-73.	--	1949-51; 1988-92.	1949-51; 1961; 1964-68; 1970-72.	--
Muddy Creek near Shoshoni.....	06258000	332	1949-68;1972-83.	--	1953; 1982-84; 1986;1988.	1949-51; 1960-61; 1964-68; 1982-85; 1988.	--
Cottonwood Creek drain near Shoshoni.....	06258010	--	--	--	--	1979-82.	--
Birdseye Creek near Shoshoni.....	06258400	13.2	--	1959-72.	--	--	--
Cottonwood (Dry Cottonwood) Creek near Bonneville.....	06258500	165	1949-53.	--	1949-50; 1976.	--	--
Boysen Reservoir.....	06258900	7,700	1951-2001a.	--	--	--	--
Wind River below Boysen Reservoir.....	06259000	7,701	1951-	--	1953-54; 1956; 1960-92; 2000-02.	1979-86; 2000-02.	1973-87; 2000-02.

WATER RESOURCES DATA - WYOMING, 2002

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Wind River at Wedding of Water, near Thermopolis .....	06259050	--	--	--	2001-02.	2001-02.	2001-02.
Bighorn River at (near) Thermopolis .....	06259500	8,020	1900-05;1910-53.	--	1949-51; 1953-54; 1969-70.	1949-53.	--
South Fork Owl Creek near Anchor .....	06260000	85.5	1932;1939-43;1959-85; 1991-95.	--	1974-85.	1965; 1977-78.	1977-78.
Middle Fork Owl Creek above Anchor Reservoir .	06260200	33.6	1959-65.	--	--	--	--
Anchor Reservoir .....	06260300	131	1960-2001a	--	--	--	--
South Fork Owl Creek below Anchor Reservoir .....	06260400	131	1959-	--	1974-86.	--	--
South Fork Owl Creek above Curtis Ranch, near Thermopolis .....	06260500	144	1943-59.	--	--	--	--
South Fork Owl Creek at Curtis Ranch, near Thermopolis .....	06261000	149	1931-32;1938-43.	--	--	--	--
South Fork Owl Creek near Thermopolis (Owl Creek near Embar).....	06261500	180	1921-22;1929-32.	--	--	--	--
North Fork Owl Creek near Anchor .....	06262000	54.8	1941-62.	--	--	--	--
North Fork Owl Creek above Basin Ranch (below Cup Creek), near Anchor.....	06262300	e61	1962-75;1991-95.	--	--	--	--
North Fork Owl Creek at Crann Ranch, near Thermopolis.....	06262500	94.2	1938-39.	--	--	--	--
North Fork Owl Creek near Thermopolis .....	06263000	102	1930-32.	--	--	--	--
Mud Creek near Thermopolis.....	06263500	101	1938-39.	--	--	--	--
Owl Creek near Thermopolis .....	06264000	478	1910-17;1931-32; 1938-69.	--	1976.	1965.	1975.
Owl Creek near Lucerne .....	06264500	509	1932-33;1938-53.	--	--	--	--
Bighorn River at Lucerne.....	06264700	--	--	--	1966-	1990-92.	1978-
Kirby Creek near Lucerne .....	06265000	199	1941-45.	--	--	--	--
Sand Draw near Thermopolis.....	06265200	6.33	--	--	1960-81.	--	--
Cottonwood Creek at High Island Ranch (at county bridge), near Hamilton Dome .....	06265337	81.4	1993-	--	1977-78.	1977-78.	1977-78.
Cottonwood Creek at State Highway 120, near Hamilton Dome.....	06265410	--	--	--	1977-78.	1977-78.	1977-78.
Grass Creek above Little Grass Creek, near Grass Creek .....	06265435	--	--	--	1977-78.	1977-78.	1977-78.
Grass Creek near mouth, near Hamilton Dome .....	06265492	--	--	--	1977-78.	1977-78.	1977-78.

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Bighorn River--continued							
Cottonwood Creek at Winchester .....	06265500	416	1941-49;1977-78.	--	1977-78.	1965-66; 1977-78.	1977-78.
Tie Down Gulch near Worland .....	06265600	1.78	--	1961-84.	--	--	--
Gooseberry Creek at Dickie .....	06265800	95	1957-78.	--	1977-78.	1977-78.	1977-78.
Gooseberry Creek near Grass Creek .....	06266000	142	1945-57.	--	--	--	--
Gillies Draw:							
Gillies Draw tributary near Grass Creek .....	06266320	1.30	--	1965-73.	--	--	--
Gooseberry Creek at State Highway 431, near Grass Creek .....	06266450	--	1977-78.	--	1977-78.	1977-78.	1977-78.
Murphy Draw near Grass Creek.....	06266460	2.32	--	1965-81.	--	--	--
Gooseberry Creek near Dickie .....	06266500	289	1938-41.	--	1983.	--	--
Gooseberry Creek at Neiber (Pulliam).....	06267000	361	1941-53.	--	--	1965-66.	--
Bighorn River at Neiber .....	06267050	--	--	--	1965-69; 1976.	--	--
Nowater Creek:							
East Fork Nowater Creek:							
North Prong East Fork Nowater Creek near Worland .....	06267260	3.77	--	1964-84.	--	--	--
North Prong East Fork Nowater Creek tributary near Worland .....	06267270	2.11	--	1965-73.	--	--	--
Denver Jake Reservoir (on unnamed tributary of East Fork).....	06267300	--	1958-67f.	--	--	--	--
East Fork Nowater Creek near Colter .....	06267400	149	1971-91.	--	1977-81.	1977-81.	--
Fifteenmile Creek:							
Red Spires Reservoir (on Rock Waterhole Creek)	06267500	5.24	1954-59d;1960-67c.	--	--	--	--
Middle Fork Fifteenmile Creek near Worland .....	06267900	--	--	--	1978-82.	1978-82.	1978-82.
Big Gin Reservoir (on unnamed tributary).....	06268000	.94	1954-59d;1960-67c.	--	--	--	--
Fifteenmile Creek near Worland .....	06268500	518	1951-72;1978-86.	1973-78.	1965; 1978-81; 1983-86; 1989-92.	1949-51; 1959-61; 1963-68; 1970-72; 1978-86; 1989-92.	1978-81.
Bighorn River at Worland .....	06268600	10,810	1965-69.	--	1964-86.	1965-68.	--

WATER RESOURCES DATA - WYOMING, 2002

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Bighorn River--continued							
Slick Creek near Worland .....	06268640	--	--	--	1981-86.	--	--
Bighorn River near Manderson .....	06269000	11,020	1949-53;1955-56.	--	1950-51; 1966-71.	1949-51.	--
Bighorn River at Manderson .....	06269500	11,048	1941-49.	--	1976.	--	--
Nowood River:							
Spring Creek near Ten Sleep .....	06269700	57.9	--	1961-74.	--	1967.	--
Nowood River (Creek) tributary near Ten Sleep ...	06269750	.42	--	1960-81.	--	--	--
Nowood River (Creek) near Ten Sleep .....	06270000	803	1938-43;1950-55; 1972-92.	--	1967-86.	1971-82.	--
Tensleep Creek:							
Leigh Creek near Ten Sleep .....	06270200	2.54	--	1961-74.	--	--	--
Canyon Creek:							
Canyon Creek tributary near Ten Sleep .....	06270300	.52	--	1961-74.	--	--	--
Canyon Creek below Cooks Canyon, near Ten Sleep .....	06270450	72	1969-71.	--	1969-71.	1969-71.	--
Canyon Creek near Ten Sleep .....	06270500	86.1	1939-44.	--	--	--	--
Tensleep Creek near Ten Sleep .....	06271000	247	1910-12;1914-24; 1943-72.	--	1967.	--	--
Brokenback Creek near Ten Sleep .....	06271200	55.0	--	1961-70.	--	--	--
Paintrock Creek below Lake Solitude .....	06271500	16.0	1946-53.	--	--	--	--
Paintrock Creek at Longview ranger station, near Hyattville .....	06272000	79.9	1911-12a.	--	--	--	--
Paintrock Creek near Hyattville .....	06272500	164	1920-27;1941-53.	--	1951.	--	--
Medicine Lodge Creek near Hyattville .....	06273000	86.8	1942-73.	--	1951;1968.	--	--
Paint Rock Creek near mouth (near Bonanza), below Hyattville .....	06273500	376	1910-13;1915-22.	--	1951-53; 1967-84.	--	--
Nowood River (Creek) at Bonanza .....	06274000	1,730	1910-28.	--	--	--	--
Sand Creek:							
East Fork Sand Creek near Worland .....	06274100	19.1	--	1960-71.	--	--	--
Nowood River tributary No. 2 near Basin .....	06274190	1.51	--	1965-84.	--	--	--
Nowood River tributary No. 2 near Manderson .....	06274200	1.59	--	1961-71.	1978.	1967.	--
Nowood River at Manderson .....	06274220	e2,000	--	--	1965-86.	1950; 1965-67.	--
Elk Creek near Basin .....	06274250	96.9	--	1959-81.	--	1967.	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Bighorn River at Basin.....	06274300	13,223	1983-	--	1983-	1989- 92; 1995-	1983-
Greybull River near Pitchfork.....	06274500	282	1946-49;1951-71.	--	--	--	--
Wood River near Kirwin.....	06274800	7.66	1970-75.	--	--	1975.	--
Wood River at Kirwin.....	06274810	11.4	1970-78.	--	--	1975.	--
Wood River at Sunshine.....	06275000	e194	1945-92.	--	--	1975.	--
Wood River near Meeteetse.....	06275500	211	1910-12;1914-17; 1929-49.	--	--	--	--
Greybull River near Meeteetse.....	06276000	659	1910-12;1915- 16;1920.	--	--	--	--
Greybull River at Meeteetse.....	06276500	681	1897;1903;1920-	--	1995-	1975. 1995-	1995-
Bench Canal near Burlington.....	06277000	--	1930-38.	--	--	--	--
Greybull River near Basin.....	06277500	1,115	1930-73.	--	1951-53; 1965-92.	1950; 1965-66; 1972; 1989-92.	--
Dry Creek:							
Twentyfour Mile Creek near Emblem.....	06277700	12.8	--	1960-81.	--	--	--
Dry Creek tributary near Emblem.....	06277750	.65	--	1960-68; 1970-81.	--	--	--
Dry Creek near Greybull.....	06277950	432	1979-81.	--	1979-81.	1979-80.	1979-81.
Dry Creek at Greybull.....	06278000	433	1951-53;1955-60.	--	1950-51; 1957-60; 1965; 1979-80.	1949-51; 1959-60; 1979-80.	1979-80.
Shell Creek above Shell (Creek) Reservoir.....	06278300	23.1	1956-	--	--	--	--
Granite Creek near Shell Creek ranger station, near Shell (formerly Granite Creek near Shell ranger station, near Shell).....	06278400	11.1	--	1961-74.	--	--	--
Shell Creek near Shell.....	06278500	145	1940-	--	1951;1976; 1982.	1967.	--
Shell Creek at Shell.....	06279000	256	1911-24.	--	--	--	1973-74.
Red Gulch near Shell.....	06279020	47.8	--	1967; 1970-81.	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Bighorn River--continued							
Shell Creek at Porter Gulch, near Greybull.....	06279050	--	--	--	1983-89.	--	1989-90.
Shell Creek near Greybull .....	06279090	e560	--	--	1951; 1965-86.	1965-67.	1973-78.
Bighorn River at Kane .....	06279500	15,765	1928-	--	1947-53; 1955-57; 1960-97; 1999-	1949-51; 1959-61; 1964; 1969-92; 1999-	1970; 1972-81; 1984-89; 1999-
Willow Creek near Kane .....	06279700	14.0	--	1961-75.	--	--	--
North Fork Shoshone River:							
Jones Creek at mouth, near Pahaska.....	06279790	24.8	1989-93.	--	1989-93.	1989-93.	--
Crow Creek at mouth, near Pahaska.....	06279795	19.1	1989-93;2001-	--	1989-93; 2001-	1989-93; 2001-	--
North Fork Shoshone River at Pahaska.....	06279800	108	1989-90.	--	--	--	--
Middle Creek at East Entrance, Yellowstone National Park .....							
North Fork Shoshone River at Wapiti .....	06279850	32.6	1981-84.	--	1968-70.	--	--
North Fork Shoshone River at Wapiti .....	06279940	669	1990-	--	1989-90.	--	1989-90.
Trout Creek near Wapiti .....	06279950	49.4	--	1961-74.	--	--	--
North Fork Shoshone River near Wapiti .....	06280000	775	1921-26;1979-89.	--	1981-86.	--	--
South Fork Shoshone River near Valley .....	06280300	297	1956-	--	1964;1984.	1958-64.	--
South Fork Shoshone River (Shoshone River) near Ishawooa.....	06280500	541	1915-24.	--	--	--	--
South Fork Shoshone River (Shoshone River) above Buffalo Bill Reservoir (at Marquette).	06281000	585	1903;1905-08;1921-26; 1973-	--	1982-92.	--	--
Diamond Creek near mouth, near Cody .....	06281400	7.34	1980-92.	--	--	--	--
Buffalo Bill (Shoshone) Reservoir near Cody .....	06281500	1,498	1909-2001.	--	--	--	--
Shoshone River above DeMaris Springs, near Cody .	06281700	--	--	--	1987-	1989.	1989.
Shoshone River below Buffalo Bill (Shoshone) Reservoir .....	06282000	1,538	1921-	--	1947-49; 1964-86.	--	1973-78.
Shoshone River at (near) Cody .....	06282500	1,603	1902-09.	--	--	--	--
Cottonwood Creek:							
Cottonwood Creek tributary near Cody.....	06282700	.76	--	1961-73.	--	--	--
Shoshone River above Dry Creek, near Cody.....	06282900	--	--	--	1974-89.	--	1974-89.

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Bighorn River--continued							
Shoshone River at Corbett Dam .....	06283000	1,793	1908-25.	--	--	--	--
Garland Canal (Corbett Tunnel) at Corbett Dam ...	06283500	--	1909-20;1922-26.	--	--	--	--
Shoshone River above Willwood Dam, near Willwood.....							
Shoshone River at Willwood Dam.....	06284000	1,833	1925-26.	--	--	--	--
Willwood Canal near Ralston.....	06284005	--	--	--	--	1981-83.	--
Shoshone River below Willwood Dam, near Ralston	06284010	--	--	--	--	1972; 1981-83.	--
Shoshone River at Willwood.....							
Roan Wash near Garland.....	06284380	--	1974-79.	--	1976.	--	--
Shoshone River near Garland.....	06284400	2,036	1958-79.	--	1985-92.	--	--
					1958-59; 1967-71; 1974-92.	--	--
Bitter Creek below sewage lagoon, near Powell ....	06284450	--	--	--	1981-92.	--	1981-89.
Bitter Creek near Garland.....	06284500	80.5	1950-53;1957-61; 1968-87.	--	1949-53; 1958-60; 1969-	1950-51.	1973-78; 1984-89; 1992-
Whistle Creek near Garland .....	06284800	101	1958-60;1968-87.	--	1959-60; 1969-87.	--	--
Shoshone River at Byron.....	06285000	2,345	1929-66.	--	1964-66; 1976.	1950.	--
Shoshone River near Lovell .....	06285100	e2,350	1966-	--	1966-97; 1999-	1971-82; 1990-92.	1978-81; 1987-89; 2000-
Sage Creek at Sidon Canal, near Deaver.....	06285400	341	1958-59;1968-87.	--	1958-60; 1969-87.	--	--
Sage Creek near Lovell .....	06285500	381	1951-60.	--	1965;1967; 1969-71.	--	--
Shoshone River at Lovell .....	06286000	2,832	1897-98;1899a.	--	--	--	--
Shoshone River at Kane .....	06286200	2,989	1957-68.	--	1958-68; 1976-89; 1999.	1959-61; 1964;1999.	1982-89; 1999.
Bighorn River near Lovell .....	06286250	e18,900	1964-66.	--	--	--	--

WATER RESOURCES DATA - WYOMING, 2002

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Bighorn River--continued							
Crooked Creek:							
Big Coulee near Lovell.....	06286258	30.1	1970-78.	--	--	1970-74; 1976-77.	--
Crooked Creek near Lovell .....	06286260	e119	1964-67.	--	--	--	--
Porcupine Creek near Lovell.....	06286270	e135	1964-67.	--	--	--	--
Bighorn Lake (Yellowtail Reservoir) near St. Xavier, Mont.....	06286400	19,626	1965-2001.	--	--	--	--
Bighorn River near St. Xavier, Mont.....	06287000	19,667	1934-	--	1966-81.	--	--
Little Bighorn River below Dayton Gulch, near							
Burgess Junction.....	06288600	15.9	1982-87.	--	--	--	--
Dry Fork below Lick Creek, near Burgess Junction	06288700	54.1	1982-87;1992-95.	--	--	--	--
Little Bighorn River near Parkman .....	06288960	137	1969-72.	--	--	--	--
Elkhorn Creek above Fuller Ranch Ditch, near							
Parkman.....	06288975	4.58	1982-87.	--	--	--	--
West Fork Little Bighorn River near Parkman.....	06288990	38.6	1969-72;1982-87.	--	--	--	--
Little Bighorn (Little Horn) River at State line, near Wyola, Mont .....	06289000	193	1939-	--	1992-2001.	1992-2001.	1992-2001.
Powers Upper Ditch (Spring Creek):							
Red Canyon Creek near Parkman.....	06289100	3.20	1982-90.	--	--	--	--
Little Bighorn (Little Horn) River near Wyola, Mont Pass Creek:	06289500	251	1911-24.	--	--	--	--
West Pass Creek near Parkman .....							
East Pass Creek near Parkman.....	06289600	15.4	1982-	--	--	--	--
East Pass Creek near Parkman.....	06289800	11.6	1974-76.	--	--	--	--
East Pass Creek near Dayton.....	06289820	21.7	1982-	--	--	--	--
Twin Creek near Parkman .....	06289870	27.0	1982-90.	--	--	--	--
Pass Creek near Wyola, Mont .....	06290000	111	1935-56;1982-	--	--	--	--
Little Bighorn (Little Horn) River below Pass Creek, near Wyola, Mont .....	06290500	428	1939-75.	--	--	--	--
Lodge Grass Creek at State line, near Wyola, Mont	06291200	16.7	1982-89.	--	--	--	--
North Tongue River:							
Hideout Creek near Dayton.....	06296400	2.89	--	1961-67.	--	--	--
North (Fork) Tongue River near Dayton.....	06296500	32.4	1945-57.	--	--	--	--
Big Willow Creek near Dayton.....	06296700	7.08	--	1961-73.	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
North Tongue River--continued							
South (Fork) Tongue River near Dayton.....	06297000	85	1945-72.	--	--	--	--
Tongue River at Tongue Canyon Campground, near Dayton.....	06297480	202	1974-79.	--	--	--	--
Highline ditch near Dayton .....	06297500	--	1919-23;1940-	--	--	--	--
Tongue River near Dayton .....	06298000	204	1918-29;1940-	--	1966-81; 1987-88; 1999-2001.	1999-2001.	1973-77; 1980; 1999-2001.
Little Tongue River at Steamboat Point, near Dayton	06298480	11.4	1974-76.	--	--	--	--
Little Tongue River above South Fork Little Tongue River, near Dayton. ....	06298490	14.1	1974-76.	--	--	--	--
Little Tongue River near Dayton .....	06298500	25.1	1951-53;1955-74.	--	1971.	--	--
Tongue River at Dayton.....	06299000	259	1903.	--	--	--	--
Wolf Creek below Alden Creek, near Wolf.....	06299480	32.8	1974-76.	--	--	--	--
Wolf Creek above Red Canyon Creek, at Wolf.....	06299490	33.8	1974-76.	--	--	--	--
Wolf Creek at Wolf .....	06299500	37.8	1945-	--	1985.	--	--
Slater Creek near Monarch.....	06299900	18.0	--	1967-81.	--	1967.	--
Tongue River at Monarch .....	06299980	--	--	--	1974-80; 1982-83.	1976-77.	1976-80; 1982-83.
Tongue River at Carneyville .....	06300000	495	1911-13;1915-17.	--	--	--	--
East Fork Big Goose (East Goose) Creek near Big Horn .....	06300500	20.1	1953-	--	--	--	--
Cross Creek above Big Horn Reservoir, near Big Horn.....	06300900	9.29	1960-71.	--	--	--	--
Cross Creek near Big Horn.....	06301000	9.63	1953-60.	--	--	--	--
West Fork Big Goose Creek:							
Coney Creek above Twin Lakes, near Big Horn.	06301480	3.41	1990-	--	--	--	--
Lost Lake Creek near Big Horn.....	06301485	2.14	1990-93.	--	--	--	--
Snail Creek near Big Horn.....	06301490	1.36	1990-93.	--	--	--	--
Coney Creek below Twin Lakes, near Big Horn..	06301495	8.07	1990-94;1995-	--	--	--	--
West Fork Big Goose (West Goose) Creek near Big Horn.....	06301500	24.4	1953-	--	--	--	--
Big Goose (Goose) Creek above PK Ditch, in canyon, near Sheridan .....	06301850	124	2001-	--	--	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Tongue River--continued							
Big Goose Creek near Sheridan .....	06302000	120	1929-2001.	--	1987-89.	1989-92.	1989-99.
Big Goose Creek above Park Creek, near Sheridan...	06302200	--	1999-2000.	--	1999-2000.	--	1999-2000.
Goose Creek at Sheridan .....	06302500	182	1909-13;1915-16.	--	--	--	--
Little Goose Creek:							
Willow Creek near Big Horn .....	06303000	2.99	1953-55.	--	--	--	--
Little Goose Creek in canyon, near Big Horn .....	06303500	51.6	1941-	--	--	--	--
Little Goose Creek above Davis Creek, near Big Horn .....	06303700	--	1999-00.	--	--	--	--
Little Goose Creek near Big Horn .....	06304000	71	1919-21.	--	--	--	--
Little Goose Creek at Sheridan .....	06304500	159	1896-97;1911-12.	--	1979-	1989-92.	1979-
Goose (Big Goose) Creek below Little Goose Creek, at Sheridan .....	06305000	341	1895;1896-97.	--	--	--	--
Goose Creek below Sheridan .....	06305500	392	1941-84.	--	1959-64; 1967-	1971-82; 1989-92.	1973-
Goose Creek near Acme .....	06305700	411	1984-	--	1983-89.	--	1983-87.
Tongue River near Acme .....	06306000	894	1938-57.	--	--	--	--
Squirrel Creek near Decker, Mont .....	06306100	33.6	1975-85.	--	1975-85.	--	--
Prairie Dog Creek near Acme .....	06306250	358	1970-79; 2000-	--	1976-92; 2000-	1976-77.	1976-77.
Tongue River at State line, near Decker, Mont .....	06306300	1,477	1960-	--	1965-	1976-77; 1979-83; 1999-	1973-89.
Deer Creek near Decker, Mont .....	06306800	38.3	--	--	1975-77.	1975-76.	--
Middle Fork Powder River near Barnum .....	06309200	45.2	1961-	--	--	--	--
Buffalo Creek above North Fork Buffalo Creek, near Arminto .....	06309260	8.80	1974-79.	--	--	--	--
North Fork Buffalo Creek near Arminto .....	06309270	8.10	1974-79.	--	--	--	--
Buffalo Creek below North Fork Buffalo Creek, near Arminto .....	06309280	18.6	1974-79.	--	--	--	--
Beaver Creek below Bayer Creek, near Barnum .....	06309450	10.9	1974-89.	--	--	--	--
Beaver Creek above White Panther Ditch, near Barnum .....	06309460	24.2	1974-89.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Middle Fork Powder River above Kaycee .....	06309500	e450	1949-70;1984-92.	--	1949; 1952-54; 1984-92.	1966-68; 1970.	1984-92.
Red Fork near Barnum .....	06310000	e142	1929-32;1950-53.	--	1988-89.	--	--
Middle Fork Powder River at Kaycee.....	06310500	647	1911-12;1929-32.	--	1977.	--	--
North Fork Powder River near Hazelton.....	06311000	24.5	1946-	--	--	--	--
North Fork Powder River below Bull Creek, near Hazelton .....	06311060	32.3	1974-92.	--	1970-71.	--	--
North Fork Powder River below Pass Creek, near Mayoworth .....	06311400	100	1973-	--	--	--	--
North Fork Powder River near Mayoworth .....	06311500	106	1940-73.	--	1971.	--	--
North Fork Powder River near Kaycee .....	06312000	244	1911;1929-32.	--	1988-89.	--	--
Powder River near Kaycee.....	06312500	e980	1933-35;1938-71; 1978-80.	--	1946; 1949-50; 1952-54; 1968-91.	--	1973-89.
South Fork Powder River near Powder River .....	06312700	262	--	1961-84.	--	--	--
Cottonwood Creek:							
North Fork Cottonwood Creek:							
Sanchez Creek above reservoir, near Arminto ....	06312795	5.53	--	1970-81.	--	--	--
Sanchez Creek near Arminto.....	06312800	5.95	--	1961-76.	--	--	--
Dead Horse Creek:							
Dead Horse Creek tributary near Midwest .....	06312910	1.53	--	1965-72.	--	--	--
Dead Horse Creek tributary No. 2 near Midwest	06312920	1.34	--	1965-72.	--	--	--
South Fork Powder River near Kaycee .....	06313000	e1,150	1911;1938-40;1950-69; 1978-80;1983-84.	--	1949; 1951-53; 1968-81; 1983-89; 1991-92; 1997.	1950-51; 1983-84; 1986-87.	1975-80.
Salt Creek:							
Bobcat Creek near Edgerton.....	06313020	8.29	--	1965-81.	--	--	--
Coopers Draw near Edgerton .....	06313030	1.11	--	1965-73.	--	--	--
Seven L Creek near Edgerton.....	06313040	7.10	--	1965-73.	--	--	--

WATER RESOURCES DATA - WYOMING, 2002

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>YELLOWSTONE RIVER BASIN</b> --continued							
Yellowstone River--continued							
Powder River--continued							
Salt Creek--continued							
Teapot Creek:							
East Teapot Creek near Edgerton .....	06313050	5.44	--	1965-72; 1974-79.	--	--	--
Coal Draw near Midwest.....	06313100	11.4	--	1961-84.	--	--	--
Dugout Creek:							
Dugout Creek tributary near Midwest .....	06313180	6.8	1974-83.	1965-74.	--	1982-83.	--
Hay Draw near Midwest.....	06313200	1.60	--	1958-70.	--	--	--
Salt Creek near Sussex .....	06313400	769	1976-93.	--	1967-83; 1983-	1975-81; 1983-87.	1976-77; 1980.
North Spring Draw near Sussex .....	06313450	5.21	--	1980-81.	--	--	--
Powder River at Sussex.....	06313500	e3,090	1938-40;1950-57; 1977-98.	--	1967-68; 1976-	1967; 1976-87.	1976-81.
Burger (Bugher) Draw near Buffalo .....	06313600	4.57	--	1961-71.	--	--	--
Powder River below Burger (Bugher) Draw, near Buffalo.....	06313605	--	--	--	2000-	--	--
Van Houten Draw near Buffalo .....	06313630	10.8	--	1971-81.	--	--	--
Powder River above Dead Horse Creek, near Buffalo (formerly 441252106090801).....	06313665	--	--	--	1978; 1988-89.	--	--
Dead Horse Creek near Buffalo .....	06313700	151	1971-90; 2000-01.	1958-71.	1976; 1980-81; 1989;2000-	1976.	1976; 1978.
North Fork Crazy Woman Creek:							
Caribou Creek near Buffalo.....	06313900	5.08	--	1961-74.	--	--	--
North Fork Crazy Woman Creek below Pole Creek, near Buffalo .....	06313950	43.4	1973-84.	--	--	--	--
North Fork Crazy Woman Creek near Buffalo .....	06314000	44.9	1942-49;1973-84.	--	--	--	--
North Fork Crazy Woman Creek below Spring Draw, near Buffalo .....	06314500	51.7	1948-79.	--	--	--	--
North Fork Crazy Woman Creek near Greub .....	06315000	174	1950-68.	--	--	1966-68.	1978.
Middle Fork Crazy Woman Creek:							
Poison Creek below Tetley Spring, near Mayoworth.....	06315480	19.0	1974-76.	--	--	--	--
Poison Creek near Mayoworth .....	06315490	24.7	1974-76.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN</b> --continued								
<b>YELLOWSTONE RIVER BASIN</b> --continued								
Yellowstone River--continued								
Powder River--continued								
North Fork Crazy Woman Creek--continued								
Middle Fork Crazy Woman Creek near Greub .....	06315500	82.7	1942-72.	--	--	--	--	1983.
Crazy Woman Creek near Buffalo .....	06316000	464	1929-32.	--	--	--	--	--
Crazy Woman Creek at upper station, near Arvada...	06316400	e945	1963-70;1977-81; 2000-	--	1949-50; 1966-	1949-50; 1966-67; 1976-81; 1990-	--	1976-81.
Headgate Draw at upper station, near Buffalo .....	06316480	3.3	--	1965-73.	--	--	--	--
Headgate Draw at lower station, near Buffalo .....	06316490	e2.6	--	1965-73.	--	--	--	--
Crazy Woman Creek near Arvada .....	06316500	956	1939-43;1950-64.	--	--	--	--	--
Coal Draw near Buffalo (formerly Powder River tributary near Buffalo) .....	06316700	1.64	--	1965-84.	--	--	--	--
Powder River at Arvada .....	06317000	e6,050	1919-	--	1946; 1948-53; 1955;1967-	1968; 1970-79; 1983-84; 1986-87; 1996.	--	1972-82.
Wild Horse Creek at Arvada .....	06317020	250	2000-	--	2000-	--	--	--
Spotted Horse Creek:								
Spotted Horse Creek tributary near Spotted Horse	06317050	3.98	--	1961-81.	--	--	--	--
Powder River near Arvada .....	06317100	e6,580	1915-19.	--	--	--	--	--
Clear Creek:								
Sourdough Creek near Buffalo .....	06317300	5.80	1985-90.	--	--	--	--	--
Little Sourdough Creek near Buffalo .....	06317340	4.53	1985-88.	--	--	--	--	--
North Fork Clear Creek near Buffalo .....	06317500	29.0	1949-68.	--	--	--	--	--
Clear Creek at Camp Comfort, near Buffalo.....	06318000	e110	1911-12a.	--	--	--	--	--
Clear Creek near (at) Buffalo .....	06318500	120	1894;1896-99; 1917-27;1938-92.	--	1977-78.	1977-78.	--	1976-78.
Clear Creek at Buffalo.....	06319000	e130	1902a;1903-04; 1911-12.	--	--	--	--	--
Bull Creek:								
Sand Creek near Buffalo.....	06319100	10.8	--	1969-84.	--	--	--	--
South Rock Creek (head of Rock Creek) at forest boundary, near Buffalo .....	06319470	40.3	1974-76.	--	--	--	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN</b> --continued								
<b>YELLOWSTONE RIVER BASIN</b> --continued								
Yellowstone River--continued								
Powder River--continued								
Clear Creek--continued								
South Rock Creek above Red Canyon, near Buffalo	06319480	40.5	1974-76.	--	--	--	--	--
South Fork Rock Creek near Buffalo .....	06319500	43.8	1941-43;1950-53.	--	--	--	--	--
Rock Creek near Buffalo .....	06320000	60.0	1941-	--	1978.	--	--	--
Clear Creek below Rock Creek, near Buffalo .....	06320200	322	1971-81.	--	1975-91.	1975-81.	1976-89.	
Clear Creek above Kumer Draw, near Buffalo .....	06320210	--	--	--	1993-	--	1993-	
Clear Creek at Ucross.....	06320400	409	1976-81.	--	1975-81; 1983-92.	1975-81.	1976.	
South Piney Creek (head of Piney Creek) at Willow Park.....	06320500	33.6	1945-57;1959-	--	--	--	--	--
South Piney Creek near Story.....	06321000	69.4	1951-80.	--	--	--	--	--
Mead-Coffeen ditch above fish hatchery, near Story.....	06321020	--	1974-79.	--	--	--	--	--
Mead-Coffeen ditch below fish hatchery, near Story.....	06321040	--	1974-79.	--	--	--	--	--
South Piney Creek below Mead-Coffeen ditch, near Story.....	06321100	69.5	1974-79.	--	--	--	--	--
North Piney Creek near Story.....	06321500	36.8	1951-82.	--	1976-77.	1976-78.	1976.	
Spring Creek near Story .....	06321800	--	1974-79.	--	--	--	--	--
Cruetz ditch near Story.....	06322000	--	1903a.	--	--	--	--	--
Prairie Dog ditch near Story.....	06322500	--	1903a.	--	--	--	--	--
Piney Creek at Kearney .....	06323000	118	1902-06;1910-17; 1919-23;1940-	--	1975-78.	1976-78.	1975-76; 1978.	
Piney Creek at Ucross .....	06323500	267	1899-1900; 1917-23;1950-82.	--	1975-92.	1976-78.	1975-80.	
Clear Creek near Arvada .....	06324000	e1,110	1915-19;1928-29; 1939-82.	--	1949-54; 1966-92; 2000-	1966-67; 1975-83.	1975-80.	
Powder River at Moorhead, Mont.....	06324500	8,088	1929-72;1974-	--	1950-53; 1955-57; 1968-72; 1974-92.	1974-97.	--	
Little Powder River:								
Little Powder River tributary near Gillette.....	06324800	.81	--	1960-81.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN</b> --continued								
<b>YELLOWSTONE RIVER BASIN</b> --continued								
Yellowstone River--continued								
Powder River--continued								
Little Powder River--continued								
Little Powder River tributary--continued								
Rawhide Creek--continued								
Box Draw:								
Box Draw tributary near Gillette .....	06324810	.5	--	1965-72.	--	--	--	--
Rawhide Creek tributary near Gillette .....	06324820	2.6	--	1965-72.	--	--	--	--
Little Powder River below Corral Creek, near Weston	06324890	204	1975;1977-83.	--	1975-83.	1975-83.	1976-81.	
Cedar Draw near Gillette (formerly Little Powder River tributary No. 2 near Gillette) .....	06324900	3.45	--	1959-81.	--	--	--	--
Cow Creek:								
Cow Creek tributary near Weston .....	06324910	.72	--	1971-84.	--	--	--	--
Little Powder River near Weston .....	06324925	540	1977-81.	--	1969; 1975-81.	1975-81.	1975-81.	1975-81.
Little Powder River above Dry Creek, near Weston..	06324970	1,235	1972-	--	1975-82; 1985-	1975-82; 1999-	1975-82; 1999-01.	
Little Powder River near Wyoming-Montana State line.....	06324985	--	--	--	1969-70.	--	--	--
<b>LITTLE MISSOURI RIVER BASIN</b>								
Little Missouri River near New Haven.....	06332800	--	--	--	1976-77.	--	1976-77.	
<b>CHEYENNE RIVER BASIN</b>								
Antelope Creek (head of Cheyenne River):								
Wind Creek:								
Reservoir No. 13.....	06361500	.60	1951-54g.	--	--	--	--	--
Sand Creek:								
Reservoir No. 35A.....	06362000	.61	1952-54g.	--	--	--	--	--
Reservoir No. 13A.....	06363000	.28	1952-54g.	--	--	--	--	--
Porcupine Creek:								
Reservoir No. 10B .....	06363500	.20	1952-54.	--	--	--	--	--
Porcupine Creek near Turnercrest.....	06363700	31.5	--	1959-76.	--	--	--	--
Reservoir No. 10A.....	06364000	.43	1952-54g.	--	--	--	--	--
Reservoir No. 11.....	06364500	2.46	1951-54g.	--	--	--	--	--
Antelope Creek near Teckla .....	06364700	959	1977-81.	--	1977-81; 2000-	1977-81.	1977-81.	
Dry Fork:								
Reservoir No. 40.....	06365000	.71	1951-54g.	--	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>CHEYENNE RIVER BASIN</b> --continued							
Cheyenne River--continued							
Dry Fork--continued							
Bear Creek:							
Reservoir No. 36.....	06365200	.48	1951-54g.	--	--	--	--
Dry Fork Cheyenne River near Bill .....	06365300	128	1976-81;1985-87.	--	1977-81; 1987.	1977-81; 1987.	1977; 1979.
Reservoir No. 33A.....	06365500	.44	1952-54g.	--	--	--	--
Cheyenne River near Dull Center.....	06365900	1,527	1976-81;1985-87.	--	1975-81; 1987.	1975-81; 1987.	1978-81.
Reservoir No. 14 .....	06366000	10.9	1950-51g;1953-54g.	--	--	--	--
Reservoir No. 31 .....	06366500	.35	1951-52g.	--	--	--	--
Reservoir No. 30 .....	06367000	1.31	1951-52g.	--	--	--	--
Reservoir No. 32 .....	06367500	.59	1951-52g.	--	--	--	--
Reservoir No. 26 .....	06368000	1.51	1951-52g.	--	--	--	--
Reservoir No. 22 .....	06368500	.02	1951g.	--	--	--	--
Reservoir No. 28 .....	06369000	.68	1951-52g.	--	--	--	--
Reservoir No. 27 .....	06369500	1.09	1951-52g.	--	--	--	--
Reservoir No. 24 .....	06370000	.52	1951-52g.	--	--	--	--
Reservoir No. 23 .....	06370500	2.67	1951-52g.	--	--	--	--
Reservoir No. 21 .....	06371000	.31	1951-52g.	--	--	--	--
Reservoir No. 18 .....	06371500	.30	1951-52g.	--	--	--	--
Reservoir No. 17 .....	06372000	.06	1951-54g.	--	--	--	--
Reservoir No. 25 .....	06372500	.56	1951-54g.	--	--	--	--
Reservoir No. 20 .....	06373000	.11	1951-52g.	--	--	--	--
Reservoir No. 19 .....	06373500	.92	1951-54g.	--	--	--	--
Reservoir No. 16 .....	06374000	.18	1951-52g.	--	--	--	--
Reservoir No. 15 .....	06374500	9.58	1951-54g.	--	--	--	--
Black Thunder Creek:							
Little Thunder Creek:							
Reservoir No. 10.....	06375000	.66	1951-54g.	--	--	--	--
Reservoir No. 12.....	06375500	.28	1951-52g.	--	--	--	--
Little Thunder Creek near Hampshire.....	06375600	234	1977-81;1987-97.	--	1977-81; 1988; 1990-97.	1977-81; 1988; 1990-97.	1977-81.
Reservoir No. 7A.....	06376000	.23	1952-54g.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>CHEYENNE RIVER BASIN</b> --continued							
Cheyenne River--continued							
Black Thunder Creek near Hampshire .....	06376300	e535	1972-90.	--	1980-81; 2000-	1980-81; 1986-87; 1989.	1980-81.
Lodgepole Creek:							
Reservoir No. 9 .....	06376500	.94	1951-54g.	--	--	--	--
Reservoir No. 7 .....	06377000	2.68	1951-54g.	--	--	--	--
Reservoir No. 8 .....	06377500	.10	1951-54g.	--	--	--	--
Reservoir No. 7B .....	06378000	1.40	1952-54g.	--	--	--	--
Lodgepole Creek near Hampshire.....	06378300	354	1977-81.	--	1978-81.	1978-81.	1978-81.
Boggy Creek:							
Reservoir No. 35 .....	06378500	7.52	1950-54g.	--	--	--	--
Lance Creek:							
Lance Creek tributary near Lance Creek.....	06378640	1.20	--	1965-73.	--	--	--
Lightning Creek:							
Reservoir No. 55 .....	06379000	.05	1953-54g.	--	--	--	--
Box Creek:							
Reservoir No. 41 .....	06379500	1.27	1951-54g.	--	--	--	--
Box Creek near Bill .....	06379600	112	1956-58.	1959; 1961-81.	--	--	--
Walker Creek:							
Reservoir No. 56 .....	06380000	.70	1953-54g.	--	--	--	--
Reservoir No. 57 .....	06380500	.21	1953-54g.	--	--	--	--
Dry Creek:							
Reservoir No. 36A .....	06381000	.41	1953-54g.	--	--	--	--
Twentymile Creek:							
Reservoir No. 58 .....	06381500	.07	1953-54g.	--	--	--	--
Reservoir No. 42 (on Twentymile Draw) .....	06382000	.33	1951-54g.	--	--	--	--
Pritchard Draw near Lance Creek .....	06382200	5.10	--	1964-81.	--	--	--
Cow Creek:							
Reservoir No. 34.....	06382500	.34	1951-54g.	--	--	--	--
Reservoir No. 37.....	06383000	2.47	1951-54g.	--	--	--	--
Reservoir No. 38.....	06383500	1.70	1951-54g.	--	--	--	--
Dogie Creek:							
Reservoir No. 33.....	06384000	.73	1951-54g.	--	--	--	--
Crazy Woman Creek:							
Reservoir No. 43.....	06384500	1.26	1951-54g.	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN</b> --continued								
<b>CHEYENNE RIVER BASIN</b> --continued								
Cheyenne River--continued								
Lance Creek--continued								
Crazy Woman Creek:								
Reservoir No. 43A.....	06385000	.18	1953-54g.	--	--	--	--	--
Old Woman Creek:								
Sage Creek:								
Cottonwood Creek at Hat Creek .....	06385400	14.5	--	1972-79.	--	--	--	--
Reservoir No. 44 .....	06385500	.92	1951-54g.	--	--	--	--	--
Lance Creek (at Spencer) near Riverview .....	06386000	e2,070	1948-54;1956-83.	--	1975-83.	1971; 1975-83.	1978.	1978.
Reservoir No. 39.....	06386200	0.52	1951-54g.	--	--	--	--	--
Cheyenne River at Riverview .....	06386400	e5,160	--	--	1980-92; 2001-	1981-82.	1980-82.	1980-82.
(South Fork) Cheyenne River (near Spencer) near Riverview .....	06386500	e5,270	1948-74.	--	1969-70; 1975-79.	1951-53; 1971-74.	1975-79.	1975-79.
Beaver Creek:								
Turner Creek near Osage.....	06387500	47.8	--	1959-84.	--	--	--	--
Reservoir No. 3.....	06388000	.25	1951-54g.	--	--	--	--	--
Stockade Beaver Creek:								
Reservoir No. 1.....	06388200	.08	1951-54g.	--	--	--	--	--
Skull Creek:								
Oil Creek:								
Reservoir No. 4 .....	06388500	.11	1951-54g.	--	--	--	--	--
Blacktail Creek:								
Blacktail Creek tributary near Newcastle.....	06388800	.25	--	1960-81.	--	--	--	--
Reservoir No. 6 .....	06389000	3.80	1951-54g.	--	--	--	--	--
Reservoir No. 6A .....	06389500	.44	1952-54g.	--	--	--	--	--
Reservoir No. 6C.....	06390000	.16	1954g.	--	--	--	--	--
Reservoir No. 6B.....	06390500	1.52	1953-54g.	--	--	--	--	--
Reservoir No. 5A .....	06391500	1.39	1953-54g.	--	--	--	--	--
Reservoir No. 2 .....	06392000	6.06	1951-53g.	--	--	--	--	--
Reservoir No. 5 .....	06392500	.54	1951-54g.	--	--	--	--	--
Beaver Creek at Mallo Camp, near Four Corners.....	06392900	10.3	1974-82;1991-	--	--	--	--	--
Stockade Beaver Creek near Newcastle.....	06392950	107	1974-82;1991-	--	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN</b> --continued								
<b>CHEYENNE RIVER BASIN</b> --continued								
Cheyenne River--continued								
Beaver Creek--continued								
Stockade Beaver Creek--continued								
Redbird Canyon:								
Gillette Canyon:								
Reservoir No. 45, S. Dak .....	06393000	1.02	1951-54.	--	--	--	--	--
Beaver Creek near Newcastle .....	06394000	e1,320	1943-97.	--	1946-47; 1949-53; 1967-86.	1977-78.	1978.	
Beaver Creek near Burdock (Edgemont), S. Dak .....	06394500	e1,540	1904-06;1928-32.	--	--	--	--	--
Reservoir No. 39A.....	06394700	.12	1953-54g.	--	--	--	--	--
Beaver Creek--continued								
Reservoir No. 46, S. Dak.....	06394800	0.30	1951-54g.	--	--	--	--	--
Cheyenne River at Edgemont, S. Dak .....	06395000	7,143	1903-06;1928-33; 1946-	--	--	--	--	--
Cottonwood Creek:								
Reservoir No. 47B .....	06395500	.05	1952-54g.	--	--	--	--	--
Reservoir No. 47A, S. Dak.....	06396000	.05	1952-54g.	--	--	--	--	--
Belle Fourche River:								
Belle Fourche River tributary near Turnercrest .....	06425700	.35	--	1961-71.	--	--	--	--
Belle Fourche River below Rattlesnake Creek, near Piney .....	06425720	495	1975-83;2001-	--	1975-83; 2001-	1976-83.	1976-77; 1980-82.	
Coal Creek near Piney.....	06425750	71.8	1980-83.	--	1981-83.	1981-83.	1981.	
Belle Fourche River above Dry Creek, near Piney .....	06425780	594	1975-83.	--	1975-83.	1976-83.	1976-77; 1981-82.	
Caballo Creek near Gillette .....	06425800	122	--	1959-69.	--	--	--	--
Caballo Creek at mouth, near Piney.....	06425900	260	1977-83.	--	1978-83; 2000-	1977-83.	1978-81.	
Raven Creek near Moorcroft.....	06425950	76	1977-83.	--	1978-82.	1977-82.	1978-82.	
Belle Fourche River near Moorcroft .....	06426000	e1,380	1923-33.	--	--	--	--	
Donkey Creek:								
Stonepile Creek:								
Burlington Lake Ditch at Gillette .....	06426095	--	1988-90.	--	--	--	--	--
Stonepile Creek at Gillette.....	06426100	11.2	1988-92.	--	1988-92.	1988-92.	1988-92.	
Donkey Creek near Gillette.....	06426130	63.4	2000-	--	--	--	--	
Stonepile Creek at mouth, near Gillette .....	06426160	14.5	2000-	--	--	--	--	

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>CHEYENNE RIVER BASIN</b> --continued							
Cheyenne River--continued							
Donkey Creek--continued							
Donkey Creek tributary above reservoir, near Gillette .....	06426195	.2	--	1970-84.	--	--	--
Donkey Creek tributary near Gillette .....	06426200	.28	--	1960-76.	--	--	--
Donkey Creek near Moorcroft .....	06426400	246	1977-81.	--	1977-89; 2000-	1977-81.	1977-81; 1983-89.
Belle Fourche River below Moorcroft .....	06426500	1,690	1943-70;1975-82; 1985-87;1990-	--	1972; 1975-93; 1995-	1976-82; 1986-87; 1990-93; 1999.	1975-93; 1995-
Keyhole Reservoir near Moorcroft .....	06427000	1,953	1952-2001.	--	--	--	--
Belle Fourche River below Keyhole Reservoir.....	06427500	1,954	1951-95.	--	1969; 1984-90.	--	--
Inyan Kara Creek near Upton.....	06427700	96.5	--	1959-84.	1968;1974.	--	--
Belle Fourche River at Devils Tower.....	06427850	--	--	--	1967-92.	--	1973-77.
Barlow Creek near Devils Tower.....	06427880	21.9	--	1971-76.	--	--	--
Blacktail Creek near Hulett.....	06427900	42.3	--	1962-69.	--	--	--
Belle Fourche River at Hulett.....	06428000	e2,800	1929-32;1938-51.	--	--	--	--
Belle Fourche River below Hulett.....	06428050	--	--	--	1981-	--	1981-89; 1993-
Belle Fourche River tributary No. 2 near Hulett.....	06428100	10.2	--	1962-84.	--	--	--
Belle Fourche River near Alva.....	06428200	2,948	1988-98;2001-	--	--	--	--
Belle Fourche River at Wyoming-South Dakota State line.....	06428500	e3,280	1946-	--	1960; 1965-88.	1960.	1970-81.
Redwater Creek:							
Rocky Ford Creek:							
Ogden Creek near Sundance.....	06429300	8.42	--	1962-81.	--	--	--
Sundance Creek:							
Sundance Creek tributary above forest boundary, at Sundance .....	06429375	.76	--	1969-72.	--	--	--
Sundance Creek tributary at Sundance .....	06429380	1.40	--	1965-68.	--	--	--
Sundance Creek tributary near Sundance .....	06429400	1.80	--	1962-71.	--	--	--
Cold Springs Creek (head of Sand Creek) at Buckhorn .....	06429500	19.0	1974-82;1991-	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>CHEYENNE RIVER BASIN</b> --continued							
Cheyenne River--continued							
Belle Fourche River--continued							
Redwater Creek--continued							
Sand Creek above Ranch A, near Beulah.....	06429898	--	--	--	1987-91.	--	--
Sand Creek at Ranch A, near Beulah .....	06429900	260	1974-76.	--	1987-91.	--	--
Sand Creek near Ranch A, near Beulah .....	06429905	267	1976-83;1991-	--	1981-83.	--	1981-83.
Murray ditch above headgate, at Wyoming-South Dakota State line.....	06429997	--	1987-	--	--	--	--
Murray ditch at Wyoming-South Dakota State line	06430000	--	1954-87.	--	--	--	--
Redwater Creek at Wyoming-South Dakota State line	06430500	471	1929-31;1936-37;1954-	--	1969-70.	1971-83.	--
<b>NIOBRARA RIVER BASIN</b>							
Niobrara River at Wyoming-Nebraska State line.....	06454000	e450	1955-94.	--	--	--	--
<b>PLATTE RIVER BASIN</b>							
North Platte River near Northgate (Pinkhampton), Colo .	06620000	1,431	1904;1915-	--	1965-86.	1971-74.	1973-82.
Douglas Creek above Keystone .....	06620400	22.1	1955-65.	--	--	--	--
Douglas Creek near Keystone .....	06620500	25.6	1912;1914-16.	--	--	--	--
Douglas Creek near Foxpark.....	06621000	120	1946-72.	--	--	--	--
Mullen Creek:							
North Fork Mullen (Mullen) Creek near French.....	06621500	--	1911a.	--	--	--	--
Big Creek at Big Creek ranger station (near Downington, Big Creek).....	06622000	106	1911a;1912-24.	--	--	--	--
French Creek near French .....	06622500	59.6	1909-24.	--	--	--	--
North Brush Creek near Saratoga .....	06622700	37.4	1960-	--	--	--	--
South Brush Creek near Saratoga.....	06622900	22.8	1960-74;1976-77;1979-	--	--	--	--
Brush Creek at upper station, near Saratoga (near Saratoga) .....	06623000	77.0	1941-47.	--	--	--	--
Brush Creek at lower station, near Saratoga (near Saratoga) .....	06623500	107	1909-15.	--	--	--	--
Encampment River above East Fork, near Encampment East Fork Encampment River at mouth, near Encampment .....	06623750	--	--	--	1991-92.	1991-92.	1991-92.
Encampment River above Hog Park Creek, near Encampment .....	06623790	--	--	--	1991-92.	1991-92.	1991-92.
Encampment River near Encampment.....	06623800	72.7	1964-	--	1964-96.	1970-96.	1970-96.
Encampment River above Encampment .....	06623900	105	1956-64.	--	--	--	--
Encampment River above Encampment .....	06624000	207	1940-44.	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Encampment River (Grand Encampment Creek) at Encampment (Perym's ranch) .....	06624500	211	1900;1909-24; 1928-32.	--	--	--	--
Encampment River at mouth, near Encampment.....	06625000	265	1940-	--	1965-89.	--	1973-78; 1982-83; 1987-89.
Cow Creek near Saratoga.....	06625500	58.9	1911-12.	--	--	--	--
North Platte River at Highway 130, near Saratoga (formerly 412117106433201).....	06625650	--	--	--	1977; 1984-91.	--	--
Spring Creek:							
North Spring Creek near Saratoga .....	06626000	24.5	1913-15.	--	--	--	--
Spring Creek near Saratoga.....	06626500	114	1911-12.	--	--	--	--
North Platte River at Saratoga .....	06627000	2,840	1903-06;1909-70.	--	1967.	--	--
Jack Creek at Jack Creek Park, near Saratoga .....	06627300	12.2	1966-68.	--	--	--	--
Jack Creek at Matheson Ranch, near Saratoga .....	06627500	41.2	1913-24.	--	--	--	--
Jack Creek below Little Jack (Willow) Creek, near Saratoga.....	06627600	98.2	1956-58;1966-68.	--	--	--	--
Jack Creek above Coyote Draw, near Saratoga .....	06627800	109	1990-	--	--	--	--
Jack Creek at Blydenburgh's ranch, near Saratoga .....	06628000	113	1912-14.	--	--	--	--
Jack Creek near Saratoga .....	06628500	138	1911-12.	--	--	--	--
North Platte River near Saratoga .....	06628550	--	--	--	1971-74.	--	--
Sage Creek below Adams Reservoir, near Rawlins .....	06628700	24.3	1966-68.	--	--	--	--
Sage Creek near Rawlins .....	06628750	52.0	1966-68.	--	--	--	--
Sage Creek near Saratoga.....	06628800	263	1973-81.	--	1972-81.	1972-81.	--
Pass Creek near Elk Mountain .....	06628900	91.5	1957-	--	1983.	--	--
Pass Creek near Saratoga .....	06629000	106	1929-32.	--	--	--	--
Rattlesnake Creek near Walcott .....	06629100	13.9	--	1962-74.	1983.	--	--
Coal Bank Draw:							
Coal Bank Draw tributary near Walcott.....	06629150	3.65	--	1962-81.	--	--	--
Coal Bank Draw tributary No. 2 near Walcott.....	06629200	2.41	--	1962-81.	--	--	--
Pass Creek tributary near Walcott.....	06629300	.66	--	1963-67.	--	--	--
Pass Creek near Walcott.....	06629500	230	1911.	--	--	--	--
St. Mary Creek:							
St. Mary Creek tributary No. 2 near Hanna .....	06629600	3.90	--	1963-67.	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Big Ditch--continued							
Kenny Creek near Hanna .....	06629650	46	--	1963-67.	--	--	--
St. Mary Creek tributary near Sinclair .....	06629700	46	--	1959-71.	--	--	--
Sugar Creek:							
Coal Creek near Rawlins.....	06629800	7.32	--	1959-81.	--	--	--
Great Divide basin:							
Delaney Draw near Red Desert .....	06629850	32.8	--	1961-75.	--	--	--
North Platte River above Seminole Reservoir, near Sinclair (Parco) .....	06630000	b4,175	1939-	--	1960-2001.	1974; 1986-94.	1973-99; 2001.
Big Ditch:							
Big Ditch tributary near Hanna .....	06630200	7.42	--	1959-81.	--	--	--
Big Ditch near Coyote Springs .....	06630300	110	1975-81.	--	1976; 1978-81.	1976; 1978-81.	--
North Ditch near Coyote Springs .....	06630330	22.6	1976-81.	--	1976; 1978-81.	1976;1981.	--
Medicine Bow River at Bow Ranger Station, near Elk Mountain .....							
East Fork Medicine Bow River near Elk Mountain .....	06630480	17.8	1972-75.	--	--	--	--
Medicine Bow River near Elk Mountain .....	06630500	65.6	1946-47.	--	--	--	--
Mill Creek near Elk Mountain .....	06630600	25.8	--	1963-65.	--	--	--
Bear Creek near Elk Mountain.....	06630800	8.93	--	1962-74.	--	--	--
Medicine Bow River near Medicine Bow.....	06631000	190	1911-17;1919-24.	--	--	--	--
Wagonhound Creek near Elk Mountain.....	06631100	25.6	--	1962-74.	--	--	--
Third Sand Creek:							
Third Sand Creek tributary near Medicine Bow ....	06631140	.78	--	1965-73.	--	--	--
Third Sand Creek near Medicine Bow .....	06631150	10.8	--	1965-81.	--	--	--
Foote Creek near Arlington.....	06631200	5.49	--	1962-69.	--	--	--
Foote Creek tributary No. 2 near Arlington .....	06631230	1.43	--	1962-65.	--	--	--
Foote Creek tributary near Arlington .....	06631260	2.10	--	1962-70.	--	--	--
Medicine Bow River above Rock Creek, near Medicine Bow .....							
Rock Creek:							
Deep Creek near Arlington.....	06632000	3.13	1914-18.	--	--	--	--
Carlson Creek ditch near Arlington.....	06632050	--	1992-94.	--	--	--	--
Carlson Creek ditch above Wagonhound Creek, near Arlington.....	06632055	--	1994-95.	--	--	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Medicine Bow River--continued							
Rock Creek above King Canyon Canal, near Arlington .....	06632400	62.9	1954-	--	1967.	--	--
Rock Creek at (near) Arlington .....	06632500	64.5	1910-18;1939-65.	--	--	--	--
Threemile Creek near Arlington.....	06632600	6.31	--	1962-74.	--	--	--
Onemile Creek near Arlington .....	06632700	3.59	--	1962-74.	--	--	--
Rock Creek near Rock River.....	06633000	187	1911-12;1928-33.	--	--	--	--
Rock Creek below Rock River.....	06633500	218	1940-42;1951-68.	--	1965-68.	--	--
Medicine Bow River at Medicine Bow.....	06634000	1,030	1901.	--	--	--	--
Little Medicine Bow River at Heward Ranch.....	06634030	--	--	--	1972-73.	--	--
Little Medicine Bow River near Shirley Basin .....	06634100	--	--	--	1972-73.	--	--
Sheep Creek near Marshall.....	06634200	61.0	--	1961-81.	--	--	--
Sheep Creek near Medicine Bow .....	06634300	174	--	1961-81.	--	--	--
Muddy Creek near Shirley.....	06634500	76.6	1915-16.	--	--	--	--
Little Medicine Bow River near Medicine Bow .....	06634600	963	1899-2000;1973-84.	--	1965-84.	1971-82.	--
Little Medicine Bow River at Boles Spring, near Medicine Bow .....	06634620	969	1984-	--	1985-89.	--	--
Medicine Bow River tributary near Hanna .....	06634910	3.01	--	1965-84.	--	--	--
Willow Springs Draw:							
Willow Springs Draw tributary near Hanna.....	06634950	1.98	--	1965-73.	--	--	--
Hanna Draw near Hanna .....	06634990	21.6	1975-81.	--	1975-81.	1975-81.	--
Medicine Bow River above Seminoe Reservoir, near Hanna .....	06635000	b2,338	1939-	--	1965-93.	1971-82; 1987-89.	--
Seminoe Reservoir near Leo.....	06635500	b7,230	1939-2001.	--	1972-78h.	--	1975-78h.
North Platte River above Pathfinder Reservoir .....	06636000	b7,241	1911;1913-39;1950-59.	--	1969-82; 1987-89.	1987-89.	--
Sage Creek above Pathfinder Reservoir.....	06636500	190	1915-25.	--	--	--	--
Deweese Creek near Alcova .....	06637000	16.4	1917-24.	--	--	--	--
Sand Creek near Alcova.....	06637500	51.0	1915-24.	--	--	--	--
Sweetwater River near South Pass City .....	06637550	177	1958-73.	1974-81.	1975-78.	1975-78.	--
Willow Creek near Atlantic City.....	06637600	3.08	1957-58.	--	--	--	--
Willow Creek near South Pass City .....	06637700	9.21	1957-58.	--	--	--	--
Sweetwater River above Rock Creek, near Atlantic City	06637740	--	--	--	--	1981.	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Sweetwater River--continued							
Rock Creek above Rock Creek Reservoir.....	06637750	e9.2	1962-95.	--	1978.	1975.	--
Rock Creek near South Pass City.....	06637800	9.87	1957-60.	--	--	--	--
Rock Creek near Atlantic City.....	06637850	14.6	1957.	--	--	--	--
Slate Creek near Atlantic City.....	06637900	5.92	1957-73.	--	--	--	--
Rock Creek at Atlantic City.....	06637910	21.3	1957-76.	--	1957-59; 1966-67; 1969-71; 1976.	1964-68; 1971-72; 1975-76.	--
Rock Creek at Oregon Trail Crossing, near Atlantic City.....	06637950	--	--	--	1981.	1981.	--
Sweetwater River near Atlantic City.....	06638000	438	1946-51.	--	--	--	--
Sweetwater River near Sweetwater Station.....	06638090	849	1973-92.	--	--	--	--
Sweetwater River at Sweetwater Station, near Lander.	06638100	889	--	1965-73.	--	--	--
Crooks Creek:							
West Fork Crooks Creek near Jeffrey City.....	06638300	11.6	--	1961-81.	1976-78.	1976-78.	--
Muddy Creek:							
Coal Creek near Muddy Gap.....	06638350	6.08	--	1961-81.	--	--	--
Cherry Creek near Lamont.....	06638400	29.4	--	1960-70.	--	--	--
Sweetwater River at Devils Gate, near Splitrock (near Splitrock).....	06638500	2,290	1902-03.	--	--	--	--
Sweetwater River near Alcova.....	06639000	2,327	1913-24;1938-	--	1964-90.	1972; 1975-82.	1973-82.
Horse Creek at Highway 220, near Alcova.....	06639480	--	--	--	1982-90.	--	--
Horse Creek near Alcova.....	06639500	117	1915-24.	--	--	--	--
Canyon Creek near Alcova.....	06640000	97.1	1915-24.	--	--	--	--
Pathfinder Reservoir near Alcova.....	06640500	b10,711	1909-2001.	--	1975-77h.	--	1975-77h.
North Platte River below Pathfinder Reservoir (at Pathfinder).....	06641000	b14,671	1905-60.	--	--	--	--
Bear Springs Creek near Alcova.....	06641400	9.33	--	1960-84.	--	--	--
Alcova Reservoir at Alcova.....	06641500	b10,766	1938-2001.	--	1975-76h.	--	1975-76h.
North Platte River at Alcova.....	06642000	b10,812	1904-05;1934-98.	--	1965-88; 1992-95.	1976; 1980-86; 1988.	1973-87.
Bates Creek near Freeland.....	06642500	118	1940-41;1945-51.	--	1981-86.	--	--
Stinking Creek above Lawn Creek, near Alcova.....	06642650	91.8	1983-84.	--	1983-84.	1983-84.	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
Platte River--continued							
Bates Creek--continued							
Lawn Creek near Alcova.....	06642700	11.5	--	1961-84.	--	--	--
Stinking Creek tributary near Alcova.....	06642730	1.34	--	1961-71.	--	--	--
Stinking Creek near Alcova .....	06642760	117	--	1961-81.	--	--	--
Bates Creek near Alcova (Casper) .....	06643000	393	1916-24;1932-61.	--	1965; 1968-86; 1988; 1992-93.	1988.	--
Coal Creek near Goose Egg .....	06643300	5.39	--	1960-84.	--	--	--
North Platte River near Goose Egg (Casper).....	06643500	11,423	1917-19;1924;1947; 1950-60;1983-86; 1988-95.	--	1957-60. 1985-87; 1989.	1985-87.	1987.
North Platte River near Goose Egg .....	06643510	--	--	--	1977-79; 1982-89; 1992-95.	1983;1988.	1977-79; 1982-87.
Poison Spider Creek near Goose Egg .....	06644000	301	1950-56.	--	1965; 1967-70; 1979;1986; 1988; 1992-95.	1988.	--
North Platte River at Mills.....	06644085	--	--	--	1970-89; 1992.	1988.	1974-77; 1982-87.
Casper Creek:							
Middle Fork Casper Creek near Bucknam .....	06644120	--	--	--	1967-75; 1988; 1992-95.	1988	--
South Fork Casper Creek:							
Clarks Gulch near Natrona .....	06644200	2.64	--	1961-72.	--	--	--
Casper Creek at Casper .....	06644500	668	1946-56.	--	1965; 1967-88; 1992-95.	1988.	1974; 1982-87.
North Platte River at Casper .....	06644550	--	--	--	1971-94.	1971-82.	1982-87.
Reefs Draw:							
Reefs Draw tributary near Casper .....	06644700	.47	--	1959-71.	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Reefs Draw--continued							
Sand Spring Creek:							
McKenzie Draw:							
McKenzie Draw tributary near Casper .....	06644840	2.02	--	1965-81.	--	--	--
North Platte River below (at) Casper.....	06645000	b12,574	1929-59.	--	1949-53; 1957-59; 1967-	1971;1988.	1970-89.
Smith Creek above Otter Creek, near Casper .....	06645150	9.91	1974-79;1987-96.	--	--	--	--
Smith Creek at Otter Creek, near Casper .....	06645160	10.9	1974-79.	--	--	--	--
Otter Creek at mouth, near Casper .....	06645164	6.50	1987-96.	--	--	--	--
Smith Creek below Otter Creek, near Casper .....	06645166	18.5	1987-96.	--	--	--	--
Beaver Creek above Pole Creek, near Casper.....	06645174	4.67	1987-96.	--	--	--	--
Pole Creek near Casper .....	06645178	2.70	1987-96.	--	--	--	--
North Platte River at Parkerton.....	06645500	b17,135	1919-24.	--	--	--	--
Deer Creek in Canyon, near Glenrock .....	06646000	139	1946-51;1985-2002.	--	1985-91.	1985-91.	1985-91.
Little Deer Creek above East Cart Creek, near Glenrock.....	06646280	3.89	1974-76.	--	--	--	--
Little Deer Creek below East Cart Creek, near Glenrock.....	06646300	7.48	1974-76.	--	--	--	--
Deer Creek at Glenrock .....	06646500	212	1916-24;1928-33; 1935-61.	--	--	--	--
Deer Creek below Millar wasteway, at Glenrock .....	06646600	213	1961-92.	--	1965; 1967-86.	--	--
North Platte River below Deer Creek, near Glenrock .....	06646610	--	--	--	1979.	--	--
Dry Creek:							
East Fork Dry Creek:							
East Fork Dry Creek tributary near Glenrock .....	06646700	2.60	--	1961-81.	--	--	--
Sand Creek near Glenrock .....	06646780	79.9	1977-81.	--	1978-81.	1978-81.	1978-81.
North Platte River near Glenrock .....	06646800	b13,538	1959-92.	--	1960-86.	1976.	--
Running Dutchman Canal near Careyhurst.....	06647000	--	1935-50.	--	--	--	--
North Platte River near Careyhurst.....	06647020	--	--	--	1969-76.	--	--
Box Elder Creek at Boxelder .....	06647500	63.0	1946-51;1961- 67;1971-	--	--	--	--
Box Elder Creek near Boxelder .....	06647800	136	1981-84.	--	--	--	--
Box Elder Creek at Converse County Park, near Careyhurst .....	06647810	138	1981-84.	--	--	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Box Elder Creek--continued							
Little Box Elder Creek near Careyhurst .....	06647890	7.18	1974-88.	--	--	--	--
Little Box Elder Creek at Little Box Elder Cave, near Careyhurst .....	06647900	8.47	1974-88.	--	--	--	--
Little Box Elder Spring near Careyhurst .....	06647910	--	1980-86.	--	1983.	--	--
Cottonwood Creek near Careyhurst .....	06647920	2.33	1981-84.	--	--	--	--
Box Elder Creek below Interstate 25, near Careyhurst.	06647990	--	--	--	1981-86.	--	--
Box Elder Creek near Careyhurst .....	06648000	202	1911;1915-24;1928-33; 1935-69.	--	1965.	--	--
Douglas (Morton) Canal near Orpha.....	06648500	--	1935-51.	--	--	--	--
Sage Creek:							
Frank Draw:							
Frank Draw tributary near Orpha .....	06648720	.79	--	1965-73.	--	--	--
Sage Creek tributary near Orpha.....	06648780	1.38	--	1965-84.	--	--	--
La Prele Creek near Douglas.....	06649000	135	1919-92.	--	--	--	--
La Prele Creek below La Prele Reservoir .....	06649200	152	1961-68.	--	1965.	--	--
La Prele Creek near Orpha (Fetterman).....	06649500	177	1916;1918;1923-24; 1928-33;1935-70.	--	1981-86.	--	--
North Platte River at Orpha .....	06649520	--	--	--	1974-75.	--	--
North Platte River tributary near Douglas .....	06649900	8.53	--	1961-81.	--	--	--
North Platte River near (at) Douglas .....	06650000	b18,338	1891-94;1919-23; 1929-39;1946-59.	--	--	--	--
Wagonhound Creek near La Bonte .....	06650500	112	1916-24;1929-32; 1937-69.	--	1965;1979; 1981-86.	--	--
La Bonte Creek:							
West Fork La Bonte Creek near La Bonte .....	06651000	20.6	1946-51.	--	1979.	--	--
La Bonte Creek near La Bonte.....	06651500	287	1916-24;1928-33; 1935-69.	--	1965; 1981-86.	--	--
Sand Creek near Orin .....	06651800	27.8	--	1955; 1961-84.	--	--	--
North Platte River at Orin (Orin Junction) (McKinley) ...	06652000	b15,025	1895-99;1917-18;1924; 1958-	--	1966-89.	1971-82.	1973-89.
Shawnee Creek:							
Shawnee Creek tributary near Orin.....	06652200	.33	--	1961-76.	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Lost Creek:							
Watkins (Watson) Draw near Lost Springs.....	06652400	6.95	--	1960-84.	--	--	--
Glendo Reservoir near Glendo .....	06652700	b15,545	1958-2001.	--	1975-76h.	--	1975-76h.
North Platte River below Glendo Reservoir .....	06652800	b15,548	1957-	--	1966-88.	--	1973-82.
Horseshoe Creek near Esterbrook .....	06653000	45.5	1946-51.	--	--	--	--
Horseshoe Creek near Binford .....	06653100	e110	1961-64.	--	--	--	--
Horseshoe Creek near Cassa .....	06653300	195	1961-68;1988-96.	--	1965.	--	--
Horseshoe Creek near Glendo.....	06653500	211	1916-18;1921-24; 1928-33;1935-70; 1988-96.	--	--	--	--
North Platte River near Cassa.....	06654000	b19,796	1946-57.	--	1953.	--	--
Cottonwood Creek near Fletcher Park .....	06654500	51.1	1946-51.	--	--	--	--
Cottonwood Creek below Dagley Creek, near Binford	06654510	54.0	1974-76.	--	--	--	--
Cottonwood Creek below Tunnel Outlet, near Binford	06654520	57.2	1974-76.	--	--	--	--
Cottonwood Creek near Binford .....	06654550	61	1973-74.	--	--	--	--
Cottonwood Creek at (near) Wendover .....	06655000	196	1916-24;1929-33; 1935-42;1946-55; 1973-74.	--	--	--	--
Deadmans Gulch near Guernsey .....	06655360	.34	--	1965-72.	--	--	--
Fish Canyon near Guernsey .....	06655380	1.06	--	1965-76.	--	--	--
Black Canyon near Guernsey.....	06655400	.22	--	1965-70.	--	--	--
Guernsey Reservoir near Guernsey .....	06655500	b16,224	1928-2001.	--	1972-73.	--	--
Hartville Canyon:							
Sparks Canyon near Hartville .....	06655750	.74	--	1965-72.	--	--	--
North Platte River (North Platte River and Interstate Canal) below Guernsey Reservoir (near, at Guernsey) (at, above Whalen) .....	06656000	b16,237	1900-98.	--	1950-52; 1955-58; 1965-86.	1979.	1980-81.
North Platte River near Guernsey.....	06656500	--	--	--	1981-83.	--	1981-83.
North Platte River (at recorder station) below Whalen (below Whalen) diversion dam.....	06657000	b16,237	1909-	--	1970-76.	--	1974.
Laramie River near (at) Glendevey, Colo .....	06657500	101	1904-05;1910-82.	--	--	--	--
Laramie River near Jelm .....	06658500	294	1904-05;1911-71.	--	1965;1968.	--	--
Laramie River at Woods Landing (Woods).....	06659000	392	1890-92;1895a; 1896-1911.	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Laramie River and Pioneer Canal near Woods .....	06659500	434	1912-24;1926-27;1931-	--	--	--	--
Sand Creek at Colorado-Wyoming State line .....	06659580	29.2	1968-	--	--	--	--
Sand Creek near Tie Siding.....	06659600	39.9	1957-68.	--	--	--	--
Laramie River at Laramie .....	06660000	b1,071	1933-72.	--	1968-70.	--	--
Laramie River above Howell .....	06660070	--	--	--	1980-89.	--	1980-89.
Laramie River at Howell .....	06660100	--	--	--	1974-80.	1974.	1974-80.
Laramie River at Two Rivers.....	06660500	b1,224	1908-27;1932-72.	--	1966-92.	--	--
Little Laramie River near Filmore (Hatton).....	06661000	157	1902-03;1911-26;1932-	--	--	--	--
Little Laramie River at Two Rivers (at Haley's ranch, near Laramie).....	06661500	b376	1903;1910-27;1933-72.	--	1965-87;1990-92.	--	--
Fourmile Creek near Centennial.....	06661530	7.34	--	1963-68.	--	--	--
Onemile Creek near Centennial.....	06661550	6.12	--	1963-65.	--	--	--
Fourmile Creek tributary near Centennial .....	06661570	.28	--	1963-71.	--	--	--
Sevenmile Creek near Centennial .....	06661580	11.2	--	1962-84.	--	--	--
Laramie River near Bosler .....	06661585	b1,790	1972-	--	1990-92.	1990-92.	--
Dutton Creek:							
Sheep Creek near Arlington .....	06661590	5.46	--	1962-63.	--	--	--
Dutton Creek near McFadden .....	06661600	19.9	1958-63.	--	--	--	--
Cooper Creek near Arlington .....	06661700	8.51	--	1962-65.	--	--	--
Cooper Creek tributary near Arlington.....	06661740	1.83	--	1962-65.	--	--	--
South Fork Cooper Creek near Arlington.....	06661750	6.41	--	1962-65.	--	--	--
Laramie River near Lookout .....	06662000	b2,174	1912-17;1921-27;1932-96.	--	1965;1976-80.	--	--
Wheatland Reservoir No. 2 near Lookout.....	06662500	b2,221	1951-66.	--	--	--	--
Laramie River at McGill .....	06663000	b2,230	1912-15.	--	--	--	--
Laramie River below Wheatland Reservoir No. 2 (below McGill).....	06663500	b2,248	1916-17;1951-63.	--	--	--	--
Laramie River below Luman Creek, near Wheatland...	06663900	--	--	--	1989-92.	--	--
Laramie River near Wheatland .....	06664000	b2,527	1912-16;1929-33.	--	--	--	--
Sybille Creek above Mule Creek, near Wheatland ....	06664400	194	1974-	--	1984-87.	--	--
Sybille Creek below Mule Creek, near Wheatland ....	06664490	219	1968-73.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Laramie River--continued							
Sybille Creek above Bluegrass Creek, near							
Wheatland .....	06664500	225	1941-68.	--	--	--	--
Bluegrass Creek near Wheatland.....	06664900	139	1958-63;1968-79.	--	--	--	--
Sybille Creek below Bluegrass Creek, near							
Wheatland .....	06665000	366	1950-68.	--	1965.	--	--
Wheatland Canal No. 1 near Wheatland .....	06665500	--	1952-63.	--	1958-59.	--	--
Sybille Creek above Canal No. 3, near Wheatland ....	06665790	--	1980-	--	--	--	--
Wheatland Canal No. 3 near Wheatland .....	06665800	--	1958-63.	--	1958-59.	--	--
Wheatland Canal No. 2 near Wheatland .....	06666000	--	1952-63.	--	1958-59.	--	--
Sybille Creek near Muleshoe Ranch, near Wheatland	06666500	507	1950-58.	--	--	--	--
Sybille Creek at Muleshoe Ranch, near Wheatland...	06666600	508	1958-63;1966-67.	--	1959.	--	--
Sybille Creek near Wheatland.....	06667000	515	1912-16.	--	--	--	--
Laramie River above North Laramie River, near Uva..	06667060	3,131	1973-79.	--	--	--	--
North Laramie River near Garrett .....	06667200	e46	1963-65.	--	--	--	--
North Laramie River (at upper station) near							
Wheatland .....	06667500	370	1914-23;1939-71; 1973-74.	--	--	--	--
Piney Creek:							
Piney Creek tributary at upper station, near							
Wheatland.....	06667560	.18	--	1965-72.	--	--	--
Piney Creek tributary at lower station, near							
Wheatland.....	06667580	.58	--	1965-70.	--	--	--
North Laramie River at Wilson's ranch, near							
Wheatland .....	06668000	377	1912-14.	--	--	--	--
Rabbit Creek near Wheatland.....	06668040	1.30	--	1965-84.	--	--	--
Fish Creek near Fletcher Park .....	06668200	6.33	1973-74.	--	--	--	--
North Laramie River at Uva.....	06668500	530	1911-12.	--	--	--	--
Laramie River at Uva .....	06669000	b3,662	1895-99;1903.	--	--	--	--
Wheatland Creek below Wheatland.....	06669050	--	--	--	1982-	--	1982-
Wheatland Creek near Uva .....	06669100	56.7	1973-74.	--	--	--	--
Chugwater Creek at Platte-Laramie County line, near							
Chugwater (formerly 413918105021401) .....	06669350	--	--	--	1984-89.	--	--
Chugwater Creek at Chugwater .....	06669500	349	1911-21;1938-40.	--	1984-89.	--	--
Chugwater Creek tributary near Chugwater.....	06669600	.23	--	1960-68.	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Laramie River--continued							
Chugwater Creek near Uva .....	06669850	654	1965-68;1973-74.	--	1958-59; 1965; 1984-85.	--	--
Laramie River near Uva .....	06670000	b4,440	1952-68.	--	1956-59.	--	--
Laramie River tributary near Guernsey .....	06670100	1.97	--	1971-79.	--	--	--
Laramie River tributary No. 2 near Fort Laramie .....	06670480	8.91	--	1971-76.	--	--	--
Laramie River near (at) Fort Laramie .....	06670500	b4,564	1915-	--	1965-88.	1971-82.	1973-82.
North Platte River near Lingle.....	06670900	b25,095	1968-75.	--	1969-75.	1969-75.	--
Rawhide Creek:							
Dry Rawhide Creek near Lingle.....	06670985	20	--	1969-81.	--	--	--
Rawhide Creek above Interstate Canal, near Lingle .....	06670990	--	--	--	1970-73.	--	--
Rawhide Creek near Lingle.....	06671000	522	1928-92.	--	1965; 1970-73.	--	--
North Platte River at Vaughn .....	06671500	b25,648	1924.	--	--	--	--
North Platte River at Torrington.....	06672000	b25,742	1917-24;1926-39.	--	1975-79.	--	--
Cherry Creek drain near Torrington.....	06672500	356	1931-32;1935-92.	--	1969-72.	--	--
Arnold drain near Torrington.....	06673000	--	1931;1940-42.	--	1971-72.	--	--
Katzer drain near Henry, Nebr .....	06673500	b45.9	1928-92.	--	1971.	--	--
Mitchell Canal at Wyoming-Nebraska State line.....	06674000	--	1931-32;1924; 1934-41.	--	--	--	--
North Platte River at Wyoming-Nebraska State line.....	06674500	b22,218	1929-	--	1964-	1971-82; 1998-	1970-89.
Horse Creek:							
Horse Creek tributary near Little Bear .....	06675300	8.16	--	1961-81.	--	--	--
Horse Creek near Meriden .....	06675500	425	1945-47.	--	--	--	--
Horse Creek near Johnson Ranch, near La Grange.....	06675850	595	1978-79.	--	--	--	--
Horse Creek near Little Horse Creek .....	06676000	--	1911-12.	--	--	--	--
Horse Creek (at Wye Cross Bridge) near La Grange....	06676500	645	1912-20.	--	--	--	--
Horse Creek at WyCross Ranch, near La Grange .....	06676550	651	1965-73;1978-79.	--	1965; 1969-72; 1981-83.	1969-72.	1981-83.
Bear Creek:							
South Fork Bear Creek near Little Bear .....	06676700	34.2	--	1960-76.	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
Horse Creek--continued							
Bear Creek near La Grange .....	06676900	516	1978-79.	--	--	--	--
Bear Creek below Lovercheck Canyon, near LaGrange.....	06676905	--	--	--	1992.	--	--
Horse Creek near Yoder.....	06677000	1,347	1928-33;1935-45.	--	--	--	--
Horse Creek at lower station, near Yoder .....	06677010	e1,320	1965-72.	--	1969-72.	--	--
Horse Creek at Wyoming-Nebraska State line .....	06677100	1,530	1969-71.	--	--	--	--
North Platte River at Mitchell, Nebr.....	06679500	i24,300	1901-13;1916-18; 1920-94.	--	--	--	--
South Platte River:							
Lonetree Creek at Carr, Colo .....	06753400	--	1993-95.	--	1993-95.	1993-95.	--
South Platte River near (at) Kersey, Colo .....	06754000	9,598	1901-03;1905-	--	1993-	1993-	--
Middle (Fork) Crow Creek near Hecla.....	06754500	25.8	1902-03;1933-69.	--	--	--	--
South (Fork) Crow Creek near Hecla.....	06755000	13.9	1933-69.	--	--	--	--
North Fork Crow Creek near Hecla.....	06755500	27.9	1933-44;1948.	--	--	--	--
Crow Creek at Roundtop Road, near Cheyenne .....	06755800	239	1994-96.	--	1986-92.	--	--
Diamond Creek below Roundtop Road, at F. E. Warren Air Force Base .....	06755840	10.75	1994-96.	--	--	--	--
Diamond Creek at F.E. Warren Air Force Base .....	06755860	10.8	1992-96.	--	--	--	--
Diamond Creek at mouth, at F.E. Warren Air Force Base .....	06755880	10.9	1992-96.	--	--	--	--
Crow Creek at F.E. Warren Air Force Base .....	06755950	253	1994-96.	--	1983-94.	--	1987-94.
Crow Creek at 19th Street, at Cheyenne .....	06755960	257	1993-	--	--	--	--
Crow Creek near Cheyenne.....	06756000	297	1922-24;1951-57.	--	1972-75; 1983-92.	--	1972-75; 1987-90.
Crow Creek near Archer .....	06756060	--	--	--	1990-	--	1990-
Crow Creek near Carpenter.....	06756100	415	1990-96.	--	1990-92.	--	1990-92.
Lodgepole Creek near Federal .....	06761000	e25	1933-38.	--	--	--	--
South Fork Lodgepole Creek near Federal.....	06761500	e16	1933-38.	--	--	--	--
Ninemile Draw:							
Ninemile Draw tributary near Federal.....	06761600	1.49	--	--	1960-76.	--	--
Muddy Creek:							
Muddy Creek tributary near Burns.....	06761700	24.8	--	--	1960-76.	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

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<b>MISSOURI RIVER BASIN</b> --continued							
<b>PLATTE RIVER BASIN</b> --continued							
North Platte River--continued							
South Platte River--continued							
Lodgepole Creek--continued							
Lodgepole Creek tributary near Pine Bluffs.....	06761900	.44	--	1960-81.	--	--	--
Lodgepole Creek tributary No. 2 near Albin.....	06762600	5.69	--	1960-84.	--	--	--
Lodgepole Creek tributary No. 3 near Albin.....	06762700	.75	--	1960-71.	--	--	--
<b>COLORADO RIVER BASIN</b>							
<b>GREEN RIVER BASIN</b>							
Green River near Kendall .....	09188000	271	1910-12;1918.	--	--	--	--
Green River at Warren Bridge, near Daniel .....	09188500	468	1931-	--	1962-64; 1967-72; 1974-82.	1975-78.	1974-82.
Beaver Creek near Daniel .....	09189000	141	1938-54.	--	--	--	--
North Horse (head of Horse Creek) Creek above Sherman Ranger Station .....	09189495	42.8	1982-84.	--	--	--	--
Horse Creek at Sherman Ranger Station.....	09189500	43.0	1954-74.	--	1976-78.	1976;1978.	1976; 1978.
South Horse Creek near Merna .....	09189550	33.3	1982-85.	--	--	--	--
Horse Creek near Daniel .....	09190000	106	1931-54;1982-85.	--	1969;1977.	1977.	1977.
Horse Creek at Daniel .....	09190500	173	1913-18.	--	--	--	--
Green River near Daniel .....	09191000	932	1912-32.	--	--	--	--
Cottonwood Creek:							
South Cottonwood Creek near Big Piney .....	09191300	21.4	1982-84.	--	--	--	--
Cottonwood Creek near Daniel .....	09191500	202	1938-54.	--	--	--	--
Cottonwood Creek near Big Piney (North channel and South channel) .....	09192000	227	1915-19;1931-32.	--	--	--	--
Cottonwood Creek near mouth, near Big Piney.....	09192500	238	1938-40.	--	--	--	--
Green River near Big Piney .....	09192600	e1,260	--	--	1967-86.	1975-78.	--
New Fork River above New Fork Lakes.....	09192750	21.8	1985.	--	--	--	--
New Fork River (New Fork) below New Fork Lake, near Cora .....	09193000	36.2	1938-72.	--	--	--	--
New Fork River at Alexander's Ranch, near Cora (near Cora) .....	09193500	47.3	1910-11.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADA RIVER BASIN</b> --continued							
<b>GREEN RIVER BASIN</b> --continued							
Green River--continued							
New Fork River at Pinedale crossing, near Cora (near Cora) .....	09194000	e72	1905.	--	--	--	--
Willow Creek near Cora.....	09194500	41.8	1938-41.	--	--	--	--
Lake Creek near Cora.....	09195000	31.6	1938-41.	--	--	--	--
Duck Creek at Cora.....	09195500	e27	1938-41.	--	--	--	--
New Fork River (New Fork) near Pinedale .....	09196000	241	1938-44.	--	1975.	--	--
Pine Creek above Fremont Lake .....	09196500	75.8	1954-97;2000-	--	1975-78; 1980; 1985-88.	1975-78.	1976.
Fremont Ditch near Pinedale .....	09196940	--	1985-86;1988-95.	--	--	--	--
Highland Ditch near Pinedale.....	09196960	--	1985-86;1988-95.	--	--	--	--
Pine Creek below Fremont Lake (at Fremont Lake outlet) (near Pinedale).....	09197000	114	1910-12;1915-18; 1985-86;1988-	--	--	--	--
Pine Creek near Pinedale.....	09197500	118	1904-06.	--	--	--	--
Pine Creek at Pinedale.....	09198000	118	1903-04;1914-54.	--	--	--	--
Pole Creek below Little Half Moon Lake, near Pinedale .....	09198500	87.5	1938-1971.	--	--	--	--
Pole Creek at Fayette.....	09199000	126	1904-06.	--	--	--	--
Fall Creek near Pinedale.....	09199500	37.2	1938-1971.	--	--	--	--
Fall Creek near (at) Fayette .....	09200000	e38	1904-05.	--	--	--	--
Pole Creek near Pinedale.....	09200500	167	1910a.	--	--	--	--
New Fork River (New Fork) near Boulder .....	09201000	552	1914-69.	--	1965; 1967-71.	--	--
Boulder Creek above Boulder Lake, near Boulder ....	09201500	115	1938-39.	--	--	--	--
Boulder Creek below Boulder Lake, near Boulder ....	09202000	130	1938-73.	--	--	--	--
Boulder Creek near Boulder (New Fork) .....	09202500	135	1903-06;1914-24; 1930-32.	--	--	--	--
East Fork River (East Fork) near Big Sandy .....	09203000	79.2	1938-92.	--	1965;1968; 1971; 1975-78.	1975-78.	1976-77.
East Fork at East Fork Canal .....	09203500	106	1915-17;1920-23.	--	--	--	--
Silver Creek near Big Sandy .....	09204000	45.4	1938-1971.	--	1965;1977.	1977.	--
East Fork at Newfork .....	09204500	348	1904-06;1914-24; 1930-32.	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN</b> --continued							
<b>GREEN RIVER BASIN</b> --continued							
Green River--continued							
New Fork River--continued							
Sand Springs Draw:							
Sand Springs Draw tributary near Boulder .....	09204700	2.77	--	1961-81.	--	--	--
New Fork River near Big Piney .....	09205000	e1,230	1954-	--	1965-86.	1975-78.	1975-78.
North Piney Creek above Apperson Creek, near Mason	09205490	29.6	1982-84.	--	--	--	--
North Piney Creek near Mason (Marbleton).....	09205500	e58	1915-16;1931-72.	--	1977.	1977.	1977.
Middle Piney Creek below South Fork, near Big Piney	09206000	34.3	1939-54.	--	--	1981.	--
Middle Piney Creek above Springman Creek, near Big Piney .....	09206500	--	1938-39.	--	--	--	--
Middle Piney Creek near Big Piney .....	09207000	e46	1914-18;1931-32.	--	--	--	--
South Piney Creek near Big Piney .....	09207500	117	1938-42.	--	--	--	--
Dry Basin Creek near Big Piney .....	09207650	47.2	--	1971-81.	1975-76; 1978.	1965; 1975-76; 1978.	--
Dry Piney Creek near Big Piney .....	09207700	e67	1965-73.	--	1990-93.	1965-68; 1970-71; 1973; 1990-93.	--
La Barge Creek near La Barge Meadows ranger station	09208000	e6.3	1940-42;1950-81.	--	1975-78.	1975-78.	1976-78.
La Barge Creek above Viola .....	09208400	122	1982-84.	--	--	--	--
La Barge Creek near Viola (La Barge) .....	09208500	172	1913-16;1940-49.	--	1977-78.	1978.	1977-78.
La Barge Creek near La Barge (Tulsa) .....	09209000	193	1931-39.	--	1963.	--	--
Green River near La Barge .....	09209400	e3,910	1963-	--	1963-94.	1975-82; 1986-94.	1973-80; 1986-94.
Green River near Fontenelle .....	09209500	3,970	1946-65.	--	1962-63.	--	--
Fontenelle Creek at upper station, near Fontenelle .....	09210000	e58	1941-42.	--	--	--	--
Fontenelle Creek near Herschler Ranch, near Fontenelle .....	09210500	152	1951-	--	1975-78.	1975-78.	1977.
Fontenelle Creek near Fontenelle.....	09211000	224	1914-19;1931-53.	--	--	--	--
Green River tributary near Fontenelle.....	09211100	3.75	--	1961-74.	--	--	--
Fontenelle Reservoir near Fontenelle .....	09211150	e4,280	1964-2000.	--	1975.	--	--
Green River below Fontenelle Reservoir .....	09211200	e4,280	1963-	--	1967-	1975-78; 1980.	1973-80.

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN</b> --continued							
<b>GREEN RIVER BASIN</b> --continued							
Green River--continued							
Fourmile Gulch:							
Fourmile Gulch tributary near Fontenelle .....	09211300	14.2	--	1971-81.	--	--	--
Big Sandy River (Creek):							
Squaw Creek near Big Sandy .....	09211500	e28	1911-12.	--	--	--	--
Dutch Joe Creek near Big Sandy .....	09212000	17.0	1911-12.	--	--	--	--
Big Sandy River (Creek) at Leckie Ranch, near Big Sandy (near Big Sandy) .....	09212500	e94	1910-11;1939-87.	--	1961-62; 1975-78.	1974-78.	1977.
Big Sandy Creek near Eden .....	09213000	265	1911;1912a.	--	--	--	--
Big Sandy River (Creek) near Farson .....	09213500	322	1914-17;1920-24; 1926-34;1953-	--	1962;1972; 1975-82.	1971-82.	1977.
Big Sandy Reservoir near Farson .....	09213700	386	1987-	--	--	--	--
Big Sandy River below Big Sandy Reservoir .....	09213705	--	--	--	1981-86.	--	--
Big Sandy River at Farson .....	09213800	--	--	--	1981-86.	--	--
Little Sandy Creek near Elkhorn .....	09214000	20.9	1939-71.	--	1961-62; 1977.	1977.	1977.
Little Sandy Creek above Eden .....	09214500	134	1954-81.	--	1962; 1975-81.	1972; 1975-81.	1977.
Jack Morrow Creek near Farson .....	09214955	--	--	--	1981.	--	--
Pacific Creek near Farson .....	09215000	e500	1954-73.	--	1976-78.	1969; 1976-78.	1976-77.
Little Sandy Creek near Eden .....	09215500	823	1911-12.	--	1981-86.	--	--
Big Sandy River below Farson .....	09215550	b1,097	1981-99.	--	1982-99.	--	--
Simpson Gulch near Farson .....	09215990	78.5	--	1961-69.	--	--	--
Big Sandy River (Creek) below Eden .....	09216000	e1,610	1954-81.	--	1961-64; 1967-81.	1971-81.	1975-80.
Big Sandy River at Gasson Bridge, near Eden .....	09216050	e1,720	1972-	--	1975-99; 2002.	1975-79; 1981-82; 1990-93.	1976-78.
East Otterman Wash near Green River .....	09216290	16.6	--	1969-84.	--	1976.	--
Green River at Big Island, near Green River .....	09216300	e7,300	--	--	1966-81.	1975-79.	1973-78.
Skunk Canyon Creek near Green River .....	09216350	15.7	--	1965; 1971-81.	--	--	--
Greasewood Canyon near Green River .....	09216400	45.1	--	1959-74.	--	--	--
Green River at Green River .....	09216500	e7,670	1891;1894-1906; 1914-45.	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN</b> --continued							
GREEN RIVER BASIN--continued							
Green River--continued							
Telephone Canyon near Green River .....	09216510	6.98	--	1965-72.	--	--	--
Telephone Canyon tributary near Green River .....	09216520	3.44	--	1965-72.	--	--	--
Bitter Creek:							
Great Divide basin:							
Separation Creek at upper station, near Riner .....	09216525	41.8	1975.	--	1975-77.	1975-76.	1976.
Separation Creek near Riner.....	09216527	55.3	1975-81.	--	1976-81.	1976-1981.	1976.
Delaney Draw near Red Desert .....	09216537	34.5	--	1961-84.	1976-78.	1976-78.	--
Bitter Creek near Bitter Creek.....	09216545	308	1975-81.	--	1975-81.	1975-81.	1976-78.
Deadman Wash near Point of Rocks.....	09216550	152	--	1961-81.	1976-78.	1976-78.	--
Bitter Creek near Point of Rocks .....	09216560	765	--	1961-75.	1975-76.	1975-76.	--
Bitter Creek above Salt Wells Creek, near Salt Wells..	09216562	836	1976-81.	--	1975-81.	1975-81.	--
Salt Wells Creek near South Baxter .....	09216565	34.7	1976-81.	--	1975-81.	1975-81.	1976.
Gap Creek above Beans Spring Creek, near South Baxter .....	09216570	22.0	--	--	1976;1978.	1975-76; 1978.	1976.
Beans Spring Creek near South Baxter .....	09216572	4.92	--	--	1975-76; 1978.	1975-76; 1978.	1975-76.
Beans Spring Creek at mouth, near South Baxter	09216574	13.1	--	--	1975-1976; 1978.	1976;1978.	1975-76.
Gap Creek below Beans Spring Creek, near South Baxter .....	09216576	35.9	1975-76.	1976-81.	1975-76; 1978.	1975-76; 1978.	1975-76.
Dry Canyon Creek near South Baxter .....	09216578	3.69	1976-80.	--	1980.	1979-80.	--
Big Flat Draw near Rock Springs.....	09216580	19.5	--	1973-81.	1976.	1976-77.	--
Cutthroat Draw near Rock Springs (formerly Salt Wells Creek tributary near Rock Springs).....	09216600	7.88	--	1959-81.	--	--	--
No Name Creek near Rock Springs.....	09216695	18.2	--	1973-81.	1975.	1975; 1977-78.	--
Salt Wells Creek near Rock Springs .....	09216700	515	--	1959-76.	1975-76.	1968; 1975-76.	--
Salt Wells Creek near Salt Wells .....	09216750	526	1976-81.	--	1975-81.	1975-81.	1976.
Bitter Creek above Killpecker Creek, at Rock Springs.	09216790	--	--	--	1983-93.	1989-93.	1989-93.
Killpecker Creek at Rock Springs .....	09216810	--	--	--	1975-80; 1983-87.	--	1975-80; 1982-83.

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN</b> --continued							
<b>GREEN RIVER BASIN</b> --continued							
Green River--continued							
Bitter Creek below Little Bitter Creek, near Kanda.....	09216880	--	--	--	1975-83.	1978; 1980-82.	1975-82.
Bitter Creek tributary near Green River .....	09216900	1.65	--	1959-82.	--	--	--
Bitter Creek near Green River.....	09216950	--	--	--	1966-72.	1966-72.	--
Green River near Green River .....	09217000	114,000	1951-	--	1951-	1960-66; 1970-71; 1973-84; 1987; 1990-92.	1973-87.
Green River below Green River .....	09217010	--	--	--	1905;1974-	1975;1977.	1974-89.
Blacks Fork above Blacks Fork ranger station, Utah....	09217500	48.8	1937-39.	--	--	--	--
Blacks Fork near Robertson .....	09217900	130	1966-86;1992-	--	--	--	--
Blacks Fork at Blacks Fork ranger station, Utah .....	09218000	129	1937-39.	--	--	--	--
Blacks Fork near Millburne.....	09218500	152	1939-98.	--	1969-70; 1975-78.	1972; 1975-78.	1976-77.
Blacks Fork near Urie .....	09219000	261	1913-24;1937-55.	--	--	--	--
East Fork of Smiths Fork at China Meadows, near Robertson .....	09219500	36.9	1938-39.	--	--	--	--
East Fork of Smiths Fork near Robertson .....	09220000	53.0	1939-99;2001-	--	1975-78.	1975-78.	1977.
West Fork of Smiths Fork near Robertson .....	09220500	37.2	1939-81.	--	1975-78.	1975-78.	1977.
Smiths Fork near Robertson .....	09221000	144	1938-39.	--	1969-70; 1976.	1976.	1976.
Smiths Fork at Mountainview .....	09221500	192	1941-57.	--	--	--	--
Smiths Fork near Lyman .....	09221650	--	--	--	1974-89.	1975-79.	1974-82.
Mud Spring Hollow:							
Mud Spring Hollow tributary near Lyman .....	09221670	0.97	--	1965-72.	--	--	--
Mud Spring Hollow near Church Butte, near Lyman .....	09221680	8.83	--	1965-84.	1977-78.	1977-78.	--
Mud Spring (Hank) Hollow near Lyman.....	09221700	10.2	--	1959-71.	--	--	--
Blacks Fork near Lyman .....	09222000	821	1937-57;1962-83.	--	1962-89; 1995-	1971-81; 1995-	1973-80; 1995-
Muddy Creek:							
Little Muddy Creek:							
Ryckman Creek near Glencoe .....	09222200	53.4	1980-81.	--	1980-81.	1980-81.	--
Little Muddy Creek above North Fork, near Glencoe.....	09222250	366	1980-81.	--	1980-81.	1980-81.	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN</b> --continued							
<b>GREEN RIVER BASIN</b> --continued							
Green River--continued							
Blacks Fork--continued							
Muddy Creek--continued							
Little Muddy Creek near Glencoe .....	09222300	416	1976-80.	--	1975-80.	1975-80.	1976.
Muddy Creek near Hampton .....	09222400	963	1975-81.	--	1975-81.	1975-81.	1976.
Blacks Fork above Hams Fork, near (at) Granger (near Granger) .....	09222500	e2,170	1896-97.	--	--	--	--
Hams Fork below Pole Creek, near Frontier .....	09223000	128	1952-	--	1975-78.	1975-78.	--
Hams Fork near Frontier .....	09223500	298	1945-1972.	--	--	--	--
Hams Fork at Diamondville (Kemmerer).....	09224000	386	1917-33;1945-49.	--	--	--	--
Hams Fork near Diamondville .....	09224050	--	--	--	1975-89;	1980-82.	1975-89;
					1992-		1992-
Hams Fork near Granger .....	09224450	e670	--	--	1967-86.	1971-82.	1975-76.
Blacks Fork below Hams Fork, at Granger (at Granger)	09224500	e2,840	1896-1900.	--	--	--	--
Blacks Fork tributary near Granger.....	09224600	5.03	--	1959-81.	--	--	--
Blacks Fork near Little America .....	09224700	e3,100	1962-	--	1964-	1968;	1973-82.
						1970-82;	
						1989.	
Meadow Springs Wash:							
Meadow Springs Wash (Spider Creek) tributary near Green River.....	09224800	5.22	--	1962-65;	--	1978.	--
				1968-81.			
Blacks Fork tributary No. 2 near Green River .....	09224810	12.0	--	1965-81.	1978.	1978.	--
Blacks Fork tributary No. 3 near Green River .....	09224820	3.59	--	1965-84.	--	--	--
Blacks Fork tributary No. 4 near Green River .....	09224840	1.26	--	1965-81.	--	--	--
Blacks Fork near Marston .....	09224900	--	--	--	1959-64.	--	--
Summers Dry Creek near Green River .....	09224980	423	--	1965-81.	1976-78.	1976-78.	--
Blacks Fork near Green River.....	09225000	e3,670	1947-62.	--	1954-55;	--	--
					1958-59;		
					1967.		
Squaw Hollow near Burntfork .....	09225200	6.57	--	1965-84.	1977-78.	1975;	--
						1977-78.	
Green River tributary No. 2 near Burntfork.....	09225300	13.0	--	1959;	1976.	1976-77.	--
				1961-81.			
Green River near Linwood, Utah.....	09225500	e14,300	1928-63.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>COLORADO RIVER BASIN</b> --continued							
<b>GREEN RIVER BASIN</b> --continued							
Green River--continued							
Henry Fork near Lonetree.....	09226000	e56	1942-72.	--	1969-72; 1976-77.	1977.	1976-77.
Middle Fork Beaver Creek near Lonetree.....	09226500	e28	1948-70.	--	--	--	--
East Fork Beaver Creek near Lonetree.....	09227000	e8.2	1948-62.	--	--	--	--
West Fork Beaver Creek near Lonetree.....	09227500	e23	1948-62.	--	--	--	--
Henry Fork near Burntfork.....	09228000	242	1942-54.	--	--	--	--
Burnt Fork near Burntfork.....	09228500	52.8	1943-83.	--	1969-70; 1975-78.	1975-78.	1977.
Burnt Fork at Burntfork.....	09229000	e73	1929-43.	--	--	--	--
Henry Fork tributary near Manila, Utah.....	09229450	3.15	--	1965-74.	--	--	--
Henry Fork near Manila, Utah.....	09229500	e520	1928-93;2001-	--	1954-55; 1958-89.	1972; 1975-78; 1989.	1976.
Sheep Creek:							
Sheep Creek upper canal near Manila, Utah.....	09231000	--	1949-61.	--	--	--	--
Carter Creek canal near Manila, Utah.....	09231200	--	1956-61.	--	--	--	--
Sheep Creek lower canal near Manila, Utah.....	09231500	--	1949-61.	--	--	--	--
Sheep Creek near Manila, Utah.....	09232000	42	1942-61.	--	--	--	--
Sheep Creek at mouth, near Manila, Utah.....	09232500	111	1946-61.	--	--	--	--
Flaming Gorge Reservoir at Flaming Gorge Dam, Utah..	09234400	e19,350	1962-2000.	--	--	--	--
Green River near Greendale, Utah.....	09234500	i19,350	1950-	--	1956-59; 1963-2000.	1956-59.	--
Vermillion Creek near Hiawatha, Colo.....	09235300	196	1975-81.	--	1975-81.	1975-81.	1976-77; 1979-
Yampa River:							
Middle Fork Little Snake River:							
North Fork Little Snake River near Encampment..	09251800	9.64	1956-65.	--	--	--	--
North Fork Little Snake River near Slater, Colo....	09251900	29.3	1956-63.	--	1957-58; 1977-78.	1977-78.	1977-78.
Little Snake River near Slater, Colo.....	09253000	285	1943-47;1950- 99;2001-	--	1977-86.	1977.	1977.
Battle Creek near Encampment.....	09253400	13.0	1956-63;1985-88.	--	1978; 1986-88.	1978; 1986-88.	1978.
West Fork Battle Creek:							
Haggarty Creek above Belvidere ditch, near Encampment.....	09253455	--	--	--	1993-	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN</b> --continued							
<b>GREEN RIVER BASIN</b> --continued							
Green River--continued							
Yampa River--continued							
Little Snake River--continued							
Battle Creek--continued							
West Fork Battle Creek at Battle Creek							
Campground, near Savery .....	09253465	--	--	--	1993-	--	--
Slater Fork (Creek) near Slater, Colo .....	09255000	161	1910-12;1931-	--	--	--	--
East Fork Savery Creek near Encampment .....	09255400	5.57	1956-58;1985-88.	--	1986-87.	1986-88.	--
Savery Creek at upper station, near Savery.....	09255500	200	1940-44;1952-71.	--	1957-58; 1975-78; 1986.	1976-78.	1975-78.
Big Sandstone Creek near Savery .....	09255900	9.85	1956-58;1985-88.	--	1986-87.	1986-88.	--
Savery Creek near Savery .....	09256000	330	1941-46;1947-72; 1985-92.	--	1975-78; 1985-91.	1976-78; 1985-91.	1975-78; 1985-91.
Savery Creek at Savery .....	09256500	354	1914-16;1918-22.	--	1957;1975; 1977.	1977.	1975; 1977.
Little Snake River near Dixon.....	09257000	988	1910-23;1938-98.	--	1957-58; 1975-78; 1981-88.	1971-82; 1988.	1975-77.
Willow Creek near Baggs.....	09257500	e5	1911-23.	--	--	--	--
Willow Creek near Dixon.....	09258000	e24	1953-93.	--	--	--	--
Muddy Creek:							
Cow Creek:							
Dry Cow Creek near Baggs .....	09258200	49.7	--	1970-81.	1976-78.	1975-79.	--
Little Robber Reservoir .....	09258500	b8.5	1954-62d.	--	--	--	--
Muddy Creek above Baggs .....	09258900	1,178	--	1958-71.	1976;1978.	1976;1978.	1976.
Muddy Creek near Baggs .....	09259000	e1,257	1915-16;1918; 1987-91.	--	1957-58; 1985.	1988-91.	1985.
Little Snake River below Baggs.....	09259050	--	--	--	1980-	1989-	1981-89.
Fourmile Creek (at Ryan's Ranch) near Baggs.....	09259500	e4	1911-23.	--	--	--	--
Little Snake River near Baggs.....	09259700	e3,020	1961-68.	--	1965-80.	1977.	1977.
Little Snake River near Lily, Colo .....	09260000	e3,730	1904;1921-	--	--	--	--

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
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<b>GREAT SALT LAKE BASIN</b>							
<b>BEAR RIVER BASIN</b>							
Bear River:							
East Fork Bear River near Evanston .....	10010400	34.6	1973-86.	--	--	--	--
Hilliard-East Fork Canal near State line, near Evanston.....	10010500	--	1941-79.	--	--	--	--
Diversions from Bear River above gaging station, near Utah-Wyoming State line .....	10011000	--	1944-47j;1953-56j; 1958-k	--	--	--	--
West Fork Bear River at Whitney Dam, near Oakley, Utah.....	10011200	6.79	1963-86.	--	--	--	--
West Fork Bear River below Deer Creek, near Evanston.....	10011400	52.2	1973-86.	--	--	--	--
Bear River near Utah-Wyoming State line .....	10011500	172	1942-	--	--	--	--
Mill Creek at Utah-Wyoming State line .....	10012000	59	1949-62.	--	--	--	--
Mill Creek near Evanston.....	10012500	60.6	1942-48.	--	--	--	--
Diversions from Mill Creek .....	10013000	--	1944-45j.	--	--	--	--
Mill Creek below diversions, near Evanston .....	10013500	--	1946-47j.	--	--	--	--
Bear River above Sulphur Creek, near Evanston .....	10014000	282	1946-56.	--	--	--	--
Sulphur Creek above diversions, near Evanston.....	10014500	--	1945k.	--	--	--	--
Willow Creek above diversion, near Evanston .....	10015000	--	1945k.	--	--	--	--
Diversions from Sulphur Creek and Willow Creek ...	10015500	--	1944-45j.	--	--	--	--
Sulphur Creek above reservoir, near Evanston .....	10015700	64.2	1957-97.	--	--	--	--
Sulphur Creek below reservoir, near Evanston.....	10015900	69.2	1958-92; 1996-97.	--	--	--	--
Sulphur Creek near Evanston.....	10016000	80.5	1942-59.	--	--	--	--
Bear River at Millis, near Evanston.....	10016500	420	1942-46.	--	--	--	--
Bear River at Evanston .....	10016900	433	1984-	--	1986;1989.	1988-89.	--
Yellow Creek near Evanston.....	10017000	79.2	1944-45;1949-78.	--	--	--	--
Coyote Creek near Evanston .....	10017500	e28	1942-45.	--	--	--	--
Diversions from Yellow Creek .....	10018000	--	1944-45j.	--	--	--	--
Yellow Creek below diversions, near Evanston .....	10018500	--	1946-47j.	--	--	--	--
Yellow Creek at mouth, near Evanston.....	10018900	--	--	--	1983-89.	--	1983-89.
Bear River near Evanston .....	10019000	715	1913-56.	--	--	--	--
Chapman Canal at State line, near Evanston .....	10019500	--	1942-86.	--	--	--	--
Whitney Canyon Creek near Evanston .....	10019700	8.93	--	1965-81.	--	--	--
Diversions from Bear River between State line and Woodruff gaging stations.....	10020000	--	1944-47j;1953-56j; 1958-k	--	--	--	--
Bear River above reservoir, near Woodruff, Utah.....	10020100	752	1961-	--	1968-	1989-	1978-89.

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>GREAT SALT LAKE BASIN--continued</b>							
<b>BEAR RIVER BASIN--continued</b>							
Bear River--continued							
Woodruff Narrows Reservoir near Woodruff, Utah.....	10020200	784	1965-96.	--	--	--	--
Bear River below reservoir, near Woodruff, Utah.....	10020300	78	1961-	--	--	--	--
Bear River near Woodruff, Utah .....	10020500	e870	1941-61.	--	--	--	--
Bear River near Randolph, Utah.....	10026500	1,616	1943-92.	--	--	--	--
Twin Creek:							
Rock Creek near Fossil.....	10026800	49.0	1961-66.	--	--	--	--
Twin Creek tributary near Sage .....	10026850	2.91	--	1965-70.	--	--	--
Twin Creek at Sage .....	10027000	246	1943-62;1976-81.	--	1958;1961; 1967-69; 1975-82; 1989-	1976-81; 1989-	1975-80.
Twin Creek Canal near Sage .....	10027500	--	1944-45j.	--	--	--	--
Diversions from Bear River between Randolph and below Pixley Dam gaging stations.....	10028000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Bear River below Pixley Dam, near Cokeville (near Cokeville) .....	10028500	2,032	1941-43;1952- 56;1958-	--	--	--	--
Leeds Creek near Cokeville .....	10029000	--	1944j.	--	--	--	--
Bear River above Sublette Creek, near Cokeville .....	10029500	e2,110	1948-55.	--	--	--	--
Sublette Creek near Cokeville.....	10030000	--	1944-45j;1955-56j; 1958k.	--	--	--	--
Smiths Fork near Afton .....	10030300	1.62	--	1964-70.	--	--	--
Smiths Fork near Smoot.....	10030500	17.3	1943.	--	--	--	--
Smiths Fork above Hobbles Creek, near Geneva, Idaho	10031000	--	1944-46j.	--	--	--	--
Smiths Fork near Border .....	10032000	165	1942-	--	--	--	--
Coal (Howland) Creek near Cokeville .....	10032500	--	1944-48j;1953-56j.	--	--	--	--
Muddy Creek above Mill Creek, near Cokeville .....	10032700	20.7	1965-69.	--	--	--	--
Mill Creek near Cokeville .....	10032800	8.07	1966-69.	--	--	--	--
Grade Creek near Cokeville .....	10033000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Pine Creek above diversions, near Cokeville.....	10033500	--	1944-48j;1953-56j; 1958-65k.	--	--	--	--
Diversions from Pine Creek .....	10034000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>GREAT SALT LAKE BASIN</b> --continued							
<b>BEAR RIVER BASIN</b> --continued							
Bear River--Continued							
Smiths Fork--Continued							
Bruner Creek above Covey Canal, near Cokeville ....	10034500	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Smiths Fork at Cokeville.....	10035000	275	1942-52.	--	1985-88; 1990-	1989-	--
Spring Creek above Covey Canal, near Cokeville.....	10035500	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Spring Creek to Collette Creek, near Cokeville.....	10036000	--	1944-48j;1953-56j.	--	--	--	--
Birch Creek near Cokeville.....	10036500	--	1944-45k.	--	--	--	--
Garrett Springs:							
Hickman Canal near Cokeville .....	10037000	--	1944-48j.	--	--	--	--
George Bourne Canal near Cokeville.....	10037500	--	1944-48j.	--	--	--	--
Bear River below Smiths Fork, near Cokeville .....	10038000	2,447	1954-	--	1992-	1995-98; 2001-	1992-
Chalk Creek:							
Chalk Creek Canal near Cokeville .....	10038500	--	1944-45j.	--	--	--	--
Diversions from Bear River between Pixley Dam and Border gaging stations, and from Smiths Fork and its tributaries.....							
	10039000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Bear River at Border.....	10039500	2,486	1937-	--	1961; 1965-95.	1978-84; 1986-93.	1973-89.
Thomas Fork near Geneva, Idaho .....	10040000	45.3	1939-51.	--	--	--	--
Thomas Fork near Wyoming-Idaho State line .....	10041000	113	1949-92.	--	--	--	--
Sheep Creek:							
Sheep Creek tributary near Border.....	10043300	0.12	--	--	1961-64.	--	--
Sheep Creek tributary No. 2 near Border.....	10043350	.34	--	--	1965-71.	--	--
<b>COLUMBIA RIVER BASIN</b>							
<b>SNAKE RIVER BASIN</b>							
Snake River at south boundary of Yellowstone National Park.....							
	13010000	485	1913-25.	--	--	--	--
Snake River above Jackson Lake, at Flagg Ranch .....	13010065	486	1987-	--	1987-	1987-	1987-93.

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLUMBIA RIVER BASIN--continued</b>							
<b>SNAKE RIVER BASIN--continued</b>							
Snake River above Jackson Lake, near Flagg Ranch .....	13010200	486	1983-87.	--	1972; 1975-76; 1983-88.	--	1976.
Pilgrim Creek near Moran.....	13010450	--	1997.	--	--	--	--
Jackson Lake near (at) Moran.....	13010500	807	1908-79;1984-2000.	--	--	--	--
(South Fork) Snake River near (at) Moran .....	13011000	807	1903-	--	--	--	--
Pacific Creek at (near) Moran .....	13011500	169	1906;1917-18;1944-75; 1978-	--	1987-93.	1987-93.	--
Buffalo Fork:							
Blackrock Creek:							
Blackrock Creek tributary near Moran.....	13011800	.80	--	1964-74.	--	--	--
Buffalo Fork above Lava Creek, near Moran .....	13011900	323	1965-	--	1971; 1973-78.	--	--
Buffalo Fork (River) near Moran (Elk).....	13012000	378	1906a;1917-18; 1944-60.	--	--	--	--
Spread Creek at diversion dam, near Moran .....	13012490	97.4	1994-96.	--	--	--	--
Spread Creek near Moran (Elk) .....	13012500	101	1917-18;1993-95.	--	1971-72; 1976;1990.	1990.	1976.
Cottonwood Creek near Teton .....	13013000	72.3	1917-18.	--	--	--	--
Spring Creek near Teton .....	13013500	--	1917-18.	--	--	--	--
Snake River at Moose .....	13013650	1,677	1995-	--	1995-	1995-	--
Cottonwood Creek:							
Spring Creek near Zenith .....	13014000	--	1917-18.	--	--	--	--
Gros Ventre River at Kelly.....	13014500	622	1918;1944-58.	--	--	--	--
Gros Ventre River at Zenith.....	13015000	683	1917-18;1987-	--	--	--	--
Spring Creek at Zenith .....	13015500	--	1917-18.	--	--	--	--
Spring Creek at West Gros Ventre Butte .....	13016000	--	1918.	--	--	--	--
Snake River near Wilson .....	13016100	2,342	1972-75.	--	--	--	--
<b>FISH CREEK BASIN</b>							
Fish Creek:							
Lake Creek below Granite Creek Supplement, near Moose.....	13016240	22.2	1995-99.	--	--	--	--
Granite Creek above Granite Creek Supplement, near Moose .....	13016305	14.9	1995-	--	--	--	--
Granite Creek Supplement above Lake Creek, near Moose.....	13016310	--	1995-99.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLUMBIA RIVER BASIN</b> --continued							
<b>SNAKE RIVER BASIN</b> --continued							
Snake River--continued							
Granite Creek Supplement below Lake Creek, near Moose.....	13016315	--	1995-99.	--	--	--	--
Dog Creek near Cheney .....	13020500	14.1	1917-18.	--	--	--	--
Fish Creek at Wilson.....	13016450	71.2	1994-	--	--	--	--
Fish Creek near Wilson.....	13016500	87.4	1917-18.	--	--	--	--
Mosquito Creek near Wilson.....	13017000	24.2	1917-18.	--	--	--	--
Big Spring Creek near Cheney.....	13017500	--	1918.	--	--	--	--
<b>FLAT CREEK BASIN</b>							
Flat Creek near Jackson .....	13018000	40.1	1933-41;1989-93.	1994-96.	1966;1973.	--	--
Cache Creek near Jackson.....	13018300	10.6	1962-	--	1965-96.	1968-96.	1969; 1973-96.
Flat Creek below Cache Creek, near Jackson.....	13018350	129	1989-96;1999-	--	1973.	--	--
Flat Creek near Cheney.....	13018500	142	1917-18;1989-93.	1994-96.	1981-82.	--	1981-82.
Snake River below Flat Creek, near Jackson.....	13018750	2,627	1975-	--	--	--	--
Horse Creek near Cheney.....	13019000	37.9	1917-18.	--	--	--	--
<b>HOBACK RIVER BASIN</b>							
Hoback River:							
Rim Draw (Fish Creek) near Bondurant .....	13019210	3.41	--	1964-74.	--	--	--
Sour Moose Creek near Bondurant .....	13019220	2.77	--	1964-81.	--	--	--
North Fork Fish Creek near Bondurant .....	13019280	14.4	--	1964-69.	--	--	--
Cliff Creek near Bondurant.....	13019400	58.6	--	1964-74.	--	--	--
Granite Creek near Bondurant.....	13019430	--	--	--	1983-90.	1983-90.	--
Little Granite Creek at mouth, near Bondurant.....	13019438	21.1	1981-92.	--	1981-90.	1981-90.	1981-90.
Hoback River near Jackson (Cheney).....	13019500	564	1917-18;1944-58.	--	--	--	--
Fall (Coburn) Creek near Jackson (Cheney).....	13020000	46.8	1917-18.	1964-74.	--	--	--
Snake River at Astoria Mineral Hot Springs.....	13020300	--	--	--	1992.	--	--
Dog Creek near Cheney .....	13020500	14.1	1917-18.	--	--	--	--
Cabin Creek near Jackson (Cheney).....	13021000	8.71	1917-18.	1964-74.	--	--	--
Bailey Creek near Alpine, Idaho (Wyoming).....	13021500	15.9	1917-18.	--	--	--	--
West Table Creek near Alpine .....	13021700	1.06	--	1964-69.	--	--	--
Wolf Creek near Alpine (Idaho) .....	13022000	13.1	1917-18.	1964-67.	--	--	--
Snake River above reservoir, near Alpine .....	13022500	3,465	1937-39;1953-	--	1965-86; 1988.	1974-77.	1973-80.

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLUMBIA RIVER BASIN</b> --continued							
<b>SNAKE RIVER BASIN</b> --continued							
Snake River--continued							
<b>RED CREEK BASIN</b>							
Red Creek near Alpine .....	13022550	3.88	--	1964-73.	--	--	--
<b>COTTONWOOD CREEK BASIN</b>							
Cottonwood Creek near Alpine.....	13022570	2.40	--	1964-72.	--	--	--
<b>GREYS RIVER BASIN</b>							
Greys River above reservoir, near Alpine (near Alpine, Idaho) .....	13023000	448	1917-18;1937-39;1953-	--	--	--	--
Snake River below Greys River, at Alpine, Idaho.....	13023500	3,940	1944-54.	--	--	--	--
<b>SALT RIVER BASIN</b>							
Salt River:							
Fish Creek near Smoot .....	13023800	e3.60	--	1964-74.	--	--	--
Salt River near Smoot .....	13023900	47.8	1932-57.	--	1981-85.	--	--
Cottonwood Creek near Smoot .....	13024500	26.3	1932-57.	--	--	--	--
Swift Creek near Afton .....	13025000	27.4	1942-80.	--	1965; 1981-85.	--	--
Crow Creek near Fairview .....	13025500	e115	1946-49;1961-67.	--	1965; 1983-84.	--	--
Stump Creek near Auburn.....	13026000	103	1946-49.	--	1989-92.	--	--
Salt River near Thayne.....	13026500	570	1932-33;1961-67.	--	--	--	--
Strawberry Creek near Bedford.....	13027000	21.3	1932-43.	--	--	--	--
Bear Canyon near Freedom.....	13027200	e3.3	--	1961-71.	--	--	--
Salt River above reservoir, near Etna .....	13027500	829	1953-	--	1965-88; 1990-1992; 1994-	1989-93; 1998-	1970; 1973-81; 1989-92.
Salt River near Alpine, Idaho.....	13028000	878	1917-18.	--	--	--	--
Salt River at Wyoming-Idaho State line .....	13028500	890	1933-55.	--	--	--	--
Snake River near Alpine.....	13029000	4,841	1916-18;1934.	--	--	--	--
Snake River near Irwin, Idaho .....	13032500	5,225	1934-36;1939-41; 1949-	--	--	--	--
<b>HENRY'S FORK BASIN</b>							
Falls River:							
Grassy Lake near Moran .....	13046500	10.4	1939-79.	--	--	--	--
Boundary Creek near Bechler Ranger Station.....	13046680	86.9	1984-	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>COUMBIA RIVER BASIN</b> --continued								
<b>SNAKE RIVER BASIN</b> --continued								
Snake River--continued								
<b>HENRYS FORK BASIN</b> --continued								
Falls River--continued								
Conant Creek:								
Squirrel Creek:								
North Fork Squirrel Creek near Squirrel, Idaho	13047800	2.40	1961-67.	--	--	--	--	--

- a Stage record or stage record and instantaneous discharge measurements only.
- b Part of drainage area is noncontributing or does not contribute directly to surface runoff.
- c Storm runoff for summer season only.
- d Published in U.S. Geological Survey Water-Supply Paper 1475-I, Hydrology of Small Watersheds in Western States.
- e Approximate.
- f Published in reports of Department of Northern Affairs and National Resources, Canada.
- g Published in U.S. Geological Survey Water-Supply Paper 1531, Hydrology of the Upper Cheyenne River Basin.
- h Includes several sites on the reservoir.
- i Approximately, includes area which is probably noncontributing.
- j Published in U. S. Geological Survey Open-File Report of Bear River hydrometric data.
- k Published in reports of Bear River Commission.

## 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 2002 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 156 gaging stations; water quality at 33 gaging stations and 34 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.

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-02-1.**" 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.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page, by telephone at (307) 778-2931, or by email at [state\\_rep\\_wy@usgs.gov](mailto:state_rep_wy@usgs.gov). Hydrologic data for Wyoming is available on the World Wide Web at:

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

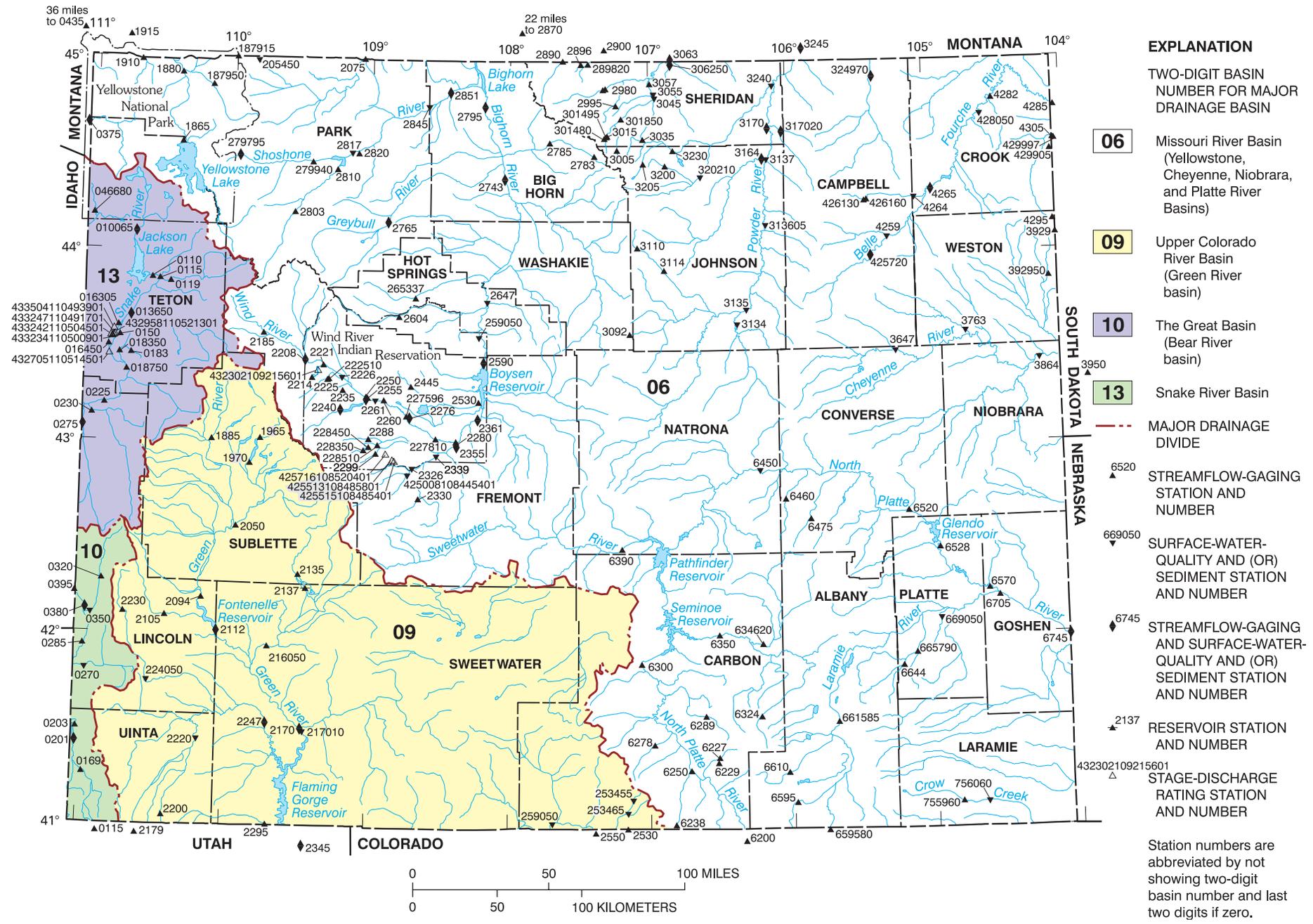


Figure 1. Location of surface-water streamflow-gaging stations, water-quality stations, reservoir station, and stage-discharge stations, 2002 water year.

## COOPERATION

The USGS and organizations of the State of Wyoming have had cooperative agreements for the systematic collection of streamflow records since 1895, for measurement of ground-water levels since 1940, 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 2002 were:

### Federal Agencies

Bureau of Reclamation, U.S. Department of the Interior  
Bureau of Land Management, U.S. Department of the Interior  
National Park Service, U.S. Department of the Interior  
Corps of Engineers, U.S. Army

### Tribal Governments

Tribal Water Engineer, Shoshone and Northern Arapaho Tribes, Joint Business Council, Vernon Hill and Burton Hutchinson, Sr., Co-chairmen  
Wind River Environmental Quality Commission, Shoshone and Northern Arapaho Tribes, Joint Business Council, Vernon Hill and Burton Hutchinson, Sr., Co-chairmen

### State Agencies

Wyoming State Engineer's Office, Patrick T. Tyrrell, State Engineer  
Wyoming Department of Environmental Quality, Dennis Hemmer, Director  
Wyoming Water Development Commission, Lawrence Besson, Administrator

### Local Agencies

Teton Conservation District, Randy Williams, Executive Director  
Sheridan Area Water Supply Joint Powers Board, Bruce Yates, Administrator  
Big Sandy Conservation District, Ginger Eaton, District Coordinator  
Converse County Emergency Management Agency, Chris Single, Coordinator  
Fremont County Weed and Pest Control District, Lars Baker, Supervisor

### Municipalities

City of Cheyenne, Jack Spiker, Mayor  
City of Gillette, Duane Evenson, Mayor

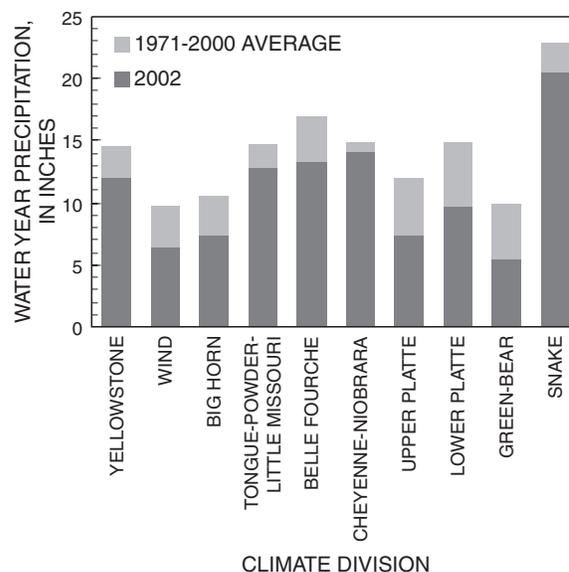
## SUMMARY OF HYDROLOGIC CONDITIONS

Water year 2002 was the third consecutive year of below normal precipitation for most of Wyoming. Statewide precipitation for the water year and snowpack accumulation through spring averaged about 54 percent of normal. Below normal streamflows recorded at gaging stations across the State resulted from the continuing drought. New record low average annual flows were set at about one-third of all stations with 10 or more years of data. Measurements of specific conductance at 10 long-term water-quality monitoring sites were generally within the range of measurements for the 10-year period 1992-2001, but four of the 10 sites had either new maximum values or minimum values exceeding the median for the 10-year period.

### Precipitation

Precipitation for water year 2002 was below normal for most of Wyoming for the third 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 2002 ranged from about 94 percent of the average for the Tongue-Powder-Little Missouri climate division to about 54 percent of the average for the Green-Bear climate division (fig. 2). Water year 2002 precipitation for all Wyoming climate divisions averaged about 75 percent of the 1971-2000 average. For the Upper Platte and Green-Bear climate divisions, water year 2002 precipitation was the lowest for the period of record (water years 1896-2002). Precipitation in water year 2002 was the third lowest for water years 1896-2002 for the Lower Platte climate division.

Snow accumulation for water year 2002 was below normal for most of Wyoming. Most of the 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, 2002 prior to the normal snowmelt period, basin snowpack conditions for most of Wyoming ranged from about 90 percent of average for parts of the Snake River Basin to 21 percent of average for parts of the Green and Bear River Basins (table 1). The Belle Fourche and Cheyenne River Basins are relatively lower in elevation than the other basins and the snowpack is usually melted by May 1, hence snowpack conditions for these basins are not reported here. The average of the snowpack conditions for most major river basins in the State was about 54 percent of normal as of May 1, 2002.

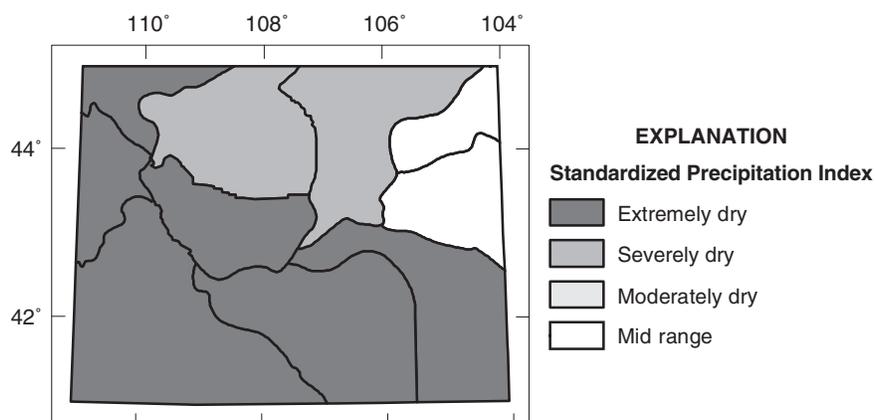


**Figure 2.** Water year 2002 and 1971-2000 average precipitation by climate division (modified from Western Region Climate Center, 2003).

**Table 1.**--Summary of snowpack conditions in seven major river basins in Wyoming for water year 2002 (modified from Natural Resources Conservation Service, 2003).

Major River Basin	Range of snowpack, in percent of average snow water equivalent as of May 1, 2002	
	Low	High
Wind River	48	87
Bighorn River	63	85
Powder and Tongue Rivers	55	78
Upper Platte River	44	54
Lower Platte River	23	66
Green and Bear Rivers	21	86
Snake River	62	90

Drought conditions worsened in Wyoming during water year 2002 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 (National Climatic Data Center, 2003a). 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. Thus, precipitation that is the same amount below normal for several consecutive months would result in an SPI that decreases through time reflecting a cumulative precipitation deficit. The SPI for water years 2001 through 2002 for six of the 10 NOAA climate divisions in Wyoming was extremely dry, illustrating the cumulative effect of the below normal precipitation (fig. 3).



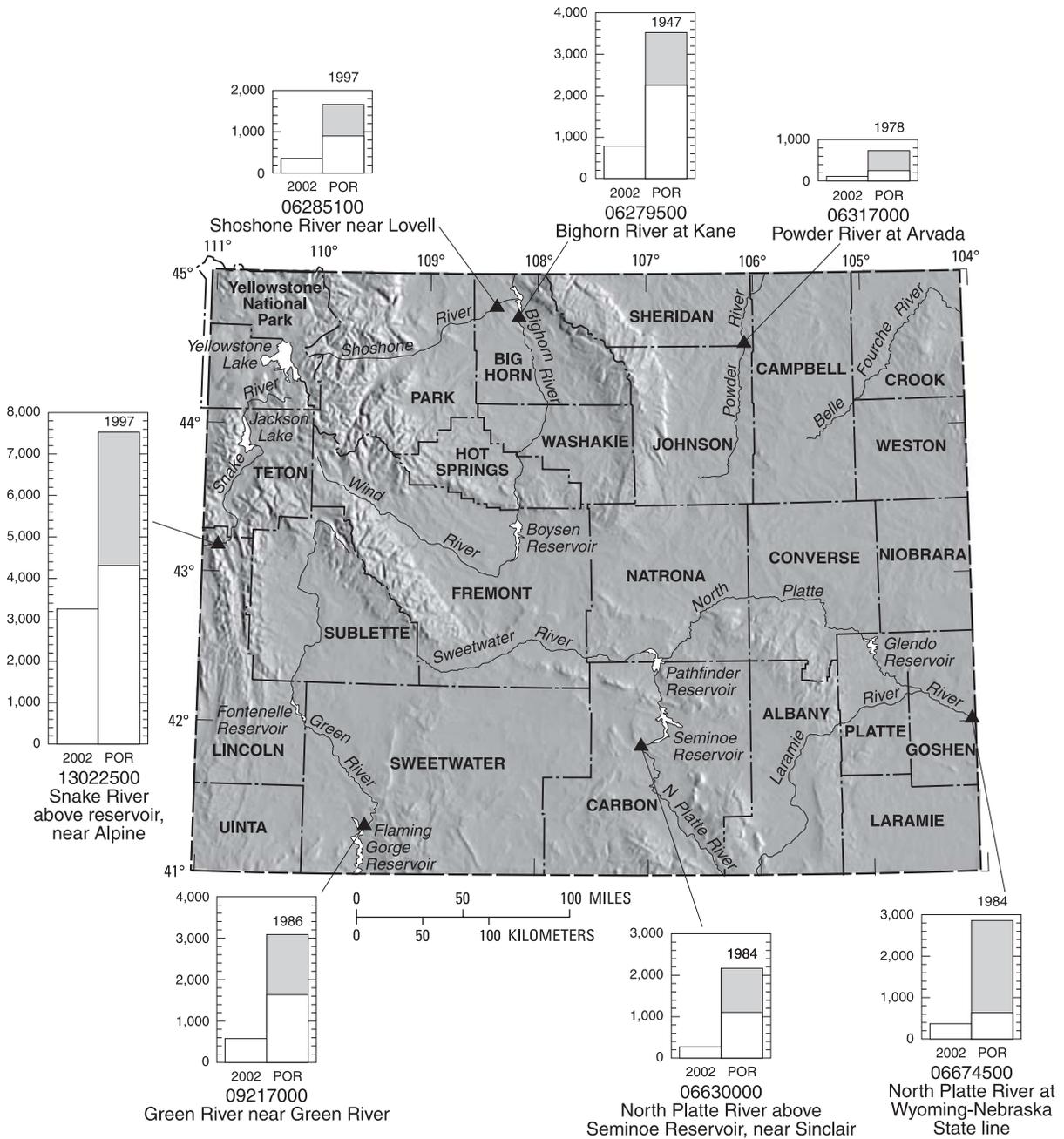
**Figure 3.** Twenty-four month standardized precipitation index (SPI) by climate divisions for Wyoming, October 2000 through September 2002 (modified from National Climatic Data Center, 2003b).

### Streamflow

Average annual discharge at seven long-term index gaging stations was much less than the median average annual discharge for the period of record (fig. 4a). Average annual discharge at five of the seven index stations was the lowest on record (36 to 73 years), the exceptions being 06317000 Powder River at Arvada (second lowest in 71 years) and 13022500 Snake River above reservoir, near Alpine (third lowest in 50 years). For 06630000 North Platte River above Seminoe Reservoir, near Sinclair, water year 2002 was about 46 percent lower than the previous lowest average annual discharge.

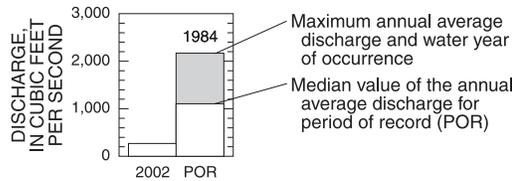
About 67 percent (43 of 64) of all gaging stations in Wyoming with at least 10 years of annual streamflow data recorded the third lowest or lower average annual discharge in water year 2002. About 33 percent (21 of 64) set new record lows for average annual discharge. The average record length for stations with new record annual lows was about 44 years, with seven of those stations having records longer than 50 years. Most (14 of 21) of the stations with new record annual lows were in the south half of Wyoming in the North Platte River and lower Green River basins.

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. 4b). Average monthly discharges during some months were the lowest on record for 06279500 Bighorn River near Kane (73 years), 06630000 North Platte River above Seminoe Reservoir, near Sinclair (63 years), and 06674500 North Platte River at Wyoming-Nebraska State line (73 years). For 06630000 North Platte River above Seminoe Reservoir, near Sinclair, water year 2002 average monthly discharges during the months of May through August ranged from 50 to 67 percent lower than the previous lowest average monthly discharges.



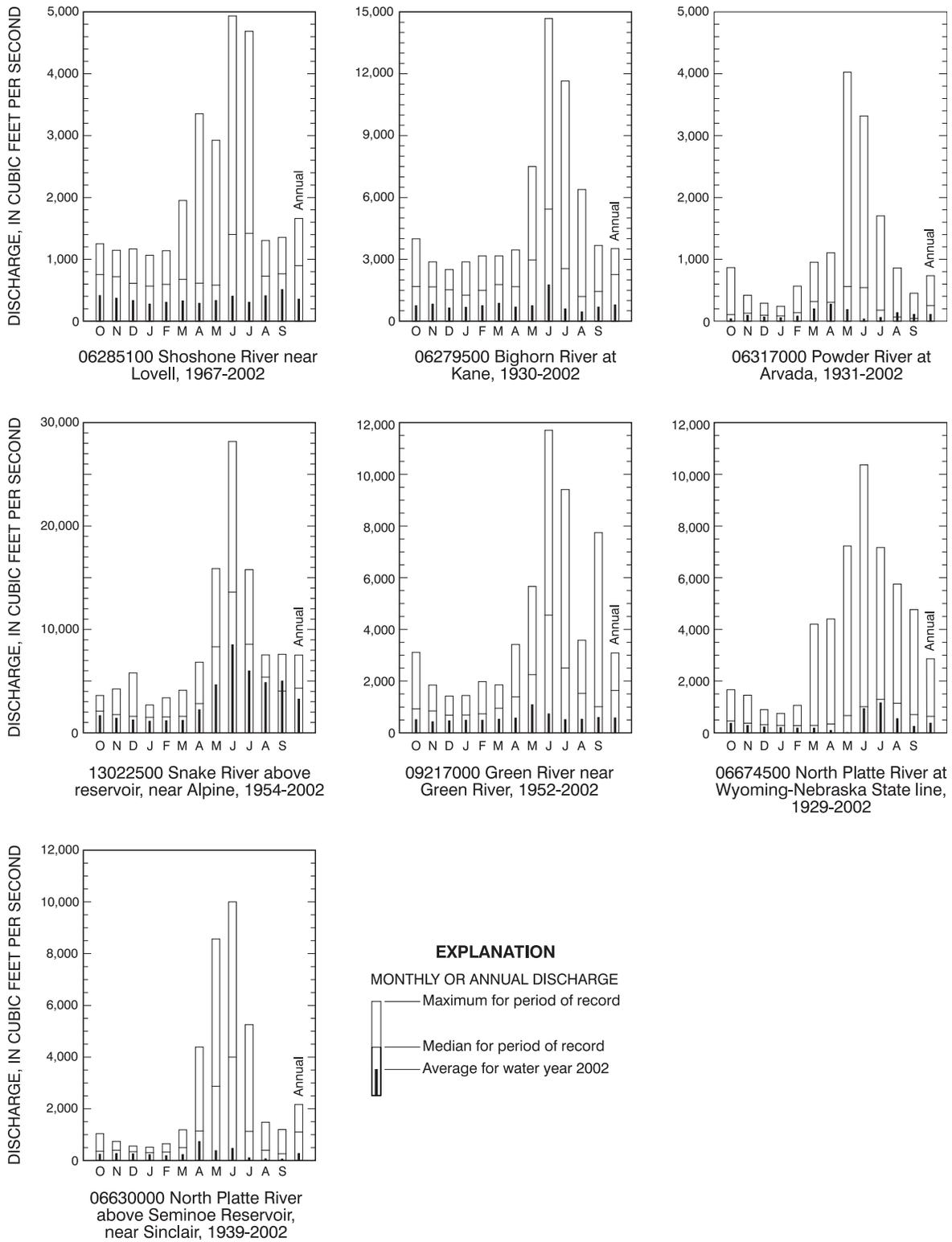
**EXPLANATION**

COMPARISON OF ANNUAL AVERAGE DISCHARGE  
 Data for water year 2002    Data for period of record



▲ STREAMFLOW-GAGING STATION SELECTED TO TYPIFY DRAINAGE BASIN--Station number and name shown below bar graph

**Figure 4a.** Annual average discharge for water year 2002, and median and maximum annual average discharge for period of record for seven long-term index gaging stations in Wyoming.



**Figure 4b.** Average monthly and annual discharge for water year 2002, and median and maximum monthly and annual discharge for period of record for seven long-term index gaging stations in Wyoming.

## Floods

Major flooding occurred in east-central Wyoming because of intense rainfall. Early Tuesday, August 27, 2002, up to 7 inches of rain fell in about 6 hours in the Middle Fork and South Fork Powder River basins. The deluge resulted in the Middle Fork Powder River flooding the town of Kaycee, damaging or destroying 19 trailers, 22 houses, and 12 of 15 businesses (National Weather Service, 2002). Farther south, Murphy Creek, a tributary to the South Fork Powder River, produced a very large flood peak. Slope failure at the bridge on U.S. Interstate Highway 25 was so extensive that the bridge for the northbound lanes was closed because of safety concerns. A temporary crossover was constructed and all traffic was routed over the southbound bridge until Wyoming Department of Transportation (WDOT) assessed and repaired the damage.

Rigorous hydraulic analyses to determine the peak streamflow in Murphy Creek were not undertaken by the USGS. Field reconnaissance by USGS personnel of the bridge at Interstate 25, however, resulted in an estimated peak discharge of about 13,500 ft<sup>3</sup>/sec (Kirk Miller, U.S. Geological Survey, unpublished data, 2002). WDOT personnel estimated about 20,000 ft<sup>3</sup>/sec for the peak discharge (William Bailey, Wyoming Department of Transportation, oral commun., 2002). Regional equations for calculating peak-streamflow characteristics for the site indicate both estimates have a recurrence interval greater than 200 years (Lowham, 1988; Kirk Miller, U.S. Geological Survey, unpublished data, 2002).

## 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 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 are sometimes analyzed in the field. Laboratory analyses in 2002 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 in water. Concentrations of dissolved solids generally are inversely related to discharge. A statistical summary of specific conductance measurements from stream-water samples at ten stations for selected streams in Wyoming describes the general chemical variability of the stream water during 2002 (table 2). The specific conductance varies considerably in Wyoming owing to the diverse geology of the State. The maximum value measured on these streams (5,170 microsiemens per centimeter at 25 degrees Celsius) was from a sample collected at 06317000 Powder River at Arvada; the minimum value measured (133 microsiemens per centimeter at 25 degrees Celsius) was from a sample collected at 06281700 Shoshone River above DeMaris Springs, near Cody.

To compare the current and long-term water-quality conditions, specific conductance measurements are summarized for water year 2002 and the 10-year period of water years 1992-2001. 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 2002 were within the range of measurements for the 10-year period of water years 1992-2001, except for two stations. The maximum specific conductance measurement (5,170 microsiemens per centimeter at 25 degrees Celsius) at 06317000 Powder River at Arvada and the maximum specific conductance measurement (993 microsiemens per centimeter at 25 degrees Celsius) at 10020100 Bear River above reservoir, near Woodruff in water year 2002 were greater than the maximum for the 10-year period of water years 1992-2001. Minimum values of specific conductance during 2002 exceeded the median for the 10-year period of water years 1992-2001 for 06279500 Bighorn River at Kane and 09224700 Blacks Fork near Little America. The elevated values for specific conductance during 2002 likely are the result of the below average flows owing to drought conditions, because specific conductance generally is inversely related to discharge.

**Table 2.**--Statistical summary of specific conductance measurements for discrete water samples at selected locations and for the 2002 and 1992-2001 water years.

[Specific conductance, in microsiemens per centimeter at 25 degrees Celsius]

Stream name and station number	Specific Conductance						
	Water Year 2002			Water years 1992-2001			
	Number of values	Maximum	Minimum	Number of values	Maximum	Minimum	Median
Little Wind River near Riverton, WY 06235500	6	1,240	785	43	1,240	161	809
Bighorn River at Kane, WY 06279500	4	1,180	1,120	103	1,850	368	899
Shoshone River above DeMaris Springs, near Cody, WY 06281700	8	423	133	90	450	89	170
Powder River at Arvada, WY 06317000	12	5,170	1,940	46	3,770	744	2,050
Belle Fourche River below Moorcroft, WY 06426500	12	3,720	594	47	4,130	299	2,570
North Platte River at Wyoming-Nebraska State line 06674500	5	942	799	72	1,240	545	869
Green River near Green River, WY 09217000	6	674	466	68	862	270	512
Blacks Fork near Little America, WY 09224700	4	2,780	1,660	95	2,830	475	1,300
Bear River above reservoir, near Woodruff, UT 10020100	4	993	229	40	682	145	456
Snake River at Moose, WY 13013650	8	210	169	58	228	113	174

## SPECIAL NETWORKS AND PROGRAMS

**Hydrologic Benchmark Network** is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative of undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these 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 can be found at:

<http://water.usgs.gov/hbn/>

**National Stream-Quality Accounting Network** (NASQAN) monitors 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 basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia 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 Program (NAWQA); (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 can be found at:

<http://water.usgs.gov/nasqan/>

**The National Atmospheric Deposition Program/National Trends Network** (NADP/NTN) 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 a network of 225 precipitation chemistry monitoring 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 all data from the individual sites, can be found at:

<http://bqs.usgs.gov/acidrain/>

**The National Water-Quality Assessment** (NAWQA) Program of the U.S. Geological Survey 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; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 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 will be 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 decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

The water quality in the Yellowstone river basin is presently being studied as part of the USGS NAWQA program. Ground water and surface water have been sampled for an extensive list of natural and anthropogenic chemicals. Aquatic ecology, including stream morphology and aquatic plant and animal communities, are also being measured. All media

are being sampled using a nationally consistent set of protocols, methods, and measurements. Most of the routine data (major ions, nutrients, trace elements, and some pesticides) collected in Montana and Wyoming are included in this report. Other data not included in this report (additional pesticides, volatile organic compounds, stream morphology, populations of aquatic flora and fauna, and data for adjacent states) are available in the District offices.

The Yellowstone River basin study unit extends from central Wyoming north to include most of southeastern Montana and a small part of western North Dakota. The entire Yellowstone River watershed defines the study unit boundaries and includes all of the Wind/Bighorn, Powder, Tongue, and Clarks Fork Yellowstone tributary watersheds. Total area for the study unit is about 70,100 mi<sup>2</sup> of which 51 percent is in Montana, 48 percent is in Wyoming, and 1 percent is in North Dakota. Total population of the study unit was about 323,000 (1990 census), of which 206,000 were in Montana, 116,000 were in Wyoming, and 1,000 were in North Dakota.

The study unit lies within the Rocky Mountain System and Interior Plains physiographic divisions. Topography of the study unit in the Rocky Mountain System division varies from mountain ranges and high plateaus, including the Wind River Range, Bighorn Mountains, and Absaroka Plateau, to intermontane basins, such as the Wind River and Bighorn Basins. The highest elevations in the study unit are in the Wind River Range, where several peaks exceed 13,000 feet above NGVD of 1929. The Interior Plains division part of the study unit varies from gently rolling plains to sharply dissected badlands. The lowest point in the study unit, 1,850 feet above NGVD of 1929, is located at the mouth of the Yellowstone River in North Dakota.

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 can be found at <http://water.usgs.gov/nawqa/>

Additional information about the NAWQA Program is available through the world wide web at:

[http://water.usgs.gov/nawqa/nawqa\\_home.html](http://water.usgs.gov/nawqa/nawqa_home.html)

or for the Yellowstone Study at:

<http://wy.water.usgs.gov/YELL/index.htm>

## EXPLANATION OF THE RECORDS

The surface-water records published in this report are for water year 2002, which began October 1, 2001, and ended September 30, 2002. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The locations of the stations where the data were collected are shown in figure 1. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

### Station Identification Numbers

Each surface-water data station in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The system is used by the USGS to assign identification numbers for surface-water stations is based on geographic location. Generally, the "downstream-order" system is used for surface-water stations, and the "latitude-longitude" system is used in Wyoming for surface-water stations where only miscellaneous measurements are made.

#### Downstream-Order System

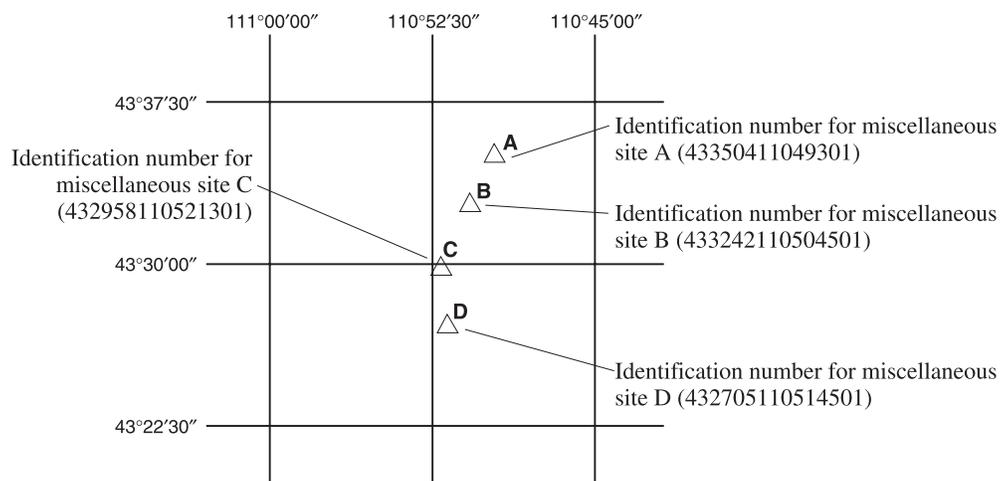
Since October 1, 1950, the order of listing hydrologic-station records in USGS reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the section "Surface-water stations, in downstream order, for which records are published in this volume" in the front of this report. Each indentation represents

one rank. This downstream order and system of indention shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned in downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of all types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06646000, which appears just to the left of the station name, includes the two-digit Part number "06" plus the six-digit downstream-order number "646000." The Part number designates the major river basin; for example, Part "06" is the Missouri River basin.

### Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of north latitude, the next seven digits denote degrees, minutes, and seconds of west longitude, and the last two digits (assigned sequentially) identify the order of sites if more than one within a 1-second grid. This site-identification number, once assigned, is arbitrary and has no locational significance. If the initial determination of latitude and longitude is found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (fig. 5)



**Figure 5.** System for assigning identification numbers to miscellaneous sites using latitude and longitude.

### Records of Stage and Water Discharge

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

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

### Data Collection and Computation

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

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with electronic data loggers that store and/or transmit stage values by satellite telemetry. Measurements of discharge are made with current meters using methods adopted by the USGS as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in USGS Techniques of Water-Resources Investigations, Book 3, Chapter A6.

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

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

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

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

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

### Data Presentation

Streamflow data in this report are presented in a format considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table.

These changes represent the results of reformatting the annual water-data report to meet current user needs and data preferences.

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

#### Station manuscript

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

**LOCATION.**--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given.

**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 and methods of determining drainage area become available.

**PERIOD OF RECORD.**--This indicates the 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 flow at it reasonably can be considered equivalent to flow at the present station.

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

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

**REMARKS.**--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information 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 to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

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

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

If errors in published water-quality records are discovered after publication, 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>]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

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

#### Data table of daily mean values

The daily table of discharge records for streamgaging 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 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. Runoff for the month usually is expressed in acre-feet (line headed "AC-FT"). At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

#### Statistics of monthly mean data

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

#### Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS \_\_\_\_-\_\_\_\_," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All statistics, except HIGHEST and LOWEST DAILY MEANS and MAXIMUM PEAK FLOW and STAGE, are computed based on the period(s) using complete 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 this occurs, it will be noted in the footnotes. Selected streamflow duration curve statistics and runoff data also are given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table. Other statistics, such as instantaneous low flow, annual runoff in cubic feet per square mile or in inches, may be available on request.

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

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The

adjusted figures are identified by a symbol and corresponding footnotes.

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

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

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

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

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for seven 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.

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

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

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

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

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

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

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

### Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified by flagging individual daily values with the letter symbol "e" and printing a table footnote (e Estimated).

### Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant

figures for more than 1,000 ft<sup>3</sup>/s. The number of significant figures used is based solely on the magnitude of the discharge value. No rounding rules apply to discharges listed for miscellaneous sites. Discharges listed are those actually computed.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff because of the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation from artificial causes, or to other factors. For such stations, figures for cubic feet per second per square mile and for 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 Records Available

Records of daily diversions of water from streams by canals are collected by and published in Hydrographers Annual Reports of the Wyoming Board of Control. Included are discharge records for streams and storage records for reservoirs not published in USGS reports.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Wyoming District office. Also, daily mean discharges are available in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained at the address given on the back of the title page of this report.

### Records of Surface-Water Quality

Records of surface-water quality in this report represent a variety of data types and measurement or sampling and analysis frequencies. Whenever possible, records of surface-water quality are obtained at or near streamgaging stations because interpretation of surface-water quality and seasonal variation is enhanced by knowledge of corresponding discharge data. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

#### Classification of Records

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

A distinction needs to be made between "continuing records", as used in reference to data for continuing-record stations, and "continuous record," which refers to a continuous graph over time or a series of recorded discrete short-time-interval values. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, most water-quality data are obtained on a monthly or less frequent basis.

#### Onsite Measurements and Sample Collection

When obtaining water-quality data, a major concern is assuring that onsite water-quality measurements and the samples collected for laboratory analysis are representative of the actual quality of the water. Measurements such as water temperature, pH, and dissolved oxygen are made onsite when the samples are collected because of the potential for significant change with time. Prescribed procedures need to be followed in collection and processing of samples. Procedures for onsite measurements and for collecting, treating, and shipping samples are documented in a series of Techniques of Water-Resources Investigations (TWRI) publications titled "National Field Manual for the Collection of Water-Quality Data." All of these references are listed under "TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from other references and from the Wyoming District office.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary

widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the sampler.

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. If an apparent inconsistency exists between a reported pH value and a 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 water-quality stations equipped with electronic monitors and digital recorders, the record consists of a daily maximum, minimum, and mean values for each constituent measured and are based upon hourly recordings beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records of the individual hourly values (unit values) may be obtained from the Wyoming District office.

### Water Temperature

Water temperatures are measured at water-quality stations at the time of sampling. In addition, water temperatures are taken at the time of discharge measurements at streamgaging stations. For stations where water temperatures are measured manually once daily, the water temperatures are taken at about the same time each day for consistency in the record. Deep streams commonly have a small diurnal temperature change, whereas shallow streams may have a daily range of several degrees, which closely follows the changes in air temperature. The water temperature in some streams may be affected by industrial discharges of warm water.

For stations where recording instruments are used, the record consisting of either daily mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements and those taken manually once-daily are on file in the Wyoming District office.

### Sediment

Suspended-sediment concentrations are determined from samples collected using depth-integrating samplers. Samples usually are obtained from several verticals in the cross section. At daily sediment stations, daily samples may be obtained from a single vertical and a coefficient applied to determine the mean concentration in the cross section. Daily mean suspended-sediment concentrations are computed using sample concentrations and the continuous streamflow record according the methods described in TWRI Book 3, Chap. C3. Daily suspended-sediment discharge then is computed as the product of stream discharge times the daily mean concentration times a unit conversion factor of 0.0027.

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

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

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

## Laboratory Analyses

Samples for indicator bacteria are analyzed locally. Samples for suspended-sediment are analyzed at the USGS laboratory in Helena, Montana. Samples for all other constituents are analyzed at the USGS National Water-Quality Laboratory in Lakewood, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1 and C3. Methods used by the National Water-Quality Laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

## Presentation of Water-Quality Records

Water-quality records collected at a streamgaging station are published immediately following the daily discharge record. Station number and name are the same for both records. Where a daily discharge record is not available or where the location of the water quality station differs significantly from that of the nearby streamgaging station, the water-quality record is published with its own station number and name in the standard downstream-order sequence.

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, cooperating agencies, and extremes for parameters measured on a daily basis. Tables of chemical, physical, biological, and radiochemical data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, water temperature, and suspended sediment then follow in sequence.

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

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

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

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

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature monitor, 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. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the USGS computerized data system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of USGS water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

### Remark Codes

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value
M	Presence of material verified, but not quantified
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
k	Results based on colony count outside the acceptable range (non- ideal colony count)

### Quality-Control Samples

Data generated from quality-control (QC) samples are used to evaluate the quality of the sampling and processing techniques, as well as data from the actual samples themselves. Interpretations of environmental sample data is aided when errors associated with sample measurements are known. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of QC data within the USGS. These procedures allow for identification of various types of QC data so that they can be related to corresponding environmental samples. Information on QC samples is on file in the Wyoming district office.

#### Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is free of the constituents of interest. Any detectable concentration of a constituent in the blank solution is believed to be due to contamination introduced at some point during sample collecting, processing, or analysis. There are many types of blank samples, each designed to test 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.

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 using recently cleaned equipment).

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 through a field splitter in the same manner and through the same apparatus used for splitting an environmental sample.

Preservation blank - a blank solution that is treated with the same preservatives used for an environmental sample.

#### Replicate Samples

Replicate samples are two or more sets of environmental samples collected in the same manner such that the samples are considered to be essentially identical in composition. Replicate samples are collected and analyzed to establish the amount of variability in the data, which can be contributed by either the collection or the analytical process or both. There are many types of replicate samples 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:

Sequential sample - a type of replicate sample in which the samples are collected one after the other, typically over a short time (pumped samples).

Split sample - a type of replicate sample in which a single composite sample is split into subsamples.

Concurrent sample - two sets of samples, collected independently, but at the same time and place.

#### 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 WATER DATA**

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

<http://water.usgs.gov>

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

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## DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Definitions of common terms such as algae, water level, and precipitation are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound units to International System (SI) units on the inside of the back cover.

**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.

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

**Artificial substrate** is a device that is purposely 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 multi-plate 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 the 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 ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ). (See also “Biomass” and “Dry mass”)

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

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

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

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

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

**Bedload** is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that 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")

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

**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 is also called the Autotrophic Index.

**Blue-green algae** (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**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 lithology and porosity of the rock.

**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 are generally reported as cells or units per milliliter (mL) or liter (L).

**Cells volume** (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used 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 ( $\mu\text{m}^3$ ) 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:

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

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

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

**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 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,  $\text{ft}^3/\text{s}$ ) 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<sup>3</sup>/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 are numerically 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<sup>3</sup>/s)/mi<sup>2</sup>] 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 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 periodic sample or 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 are usually 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 UTM coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

**Diatoms** are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

**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, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

**Dissolved oxygen** (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO<sub>3</sub>) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index (H)** (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

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

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

**Dry mass** refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

**Embeddedness** is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

**Enterococcus bacteria** are commonly 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 are generally 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) concentration value** 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 qualitatively identified 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 (<).

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

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

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

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

**Fire algae (*Pyrrophyta*)** 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 itself is not an actual physical object, the datum usually is 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** have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating “moss” in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

**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 are typically 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 ( $\text{CaCO}_3$ ).

**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.co-ops.nos.noaa.gov/tideglos.html>*

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

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

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.), 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 uniformly distributed on it. (See also "Annual runoff")

**Instantaneous discharge** is the discharge at a particular instant of time. (See also "Discharge")

**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)** is generally 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. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

**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,  $\lambda$  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.co-ops.nos.noaa.gov/tideglos.html>

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also “Daily mean suspended-sediment concentration” and “Suspended-sediment concentration”)

**Mean discharge (MEAN)** is the arithmetic mean of individual daily mean discharges during a specific period. (See also “Discharge”)

**Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.

**Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also “Datum”)

**Measuring point (MP)** is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

**Membrane filter** is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Method detection limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

**Methylene blue active substances (MBAS)** are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

**Micrograms per gram (UG/G,  $\mu\text{g/g}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

**Micrograms per kilogram (UG/KG,  $\mu\text{g/kg}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter (UG/L,  $\mu\text{g/L}$ )** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

**Microsiemens per centimeter (US/CM,  $\mu\text{S/cm}$ )** is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter (MG/L, mg/L)** is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

**Minimum reporting level (MRL)** is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

**Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where 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 of 1929)** is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. *See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>* (See "North American Vertical Datum of 1988")

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

**Nekton** are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

**Nephelometric turbidity unit (NTU)** is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

**North American Vertical Datum of 1988 (NAVD 1988)** 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<sup>2</sup>), 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 utilizes 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 measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

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

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

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

**Phytoplankton** is the plant part of the plankton. They are usually 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 ( $1 \times 10^{-12}$ ) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields  $3.7 \times 10^{10}$  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 [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

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

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

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

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

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

and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

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

**Return period** (See "Recurrence interval")

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

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

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

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

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

**Sediment** is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "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 pre-cipitation.

**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 (<2mm, 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.

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

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

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

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

**Suspended-sediment discharge** (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/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, 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”)

**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.

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

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

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

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

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

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

**Time-weighted average** is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days.

**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 tons 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 the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to U.S. EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

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

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

**Vertical datum** (See “Datum”)

**Volatile organic compounds (VOCs)** are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often 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.”

**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")

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

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

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- 1–D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

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- 2–D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 p.
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- 3–A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.

- 3–A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.
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- 3–A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.
- 3–A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.
- 3–A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.
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- 3–A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.
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- 3–A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

### **Section B. Ground-Water Techniques**

- 3–B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.
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- 3–B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.
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- 3–B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

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- 3–C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
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## **Book 4. Hydrologic Analysis and Interpretation**

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- 4–A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.
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- 5–A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.
- 5–A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.
- 5–A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.
- 5–A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

**Section C. Sediment Analysis**

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

**Book 6. Modeling Techniques****Section A. Ground Water**

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

**Book 7. Automated Data Processing and Computations****Section C. Computer Programs**

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

**Book 8. Instrumentation****Section A. Instruments for Measurement of Water Level**

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

**Section B. Instruments for Measurement of Discharge**

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

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

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

MISSOURI RIVER BASIN  
MADISON RIVER BASIN  
06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT

LOCATION.--Lat 44°39'25", long 111°04'03", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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. U.S. Geological Survey data collection platform with satellite telemetry at station. Supplementary nonrecording gage at site 0.3 mi downstream at different datum used at time during 1927-30.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	423	370	363	370	359	394	536	791	417	375	368
2	361	390	376	356	369	355	401	526	813	413	379	363
3	363	381	390	368	366	360	387	566	892	411	397	362
4	363	374	382	369	367	358	385	581	751	415	414	361
5	362	372	381	365	363	358	397	586	687	405	390	361
6	363	382	386	365	365	363	428	559	666	402	381	383
7	365	444	379	369	365	381	471	586	670	403	375	447
8	364	387	375	371	376	384	446	569	649	397	378	411
9	372	374	375	372	370	365	441	520	651	390	382	384
10	375	371	372	361	360	369	468	505	654	390	380	375
11	379	370	375	362	364	372	489	516	641	388	375	375
12	379	369	371	362	366	379	455	570	610	387	375	370
13	381	369	373	363	360	382	461	644	568	387	374	369
14	391	369	385	360	366	380	556	798	540	387	369	369
15	386	369	383	361	356	372	754	858	537	382	369	365
16	377	369	370	351	358	369	617	827	532	386	367	366
17	383	369	376	359	365	367	523	819	523	386	362	368
18	383	376	378	360	365	361	488	836	542	389	364	395
19	375	371	379	357	363	360	458	908	592	402	363	380
20	375	364	378	358	368	360	431	984	519	392	363	374
21	374	376	377	356	359	367	420	1000	495	389	364	369
22	373	387	373	363	363	390	430	904	486	387	364	368
23	399	382	369	363	370	401	440	822	492	387	365	367
24	390	377	e350	366	377	394	421	734	484	381	369	367
25	370	379	e340	375	364	393	422	684	473	381	363	367
26	366	375	e340	382	348	383	447	662	456	384	364	365
27	370	365	e350	390	371	380	468	675	449	395	378	368
28	371	365	e360	385	370	376	458	701	442	422	381	369
29	370	370	369	376	---	375	460	698	435	392	375	369
30	374	373	368	e350	---	373	530	725	423	384	375	384
31	419	---	369	e360	---	378	---	772	---	381	369	---
TOTAL	11633	11342	11519	11318	10224	11564	13946	21671	17463	12212	11599	11239
MEAN	375.3	378.1	371.6	365.1	365.1	373.0	464.9	699.1	582.1	393.9	374.2	374.6
MAX	419	444	390	390	377	401	754	1000	892	422	414	447
MIN	360	364	340	350	348	355	385	505	423	381	362	361
AC-FT	23070	22500	22850	22450	20280	22940	27660	42980	34640	24220	23010	22290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2002, BY WATER YEAR (WY)\*

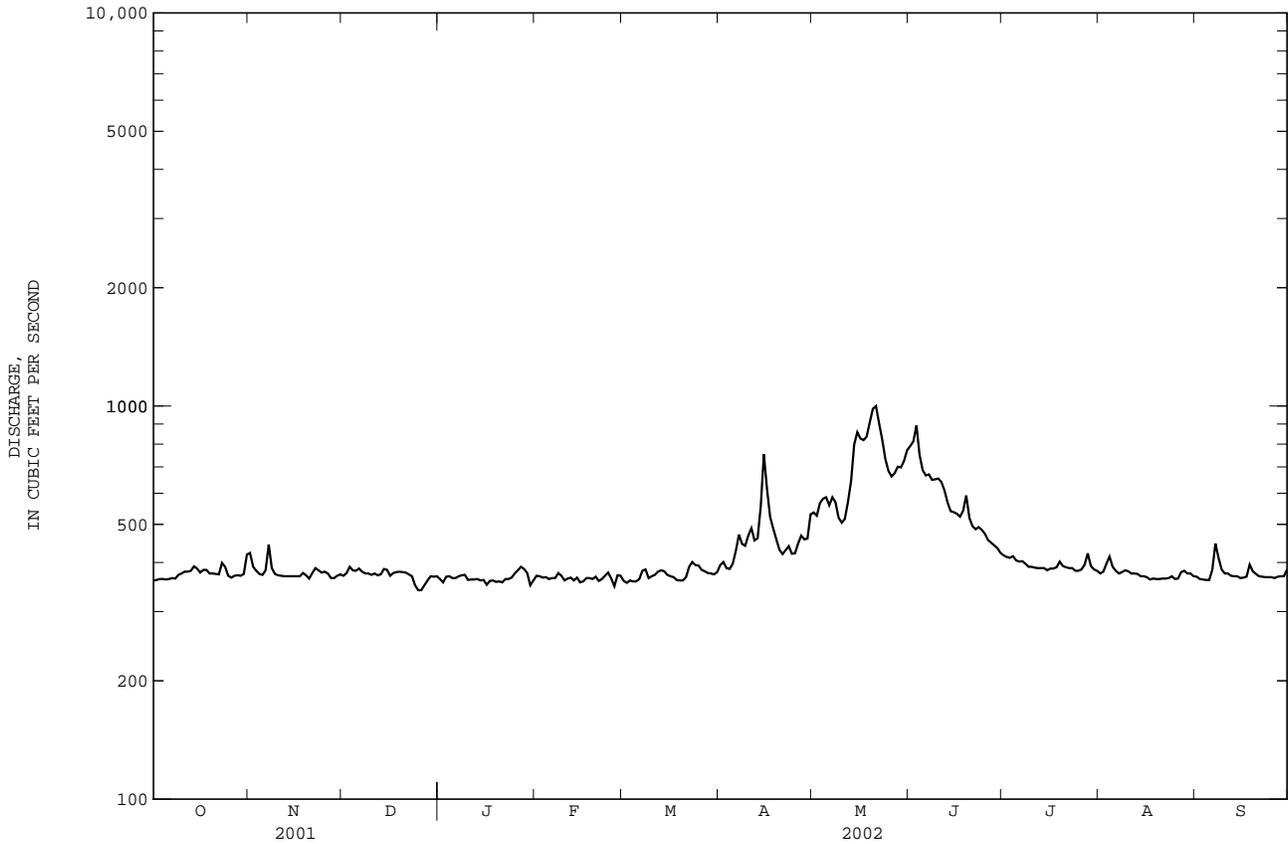
MEAN	434.1	424.7	416.1	404.7	399.1	405.8	496.1	851.5	815.1	500.0	433.7	427.2
MAX	710	697	641	586	572	539	671	1725	1479	917	759	704
(WY)	1914	1914	1997	1997	1914	1917	1925	1997	1997	1913	1913	1913
MIN	297	297	304	304	303	313	369	388	341	282	273	282
(WY)	1935	1932	1932	1932	1932	1943	1941	1934	1931	1931	1934	1934

MADISON RIVER BASIN

06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1913 - 2002*	
ANNUAL TOTAL	156096		155730		--	
ANNUAL MEAN	427.7		426.7		499.4	
HIGHEST ANNUAL MEAN	--		--		789 1997	
LOWEST ANNUAL MEAN	--		--		337 1934	
HIGHEST DAILY MEAN	1490	May 16	1000	May 21	2750	May 18 1996
LOWEST DAILY MEAN	340 <sup>e</sup>	Dec 25,26	340	Dec 25	245	Jan 1 1942
ANNUAL SEVEN-DAY MINIMUM	354	Dec 24	354	Dec 24	267	Aug 6 1931
MAXIMUM PEAK FLOW	--		1080	May 20	2820 <sup>a</sup>	May 18 1996
MAXIMUM PEAK STAGE	--		2.55	May 20	10.0 <sup>b</sup>	Jan 8 1937
ANNUAL RUNOFF (AC-FT)	309600		308900		361800	
10 PERCENT EXCEEDS	533		583		747	
50 PERCENT EXCEEDS	406		378		433	
90 PERCENT EXCEEDS	365		362		339	

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



## GALLATIN RIVER BASIN

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT

LOCATION.--Lat 45°29'51", long 111°16'11" in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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).

GAGE.--Water-stage recorder. Datum 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	307	371	214	230	222	225	267	424	4250	1620	529	389
2	305	343	232	219	230	224	246	403	4960	1490	526	377
3	304	329	254	242	224	223	240	465	4030	1390	538	367
4	302	314	242	245	237	227	257	473	3320	1330	592	360
5	302	315	219	233	229	231	272	520	3100	1250	530	354
6	303	324	236	229	227	230	296	507	3550	1170	501	406
7	309	339	246	231	227	231	305	521	3490	1110	488	514
8	306	293	229	232	231	227	292	486	3250	1090	518	465
9	340	290	232	232	232	212	298	442	2750	1020	552	410
10	324	295	231	222	224	223	309	457	2410	948	506	392
11	338	301	199	211	222	225	308	446	2130	899	485	382
12	321	304	221	223	225	229	306	487	1970	859	476	376
13	348	309	219	225	225	229	339	589	1880	829	470	369
14	353	307	253	228	232	226	447	789	1940	830	453	361
15	343	301	250	231	227	213	555	905	2170	788	444	355
16	323	295	226	209	229	215	444	837	2430	806	434	351
17	345	297	237	210	237	216	384	842	2760	794	425	370
18	333	299	244	227	243	216	359	984	3170	747	422	434
19	330	272	243	226	240	222	324	1370	3190	735	418	400
20	365	277	240	231	238	221	305	1940	2540	727	414	379
21	349	307	243	245	227	217	307	2290	2330	708	414	366
22	336	302	240	240	228	226	318	1980	2410	667	415	363
23	347	299	213	225	238	236	334	1530	2350	649	405	359
24	327	285	197	229	239	237	318	1310	2520	630	410	354
25	296	287	193	227	205	235	321	1230	2400	630	409	353
26	308	288	204	228	190	240	334	1270	2280	656	396	353
27	322	269	215	236	230	244	345	1450	2140	634	403	353
28	333	201	230	235	238	244	339	1710	2010	652	417	362
29	327	230	247	221	---	240	354	2150	1930	590	403	354
30	335	247	243	216	---	249	421	2990	1780	561	396	370
31	375	---	241	222	---	255	---	3930	---	546	390	---
TOTAL	10156	8890	7133	7060	6396	7088	9944	35727	81440	27355	14179	11398
MEAN	327.6	296.3	230.1	227.7	228.4	228.6	331.5	1152	2715	882.4	457.4	379.9
MAX	375	371	254	245	243	255	555	3930	4960	1620	592	514
MIN	296	201	193	209	190	212	240	403	1780	546	390	351
AC-FT	20140	17630	14150	14000	12690	14060	19720	70860	161500	54260	28120	22610

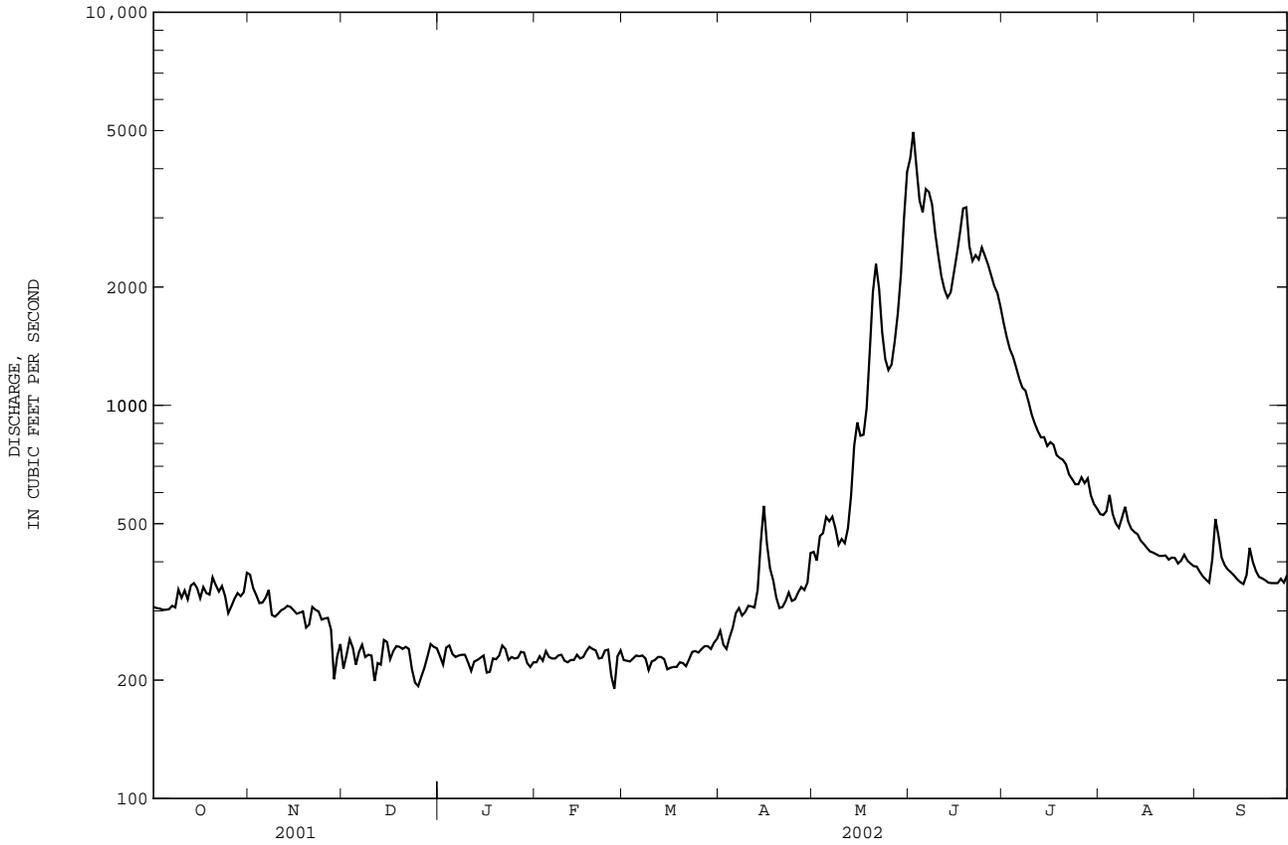
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEAR 1889 - 2002, BY WATER YEAR (WY)\*

MEAN	456.0	383.2	321.6	308.1	304.7	311.8	502.0	1803	2945	1294	611.2	492.3
MAX	743	589	549	468	430	465	899	3135	5110	3669	1162	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1989 - 2002*	
ANNUAL TOTAL	205146		226766		--	
ANNUAL MEAN	562.0		621.3		813.6	
HIGHEST ANNUAL MEAN	--		--		1184	1976
LOWEST DAILY MEAN	--		--		408	1934
HIGHEST DAILY MEAN	3480	May 15	4960	Jun 2	8970	Jun 17 1974
LOWEST DAILY MEAN	193	Dec 25	190	Feb 26	174	Nov 21 1931
ANNUAL SEVEN-DAY MINIMUM	213	Dec 22	213	Dec 22	182	Jan 18 1931
MAXIMUM PEAK FLOW	--		5260	Jun 2	9160 <sup>a</sup>	Jun 2 1997
MAXIMUM PEAK STAGE	--		5.03	Jun 2	7.38	Jun 17 1974
10 PERCENT EXCEEDS	1470		1740		2040	
50 PERCENT EXCEEDS	323		330		430	
90 PERCENT EXCEEDS	255		224		268	

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



Gallatin RIVER BASIN

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2001 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: (Seasonal records) May 2001 to current year.

INSTRUMENTATION.--Temperature probe installed May 3, 2001.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: During period of seasonal operation, maximum, 18.5°C, July 26, 2001 and August 4-6, and 8, 2001; minimum, 0.0°C, April 2, 2002.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: During period of operation, maximum, 19.5°C, July 13; minimum, 0.0°C, April 2.

WATER TEMPERATURE, in DEGREES C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	5.0	2.0	3.5	8.5	5.0	6.5
2	---	---	---	---	---	---	3.0	0.0	1.5	10.5	4.5	7.5
3	---	---	---	---	---	---	4.5	0.5	2.5	9.0	7.0	8.0
4	---	---	---	---	---	---	6.0	2.0	4.0	9.5	4.5	7.0
5	---	---	---	---	---	---	7.5	2.5	5.0	9.0	6.5	7.5
6	---	---	---	---	---	---	7.0	4.5	5.5	7.0	5.0	6.0
7	---	---	---	---	---	---	7.0	4.5	6.0	6.0	1.0	4.0
8	---	---	---	---	---	---	8.5	4.5	6.5	7.0	1.0	3.5
9	---	---	---	---	---	---	7.0	5.5	6.0	6.5	2.5	4.5
10	---	---	---	---	---	---	7.5	5.0	6.5	8.5	5.0	6.5
11	---	---	---	---	---	---	8.0	4.5	6.0	10.5	6.0	8.0
12	---	---	---	---	---	---	9.5	5.5	7.5	11.5	6.5	9.0
13	---	---	---	---	---	---	9.0	6.5	7.5	12.0	7.0	9.5
14	---	---	---	---	---	---	9.5	6.5	8.0	11.0	7.5	9.0
15	---	---	---	---	---	---	6.5	2.5	4.0	9.0	6.0	7.5
16	---	---	---	---	---	---	6.5	2.0	4.0	9.5	5.5	7.5
17	---	---	---	---	---	---	5.0	3.0	4.0	10.5	6.0	8.5
18	---	---	---	---	---	---	4.0	3.0	3.5	11.0	7.0	9.0
19	---	---	---	---	---	---	6.5	2.0	4.0	12.0	7.5	9.5
20	---	---	---	---	---	---	6.5	2.5	4.5	10.5	7.0	8.5
21	---	---	---	---	---	---	7.0	2.5	4.5	9.0	5.5	7.0
22	---	---	---	---	---	---	10.0	4.0	7.0	6.5	3.0	4.5
23	---	---	---	---	---	---	8.5	4.5	6.0	6.5	2.5	4.5
24	---	---	---	---	---	---	8.0	3.0	5.5	9.5	5.0	7.0
25	---	---	---	---	---	---	7.5	3.5	5.5	9.0	5.0	7.5
26	---	---	---	---	---	---	9.0	5.0	6.5	8.5	6.5	7.5
27	---	---	---	---	---	---	7.0	5.5	6.0	11.0	6.0	8.5
28	---	---	---	---	---	---	9.5	4.5	6.5	9.5	7.0	8.0
29	---	---	---	---	---	---	10.5	5.0	8.0	11.0	6.5	8.5
30	---	---	---	---	---	---	8.5	6.5	7.0	9.5	6.0	7.5
31	---	---	---	---	---	---	---	---	---	10.5	5.0	7.5
MONTH	---	---	---	---	---	---	10.5	0.0	5.4	12.0	1.0	7.3

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT--Continued

WATER TEMPERATURE, in DEGREES C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

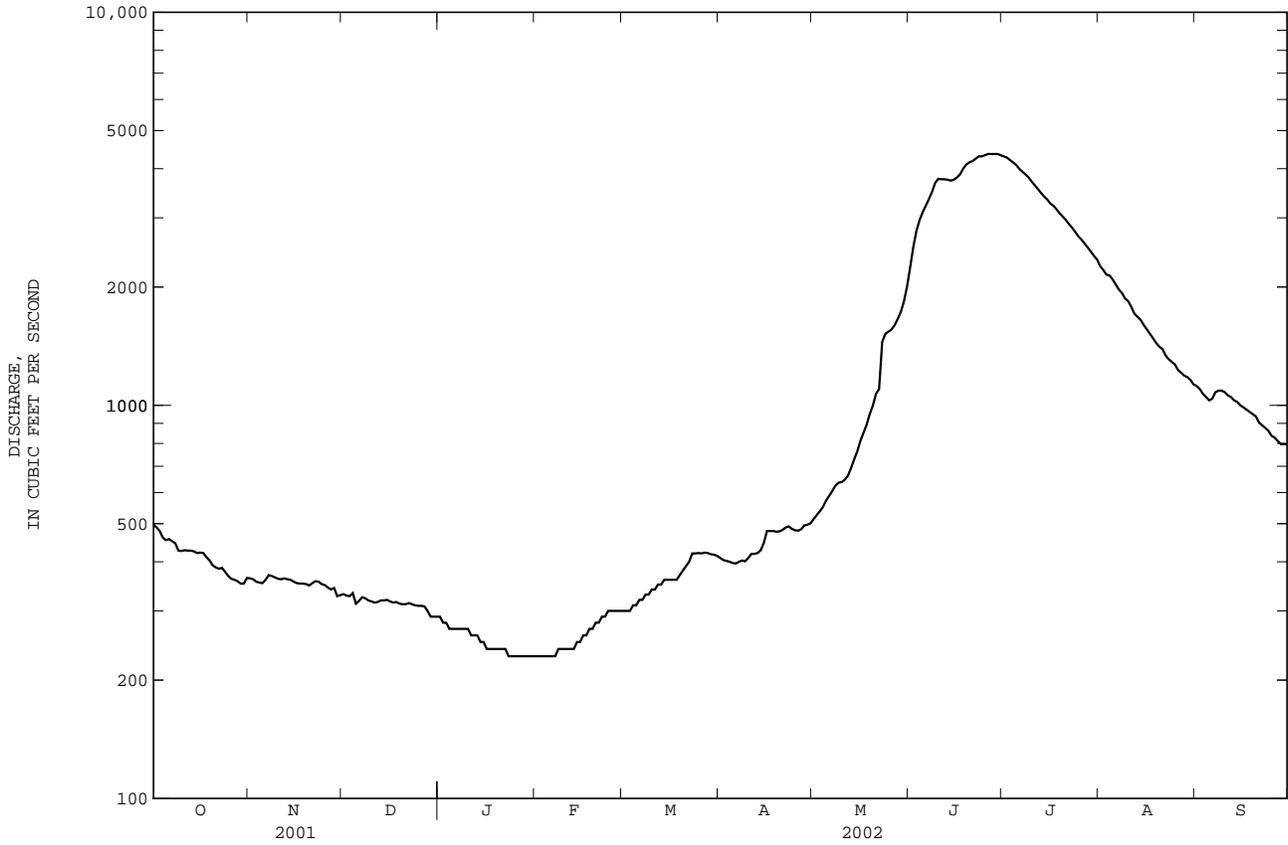
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.0	5.5	7.5	15.0	10.0	12.5	16.0	10.0	13.0	14.5	10.5	12.5
2	7.5	5.0	6.0	15.0	9.5	12.5	14.0	11.0	12.5	16.0	11.5	13.5
3	7.0	4.5	6.0	14.5	10.5	12.5	14.5	10.5	12.5	16.0	12.0	14.0
4	8.5	4.5	6.5	16.5	11.0	13.5	16.5	11.5	14.0	15.5	12.0	13.5
5	10.0	6.0	8.0	16.0	11.0	13.5	17.0	11.5	14.5	14.0	11.5	13.0
6	10.5	6.0	8.5	16.0	11.5	13.5	17.0	12.0	14.5	13.0	11.0	11.5
7	10.0	5.5	8.0	15.0	11.5	13.5	16.0	12.5	14.0	11.5	10.0	11.0
8	9.0	5.0	7.0	18.0	12.0	15.0	14.5	11.0	12.5	13.5	9.5	11.0
9	7.0	5.0	6.0	16.5	11.0	14.0	13.5	8.5	11.0	13.0	9.0	11.0
10	5.0	4.0	4.5	17.0	10.5	14.0	16.0	9.5	13.0	13.0	8.5	11.0
11	8.5	4.0	6.0	18.0	11.0	14.5	14.5	11.5	13.5	13.5	9.0	11.5
12	9.0	6.0	7.5	18.5	11.5	15.0	15.0	11.5	13.5	13.5	9.5	11.5
13	11.5	6.0	8.5	19.5	13.5	16.5	15.5	10.0	13.0	13.0	9.0	11.0
14	12.5	7.0	9.5	19.0	14.0	16.5	16.5	11.0	14.0	13.0	8.5	11.0
15	12.5	8.0	10.0	18.5	14.0	16.0	16.5	11.5	14.0	13.0	9.5	11.5
16	12.0	7.5	9.5	16.5	14.0	15.5	16.0	11.5	14.0	12.5	10.0	11.5
17	10.5	8.0	9.5	18.5	13.0	15.5	15.0	10.0	12.5	12.0	10.0	11.0
18	9.0	7.5	8.5	17.0	13.5	15.5	15.0	10.5	12.5	10.5	9.0	10.0
19	9.0	5.0	7.0	16.0	13.0	14.5	14.5	10.0	12.5	12.0	8.0	10.0
20	10.5	6.0	8.5	16.0	12.5	14.5	15.0	10.5	13.0	11.0	8.5	9.5
21	12.0	7.5	9.5	18.0	12.5	15.0	13.5	10.5	12.0	9.5	7.0	8.5
22	10.5	9.0	9.5	17.5	12.5	15.0	14.0	10.0	12.0	9.5	5.0	7.5
23	13.0	8.5	10.5	17.0	12.5	15.0	13.5	10.0	12.0	10.5	6.5	8.5
24	12.5	8.5	10.5	18.5	12.5	15.5	12.5	10.0	11.5	11.0	8.0	9.5
25	14.0	9.0	11.5	17.5	14.0	15.0	14.5	9.5	12.0	10.5	8.5	9.5
26	14.0	10.0	12.0	15.0	11.5	13.5	14.0	10.5	12.5	9.5	6.5	8.0
27	14.5	10.5	12.5	14.0	11.5	12.5	12.5	10.0	11.5	8.5	7.5	8.0
28	13.5	10.5	12.0	16.0	10.0	13.0	13.5	9.5	12.0	10.0	6.5	8.0
29	12.5	10.0	11.5	17.5	11.5	14.5	14.0	10.5	12.5	9.5	7.0	8.5
30	14.5	9.0	11.5	16.0	12.0	14.5	14.5	10.5	12.5	9.0	7.0	8.0
31	---	---	---	15.5	12.0	14.0	14.0	12.0	13.0	---	---	---
MONTH	14.5	4.0	8.8	19.5	9.5	14.4	17.0	8.5	12.8	16.0	5.0	10.5



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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1927 - 2002*	
ANNUAL TOTAL	295657		398406		--	
ANNUAL MEAN	810.0		1092		1337	
HIGHEST ANNUAL MEAN	--		--		2253 1997	
LOWEST ANNUAL MEAN	--		--		682 1934	
HIGHEST DAILY MEAN	2530	Jun 14	4360	Jun 26	9930	Jun 19 1997
LOWEST DAILY MEAN	250 <sup>e</sup>	Jan 1-Feb 15	230	Jan 23	100	Feb 18 1993
ANNUAL SEVEN-DAY MINIMUM	250	Jan 1	230	Jan 23	113	Feb 11 1989
MAXIMUM PEAK FLOW			4410	Jun 29	9950	Jun 18 1997
MAXIMUM PEAK STAGE			6.21	Jun 29	8.90	Jun 18 1997
ANNUAL RUNOFF (AC-FT)	586400		790200		968600	
10 PERCENT EXCEEDS	2230		3430		3490	
50 PERCENT EXCEEDS	426		426		678	
90 PERCENT EXCEEDS	250		260		333	

\* For period of operation.  
e Estimated.



## YELLOWSTONE RIVER BASIN

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

LOCATION.--Lat 45°00'11", long 110°00'04", in SW 1/4 NW 1/4 SW 1/4 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<sup>2</sup>.

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,340 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	5.3	e5.4	4.0	2.9	1.9	e1.5	15	735	274	36	14
2	5.3	5.3	e5.4	3.9	2.9	1.8	e1.4	19	662	245	36	13
3	5.3	5.2	e5.4	4.0	2.6	e1.8	e1.4	22	502	216	39	13
4	5.3	5.8	e5.2	3.8	2.6	e2.0	e1.6	21	454	201	66	13
5	5.2	e6.0	e5.0	3.6	2.5	e2.0	1.5	22	467	193	37	12
6	4.6	e6.0	e5.2	3.4	2.6	e2.0	2.4	18	544	175	34	23
7	4.6	e6.2	e5.2	3.4	2.7	e2.0	2.8	17	466	170	33	57
8	4.9	e6.2	5.2	3.3	2.7	e1.9	3.0	15	403	167	33	27
9	5.0	e6.2	5.2	3.4	2.5	e1.9	3.3	17	319	142	30	19
10	4.9	e5.8	5.1	3.3	2.5	e1.9	3.5	14	244	125	28	17
11	4.9	e5.4	e5.0	3.4	2.5	e1.8	3.4	14	203	113	28	16
12	4.7	e5.4	e5.0	3.4	2.5	e1.9	3.3	19	182	103	27	15
13	4.8	5.4	e4.9	3.4	2.4	e1.9	4.3	35	176	95	25	15
14	5.0	5.0	e4.9	3.3	2.4	e1.7	11	59	194	89	23	14
15	5.0	5.0	e4.9	3.2	2.3	e1.8	12	76	225	83	22	14
16	5.7	5.3	e4.9	3.1	2.3	e1.7	9.4	79	293	83	21	13
17	5.3	5.0	e4.9	3.2	2.3	e1.8	7.3	92	375	92	21	16
18	5.1	5.0	e4.9	3.2	2.3	e1.9	5.8	132	435	79	20	17
19	5.1	e5.2	4.9	3.2	2.3	e1.8	6.7	205	417	72	19	14
20	5.3	e5.2	4.6	3.2	2.1	e1.7	7.8	267	381	69	19	13
21	5.1	e5.2	4.3	3.2	1.9	e1.7	8.0	270	373	63	20	13
22	5.1	e5.2	4.1	3.3	1.9	e1.7	5.2	195	379	63	19	12
23	5.1	5.0	3.8	3.2	1.9	e1.8	5.3	138	367	71	18	12
24	5.3	e5.2	3.8	3.2	1.8	e1.7	7.1	118	389	55	18	12
25	e5.4	e5.4	4.1	3.2	1.7	e1.6	7.7	105	413	50	17	12
26	e5.8	e5.4	e4.1	3.2	1.7	e1.6	9.7	112	390	48	16	11
27	e5.2	5.3	e4.1	3.3	1.9	e1.5	11	131	372	71	18	11
28	5.0	e5.4	e4.1	3.4	2.0	e1.5	9.3	190	346	55	16	11
29	5.1	e5.4	e4.1	3.3	---	e1.6	16	289	324	45	16	11
30	5.1	e5.4	e4.0	3.2	---	e1.6	19	432	310	41	15	12
31	5.7	---	4.0	3.0	---	e1.7	---	581	---	39	14	---
TOTAL	159.2	162.8	145.7	104.2	64.7	55.2	191.7	3719	11340	3387	784	472
MEAN	5.135	5.427	4.700	3.361	2.311	1.781	6.390	120.0	378.0	109.3	25.29	15.73
MAX	5.8	6.2	5.4	4.0	2.9	2.0	19	581	735	274	66	57
MIN	4.6	5.0	3.8	3.0	1.7	1.5	1.4	14	176	39	14	11
AC-FT	316	323	289	207	128	109	380	7380	22490	6720	1560	936
CFSM	0.16	0.17	0.15	0.11	0.07	0.06	0.20	3.85	12.1	3.50	0.81	0.50
IN.	0.19	0.19	0.17	0.12	0.08	0.07	0.23	4.43	13.52	4.04	0.93	0.56

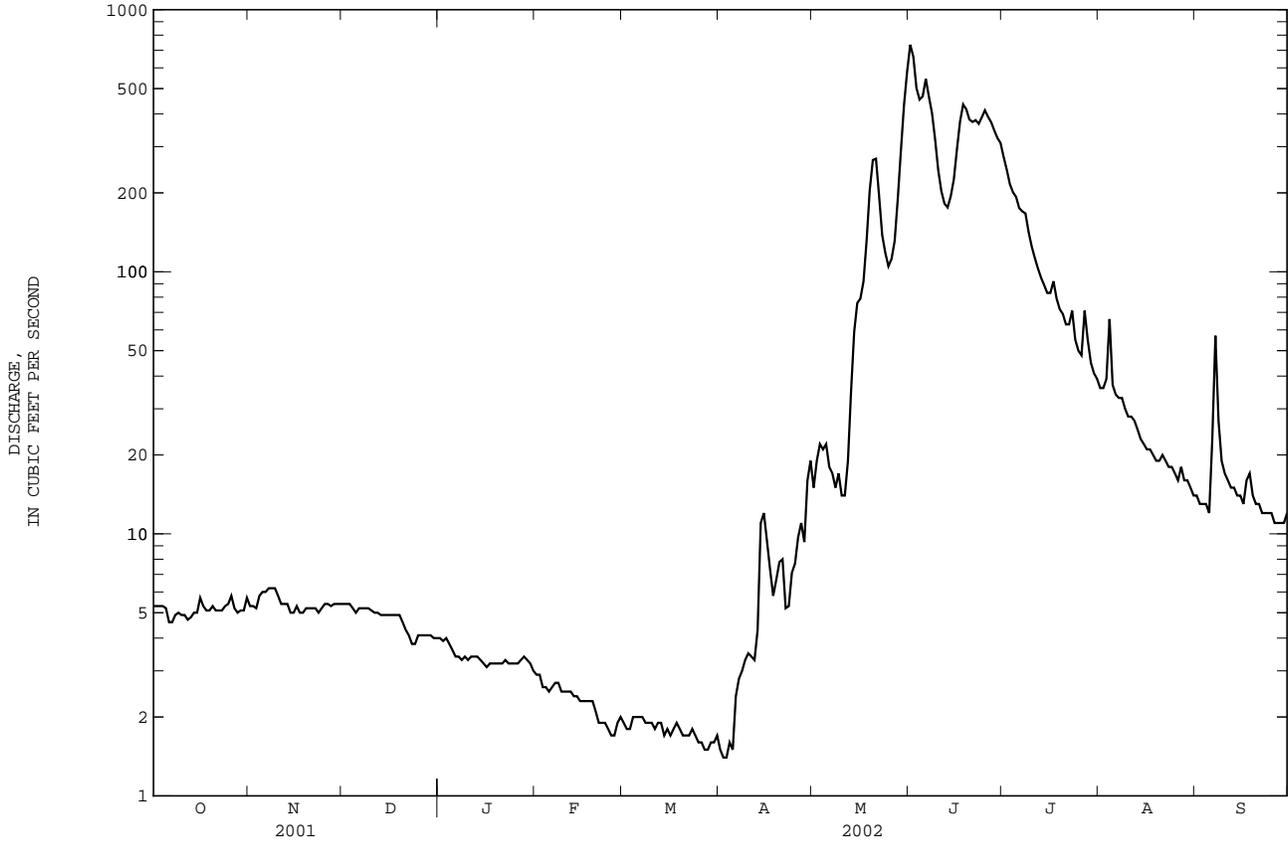
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002
MEAN	9.047	5.671	3.577	2.405
MAX	11.9	6.84	4.70	3.36
(WY)	1999	1999	2002	2002
MIN	5.14	4.96	2.85	2.01
(WY)	2002	2001	2001	2000

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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1999 - 2002	
ANNUAL TOTAL	13953.1		20585.5		--	
ANNUAL MEAN	38.23		56.40		53.64	
HIGHEST ANNUAL MEAN	--		--		62.9 1999	
LOWEST ANNUAL MEAN	--		--		38.5 2001	
HIGHEST DAILY MEAN	346	May 29	735	Jun 1	735	Jun 1 2002
LOWEST DAILY MEAN	1.0	Feb 28	1.4 <sup>e</sup>	Apr 2	1.0	Dec 21 1998
ANNUAL SEVEN-DAY MINIMUM	1.1	Feb 27	1.5	Mar 28	1.1	Feb 27 2001
MAXIMUM PEAK FLOW	--		912	Jun 1	912	Jun 1 2002
MAXIMUM PEAK STAGE	--		3.49	Jun 1	3.49	Jun 1 2002
ANNUAL RUNOFF (AC-FT)	27680		40830		38860	
10 PERCENT EXCEEDS	162		202		202	
50 PERCENT EXCEEDS	5.3		5.4		7.5	
90 PERCENT EXCEEDS	1.7		1.9		1.8	

e Estimated.



## YELLOWSTONE RIVER BASIN

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<sup>2</sup>.

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

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 by National Park Service and record provided by the Montana District. The DISCHARGE, DAILY MEAN VALUES, table and hydrograph plot of daily values were published incorrectly. Please see the Water Resources Data Montana Water Year 2001 (Water-Data Report MT-01-1) for the correct data.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	34	16	e16	18	e14	18	75	999	470	115	52
2	31	32	e16	e16	e16	e14	e16	87	990	430	117	50
3	31	31	17	19	e15	e16	e15	109	818	390	105	50
4	31	30	17	20	e16	19	17	95	691	354	152	50
5	29	29	17	21	e17	19	19	105	635	336	100	49
6	28	32	e16	21	e17	20	24	92	795	320	89	55
7	28	38	e15	22	e18	20	26	87	816	304	84	118
8	28	32	e15	e20	e19	e17	25	77	754	289	85	78
9	30	29	e15	e20	e18	e18	25	69	689	263	75	61
10	29	28	e14	e19	e17	19	27	69	565	243	71	55
11	30	30	e14	21	e17	19	27	66	482	219	73	52
12	29	34	e15	22	e16	e17	27	76	439	195	75	50
13	30	34	e16	21	e16	18	31	133	421	183	76	49
14	32	33	18	e20	e16	e16	47	206	423	168	73	47
15	30	32	e16	e18	e15	e15	64	241	462	158	71	46
16	29	32	e16	e17	e15	e15	49	260	542	157	68	45
17	31	32	19	e18	17	e15	41	281	631	197	67	47
18	31	32	20	e19	17	e16	37	397	750	190	65	56
19	30	31	21	e19	17	e17	33	614	685	171	64	48
20	31	26	22	e19	e16	e16	e31	812	582	168	63	46
21	31	33	e21	e20	e15	e17	31	806	586	167	62	45
22	30	31	22	e19	e17	19	33	623	606	160	64	43
23	33	31	e18	e19	e18	21	34	433	586	170	62	42
24	29	30	e16	e20	e16	20	33	351	615	144	60	42
25	24	29	e14	19	e14	18	37	307	624	128	58	42
26	27	27	e14	19	e13	17	45	319	632	124	57	42
27	29	e18	e14	19	e15	17	50	374	601	132	60	42
28	30	e14	e15	e18	e14	16	49	464	553	164	59	42
29	30	16	17	e17	---	15	64	634	532	139	57	42
30	31	16	18	e17	---	16	96	884	511	126	55	43
31	34	---	19	19	---	17	---	1050	---	121	53	---
TOTAL	927	876	523	594	455	533	1071	10196	19015	6780	2335	1529
MEAN	29.90	29.20	16.87	19.16	16.25	17.19	35.70	328.9	633.8	218.7	75.32	50.97
MAX	34	38	22	22	19	21	96	1050	999	470	152	118
MIN	24	14	14	16	13	14	15	66	421	121	53	42
AC-FT	1840	1740	1040	1180	902	1060	2120	20220	37720	13450	4630	3030

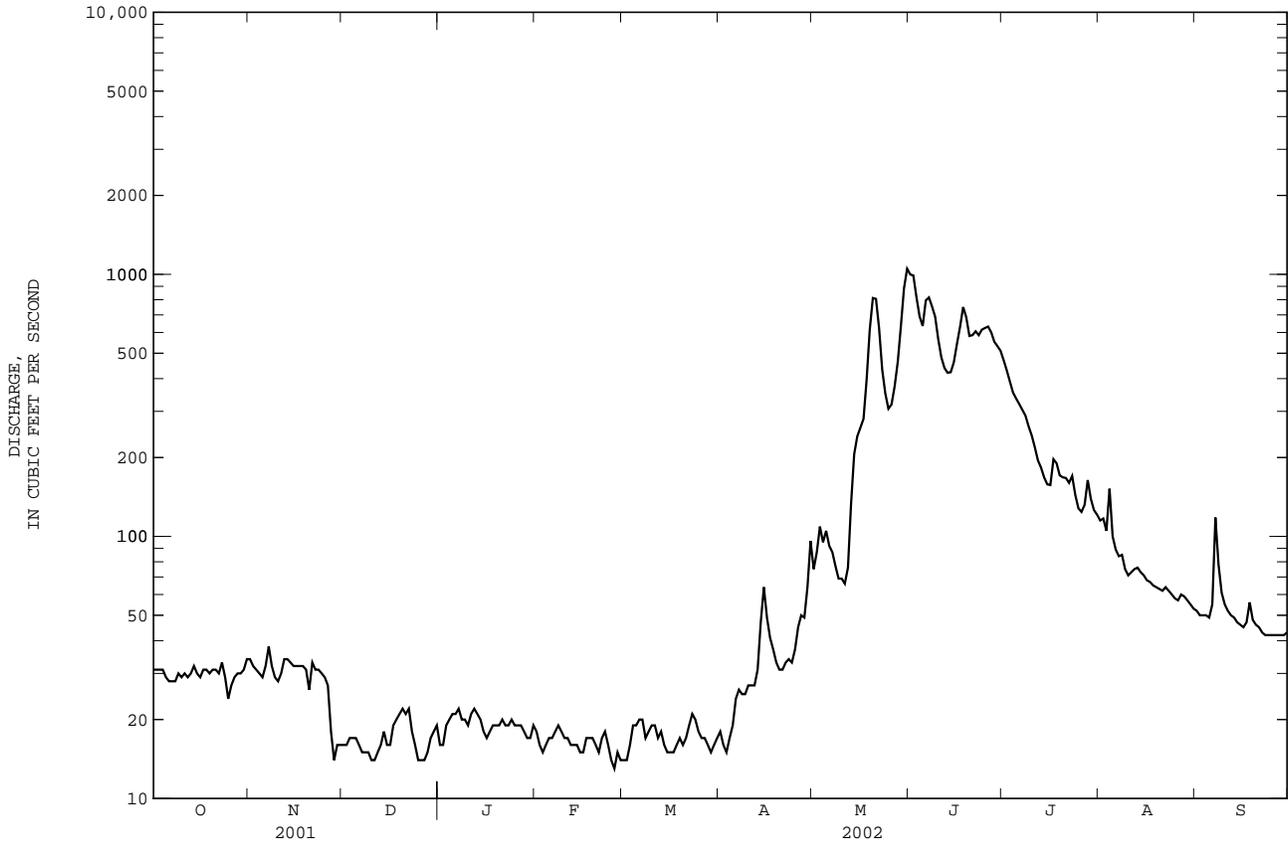
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)

	1989	1995	1989	1989	2002	2002	1993	1995	2001	1994	2001	2001
MEAN	44.01	32.16	25.18	25.42	23.55	23.65	62.16	405.7	690.1	290.7	95.79	57.66
MAX	68.8	40.3	31.2	33.3	32.0	32.0	127	580	1251	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	21.7	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1989 - 2002	
ANNUAL TOTAL	34325		44834		--	
ANNUAL MEAN	94.04		122.8		148.3	
HIGHEST ANNUAL MEAN	--		--		204	
LOWEST ANNUAL MEAN	--		--		96.5	
HIGHEST DAILY MEAN	729	May 29	1050	May 31	2070	Jun 9 1996
LOWEST DAILY MEAN	14	Nov 28	13	Feb 26	12	Feb 4 1989
ANNUAL SEVEN-DAY MINIMUM	15	Dec 6	14	Feb 24	13	Feb 2 1989
MAXIMUM PEAK FLOW	--		1330	May 31	2450 <sup>a</sup>	Jun 8 1996
MAXIMUM PEAK STAGE	--		7.02	May 31	7.02	May 31 2002
ANNUAL RUNOFF (AC-FT)	68080		88930		107400	
10 PERCENT EXCEEDS	332		448		484	
50 PERCENT EXCEEDS	31		32		42	
90 PERCENT EXCEEDS	18		16		21	

a Gage height, 5.61 ft.  
e Estimated.



## YELLOWSTONE RIVER BASIN

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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	190	e100	e80	e90	e85	e160	1010	10700	2120	353	185
2	117	168	e110	e90	e85	e85	e140	1170	10100	1880	339	176
3	117	158	e100	e90	e85	e85	e140	1650	7490	1670	375	169
4	117	150	e100	e85	e85	e90	e150	1410	5900	1470	502	168
5	116	143	e100	e85	e85	e90	e160	1590	5460	1360	408	164
6	110	158	e100	e85	e90	e90	243	1210	6360	1240	343	177
7	110	231	e95	e85	e100	e85	307	1050	6450	1150	317	383
8	112	193	e90	e85	e95	e85	298	955	5580	1090	313	369
9	118	144	e80	e80	e90	e90	323	795	4530	1000	318	310
10	120	148	e85	e85	e90	e90	313	776	3660	885	297	232
11	123	163	e90	e85	e90	e90	315	825	3020	814	277	210
12	128	163	e90	e85	e85	e90	293	1210	2850	753	272	197
13	131	150	e95	e85	e90	e90	320	2180	2830	705	264	191
14	139	147	e95	e80	e85	e90	592	3350	3030	676	251	183
15	142	142	e90	e70	e85	e85	1020	3540	3420	639	236	176
16	130	137	e90	e75	e90	e85	714	3460	3930	633	227	171
17	142	135	e90	e85	e90	e85	541	3320	4390	710	220	172
18	153	141	e90	e85	e90	e85	478	4410	4970	724	216	209
19	142	132	e90	e85	e90	e90	400	5970	4700	644	210	208
20	141	113	e90	e90	e90	e85	358	7840	3730	576	204	186
21	142	134	e90	e85	e95	e90	349	7760	3580	592	204	177
22	141	140	e85	e90	e100	e90	348	5360	3660	569	215	170
23	155	136	e70	e95	e110	e90	350	3550	3420	532	209	165
24	151	129	e65	e100	e90	e90	329	2770	3470	519	208	163
25	117	124	e75	e110	e95	e95	376	2470	3340	461	199	162
26	131	e110	e80	e100	e100	e100	576	2680	3230	495	190	161
27	135	e80	e90	e90	e95	e110	717	3130	3030	490	205	160
28	146	e70	e100	e85	e90	e120	664	4120	2690	637	215	162
29	149	e90	e90	e80	---	e140	778	5850	2510	462	213	162
30	153	e100	e90	e85	---	e160	1430	7920	2380	406	202	173
31	172	---	e85	e90	---	e180	---	9740	---	373	188	---
TOTAL	4119	4219	2790	2685	2555	3015	13182	103071	134410	26275	8190	5891
MEAN	132.9	140.6	90.00	86.61	91.25	97.26	439.4	3325	4480	847.6	264.2	196.4
MAX	172	231	110	110	110	180	1430	9740	10700	2120	502	383
MIN	110	70	65	70	85	85	140	776	2380	373	188	160
AC-FT	8170	8370	5530	5330	5070	5980	26150	204400	266600	52120	16240	11680

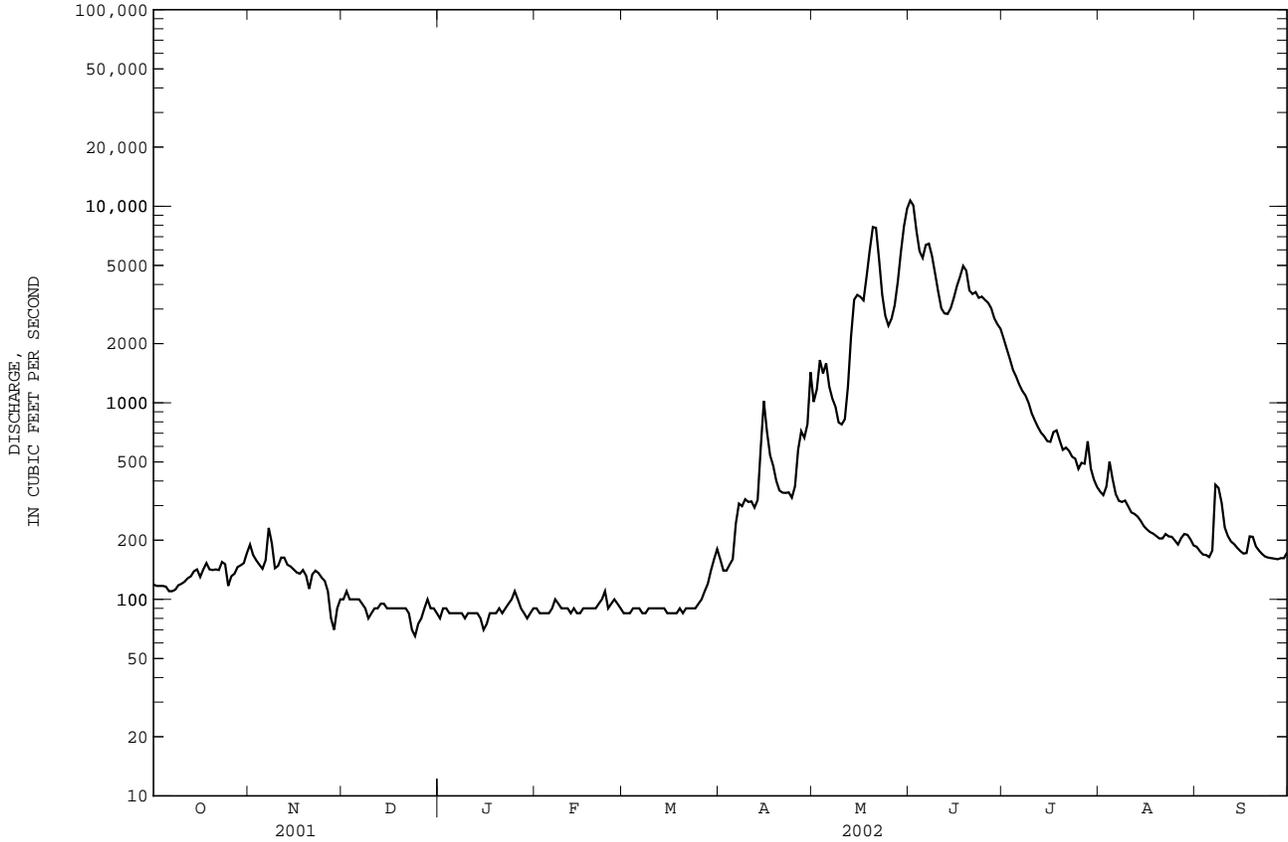
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2002, BY WATER YEAR (WY)\*

MEAN	212.7	156.7	119.9	106.5	102.2	113.3	465.3	2855	4259	1354	352.0	229.0
MAX	485	330	202	200	171	204	1684	6885	9044	3256	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	1408	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1923 - 2002*	
ANNUAL TOTAL	216798		310402		--	
ANNUAL MEAN	594.0		850.4		867.0	
HIGHEST ANNUAL MEAN	--		--		1531 1997	
LOWEST ANNUAL MEAN	--		--		525 1934	
HIGHEST DAILY MEAN	6850	May 15	10700	Jun 1	15600	Jun 10 1996
LOWEST DAILY MEAN	65 <sup>e</sup>	Dec 24	65	Dec 24	45	Mar 23 1964
ANNUAL SEVEN-DAY MINIMUM	79	Dec 20	79	Dec 20	57	Mar 5 1964
MAXIMUM PEAK FLOW	--		13200	Jun 1	19500	Jun 10 1996
MAXIMUM PEAK STAGE	--		9.85	Jun 1	12.15	Jun 10 1996
10 PERCENT EXCEEDS	1800		3170		2940	
50 PERCENT EXCEEDS	147		162		183	
90 PERCENT EXCEEDS	90		85		90	

\* For period of operation.  
e Estimated.

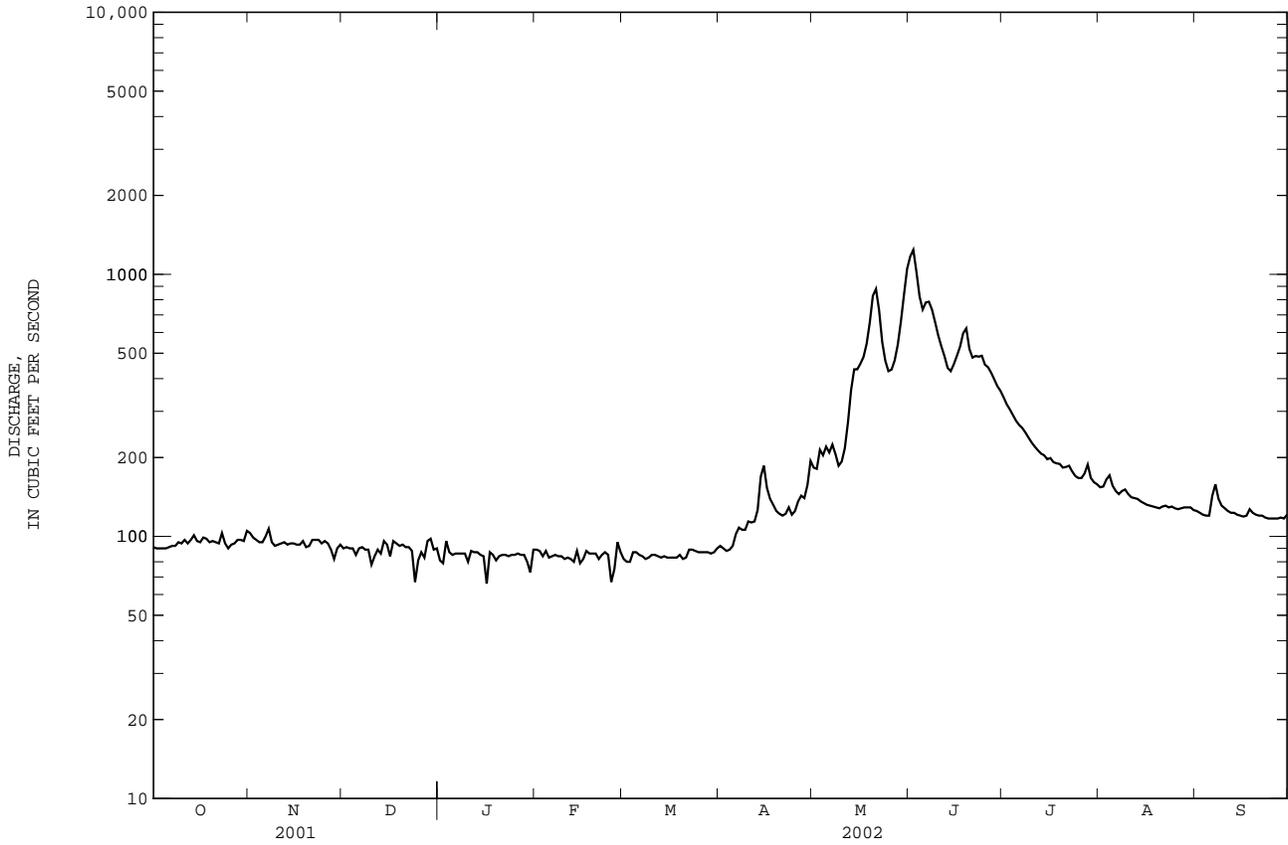




06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002*	
ANNUAL TOTAL	51042		66302		--	
ANNUAL MEAN	139.8		181.6		216.7	
HIGHEST ANNUAL MEAN	--		--		324 1997	
LOWEST ANNUAL MEAN	--		--		138 1988	
HIGHEST DAILY MEAN	804	May 16	1240	Jun 2	1830	May 29 1956
LOWEST DAILY MEAN	67	Dec 24	66	Jan 16	53	Dec 15 1988
ANNUAL SEVEN-DAY MINIMUM	84	Dec 21	81	Feb 25	61	Feb 1 1989
MAXIMUM PEAK FLOW	--		1360	Jun 2	2080 <sup>a</sup>	Jun 4 1956
MAXIMUM PEAK STAGE	--		4.28	Jun 2	5.03	Jun 2 1997
ANNUAL RUNOFF (AC-FT)	101200		131500		157000	
10 PERCENT EXCEEDS	256		453		512	
50 PERCENT EXCEEDS	100		101		122	
90 PERCENT EXCEEDS	90		84		88	

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

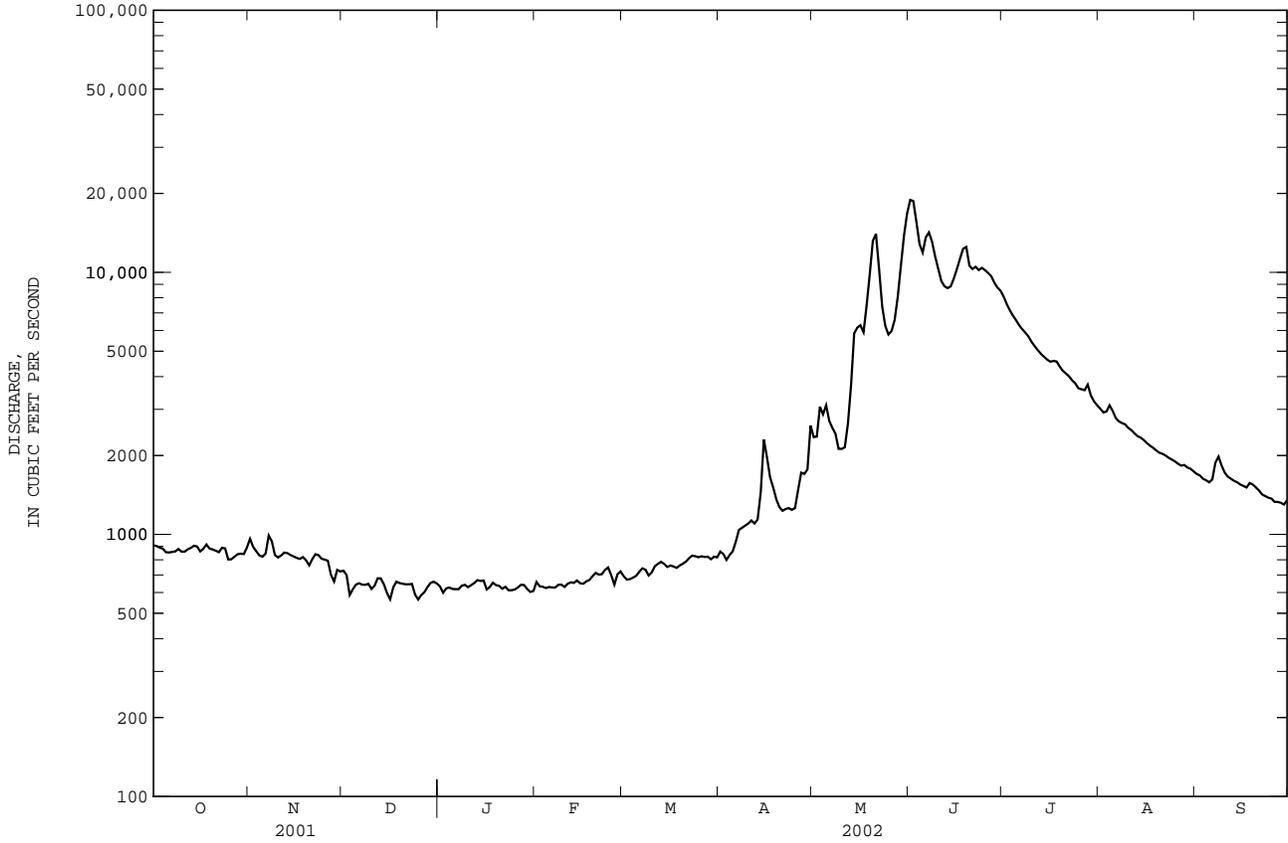




06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1889 - 2002*	
ANNUAL TOTAL	718650		978144		--	
ANNUAL MEAN	1969		2680		3120	
HIGHEST ANNUAL MEAN	--		--		5158 1997	
LOWEST ANNUAL MEAN	--		--		1903 1934	
HIGHEST DAILY MEAN	12400	May 15	18900	Jun 1	32000	Jun 14 1918
LOWEST DAILY MEAN	564	Dec 25	564	Dec 25	380	Feb 5 1989
ANNUAL SEVEN-DAY MINIMUM	609	Dec 22	609	Dec 22	393	Feb 4 1937
MAXIMUM PEAK FLOW	--		21400	Jun 1	32200 <sup>a</sup>	Jun 10 1996
MAXIMUM PEAK STAGE	--		8.89	Jun 1	11.50	Jun 14 1918
ANNUAL RUNOFF (AC-FT)	1425000		1940000		2260000	
10 PERCENT EXCEEDS	5230		8590		8500	
50 PERCENT EXCEEDS	915		908		1400	
90 PERCENT EXCEEDS	646		634		760	

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



## YELLOWSTONE RIVER BASIN

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 23...	1220	15	580	10.9	108	8.6	103	2.5	3.5	53	16.5	2.75	.45
FEB 07...	0850	14	595	9.2	81	7.3	107	-1.5	.0	46	14.7	2.27	.35
MAY 15...	0810	241	589	11.1	101	7.3	51	4.0	1.0	24	7.18	1.38	.36
AUG 07...	0755	98	597	7.7	93	7.4	66	9.0	12.5	31	9.73	1.51	.34
Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT 23...	.1	1.78	53	.35	<.1	4.6	5.9	.09	2.60	--	64	<.04	--
FEB 07...	.1	1.40	45	E.27	<.1	4.6	4.9	--	--	--	--	<.04	--
MAY 15...	.1	1.18	24	<.30	<.10	4.9	3.5	--	--	--	--	<.04	--
AUG 07...	.1	.84	29	<.30	<.10	2.96	3.4	--	--	29	--	<.04	<.10
Date	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE SOLVED (MG/L AS CU) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM SOLVED (UG/L AS CD) (01025)
OCT 23...	--	E.03	<.008	--	<.02	--	3	E.04	.2	17	<.06	<10	.07
FEB 07...	--	.09	<.008	--	<.02	--	2	<.05	E.2	15	<.06	<10	<.04
MAY 15...	--	.05	<.008	--	<.02	--	27	E.04	.2	10	<.06	<10	.06
AUG 07...	E.06	<.05	<.008	E.004	<.02	.010	8	E.03	E.1	13	<.06	<10	.04
Date	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
OCT 23...	<.8	.03	.7	<10	<.08	<4	1.7	<.01	.2	<.06	<.3	<1	49.8
FEB 07...	<.8	.02	.5	<10	<.08	<4	.8	<.01	E.2	<.06	<.3	<1	41.3
MAY 15...	<.8	.04	1.6	30	.09	<4	2.8	E.01	<.2	.34	<.3	<1	27.4
AUG 07...	<.8	.02	1.2	E8	<.08	<4	1.2	<.01	E.2	.19	<.3	<1	31.6

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT 23...	<8	2	.12
FEB 07...	<8	<1	.09
MAY 15...	<8	2	.07
AUG 07...	<8	2	.06

E -- Estimated value

## YELLOWSTONE RIVER BASIN

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45°00'37", long 109°03'53", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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. Datum 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	108	e220	192	e170	e170	207	596	10200	4290	635	233
2	50	157	e210	183	224	e160	200	494	10600	3910	577	231
3	50	152	e210	191	221	e180	172	589	9170	3400	538	225
4	51	144	e220	220	216	e190	193	654	6870	2870	578	195
5	51	126	e220	215	218	e220	219	688	5840	2620	609	139
6	52	135	258	208	220	e180	253	685	6490	2540	539	95
7	52	153	268	222	221	e180	342	616	7310	2360	518	98
8	46	220	250	260	224	e180	389	598	6660	2260	523	98
9	46	171	264	244	214	e190	356	490	5290	2230	498	103
10	46	175	250	221	210	e210	336	434	4010	2070	446	102
11	46	153	222	208	203	e200	332	403	3040	1770	403	103
12	46	163	200	217	206	e200	315	420	2470	1570	382	106
13	45	183	148	217	194	e200	292	559	2150	1420	362	106
14	45	182	243	208	196	201	381	1100	2190	1330	330	104
15	47	179	291	198	200	187	929	1600	2880	1250	309	110
16	50	181	225	171	195	184	719	1740	3840	1160	291	107
17	51	190	246	150	199	196	519	1570	5180	1210	275	98
18	55	226	264	167	196	177	441	1880	6350	1430	257	98
19	53	222	245	153	193	180	379	2640	6760	1460	250	99
20	56	175	248	148	189	179	327	4520	5280	1270	245	98
21	52	191	241	181	185	157	295	5470	4620	1250	240	98
22	51	235	251	204	189	239	285	5040	4750	1160	251	99
23	51	235	226	e150	200	216	248	3560	4600	1230	255	99
24	69	e230	201	e140	e180	210	253	2560	4760	1220	232	98
25	82	e220	198	211	e150	210	230	2040	5130	1100	230	99
26	85	e220	208	223	e160	215	287	1880	5210	1000	213	100
27	79	e210	218	218	e200	246	415	2010	5010	913	211	99
28	81	e210	202	216	e180	215	432	2570	4500	1050	265	101
29	90	e200	197	221	---	210	351	3780	4210	911	250	103
30	75	e210	201	e160	---	203	502	5950	4270	820	244	101
31	95	---	185	e150	---	199	---	8430	---	715	238	---
TOTAL	1801	5556	7030	6067	5553	6084	10599	65566	159640	53789	11194	3545
MEAN	58.10	185.2	226.8	195.7	198.3	196.3	353.3	2115	5321	1735	361.1	118.2
MAX	95	235	291	260	224	246	929	8430	10600	4290	635	233
MIN	45	108	148	140	150	157	172	403	2150	715	211	95
AC-FT	3570	11020	13940	12030	11010	12070	21020	130100	316600	106700	22200	7030

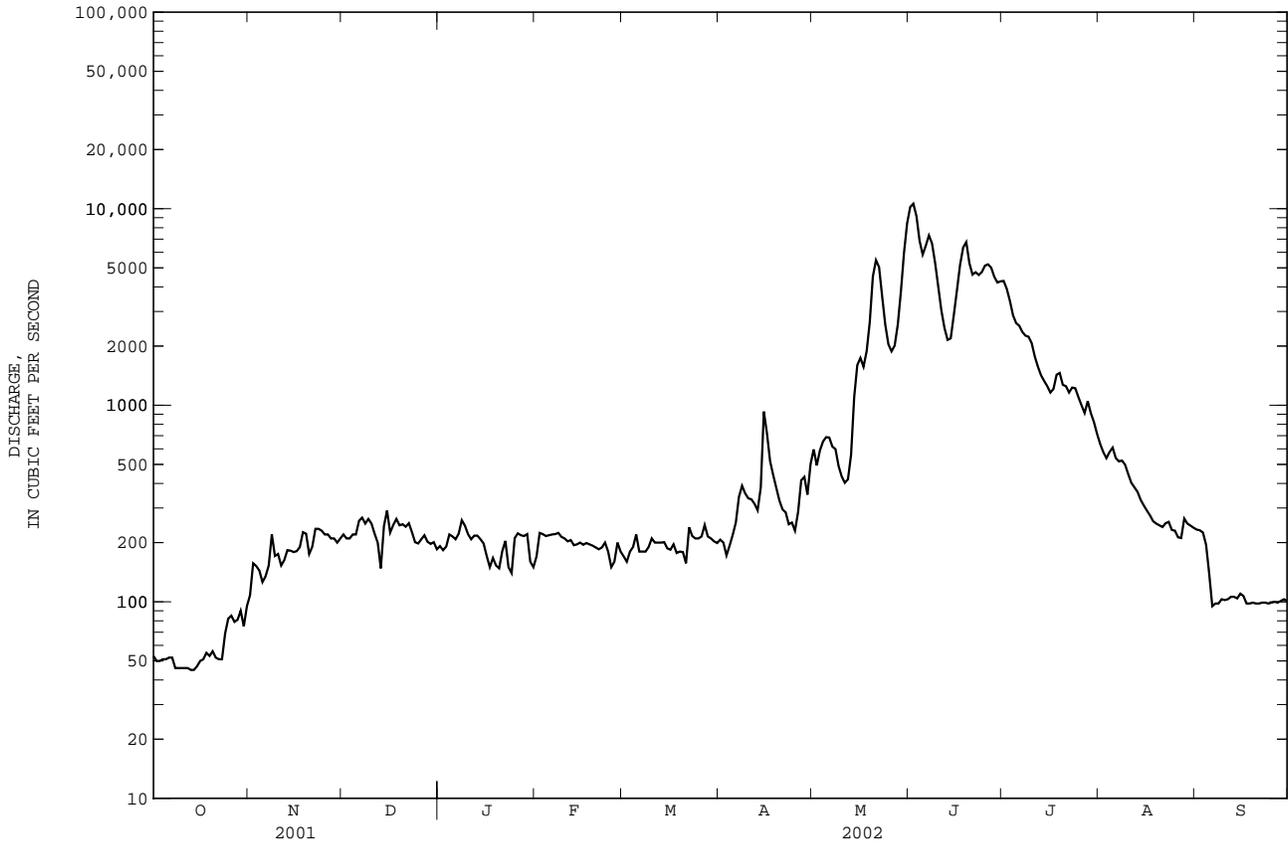
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2002, BY WATER YEAR (WY)

	MEAN	280.1	294.9	263.1	231.2	222.6	221.6	424.8	2042	4107	2193	615.8	314.4
MAX	725	648	379	359	329	364	1167	5704	7225	5744	1453	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	1607	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1921 - 2002	
ANNUAL TOTAL	203089		336424		--	
ANNUAL MEAN	556.4		921.7		935.7	
HIGHEST ANNUAL MEAN	--		--		1485	1997
LOWEST ANNUAL MEAN	--		--		547	1977
HIGHEST DAILY MEAN	4630	May 16	10600	Jun 2	12300	Jun 9 1981
LOWEST DAILY MEAN	45	Oct 13,14	45	Oct 13,14	33	Apr 26 1961
ANNUAL SEVEN-DAY MINIMUM	46	Oct 8	46	Oct 8	37	Oct 8 1988
MAXIMUM PEAK FLOW	--		11200	Jun 2	14800	Jun 9 1981
MAXIMUM PEAK STAGE	--		8.14	Jun 2	9.97	Jun 9 1981
10 PERCENT EXCEEDS	1920		2940		2880	
50 PERCENT EXCEEDS	195		220		300	
90 PERCENT EXCEEDS	56		98		170	

e Estimated.



## YELLOWSTONE RIVER BASIN

06218500 WIND RIVER NEAR DUBOIS, WY

LOCATION.--Lat 43°34'43", long 109°45'33", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,188.71 ft above NGVD of 1929 (levels by Bureau of Reclamation).

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	50	e30	e37	e32	e38	63	93	896	327	94	e54
2	42	48	e30	e37	e32	e37	98	80	817	291	94	e52
3	41	45	e31	e37	e31	e36	79	87	666	258	94	e50
4	41	39	e32	e37	e32	e36	71	87	579	226	95	e49
5	39	36	e34	e38	e32	e35	81	101	520	227	92	e49
6	38	46	e36	e39	e32	34	98	95	558	218	87	e52
7	38	59	e37	e39	e33	33	96	100	598	205	83	e56
8	39	46	e37	e37	e33	37	94	98	560	200	82	e62
9	39	37	e36	e36	e33	e36	99	83	435	191	77	e72
10	39	42	e35	e35	e34	36	101	86	385	171	76	e70
11	39	43	e35	34	e34	34	93	83	333	159	73	e66
12	35	47	e36	37	e35	35	79	85	294	153	70	e62
13	43	42	e37	e38	e36	36	81	92	289	148	72	e58
14	52	43	e38	e39	37	36	104	124	323	147	69	e56
15	51	39	e40	e39	e36	e37	129	143	385	138	66	e54
16	47	38	e40	e39	e36	e37	122	151	386	138	63	e52
17	50	38	e40	e38	35	e36	91	147	455	149	62	e54
18	53	42	e39	e37	38	e36	77	196	492	e146	62	e52
19	50	34	e37	e36	e38	e36	79	258	433	e165	e63	e52
20	47	39	e36	e35	39	36	72	452	391	e150	e66	e52
21	43	41	e35	e35	e37	e38	67	530	386	e140	e68	e54
22	42	43	e36	e35	35	e40	71	379	384	e125	e66	e52
23	46	41	e36	e37	37	e42	69	295	375	e120	e64	e52
24	45	36	e36	e38	38	e46	63	247	383	e120	e60	e52
25	43	32	e37	e38	e38	50	65	207	363	e123	e56	47
26	42	e31	e37	e37	e38	53	77	217	352	e126	e56	50
27	45	e30	e38	e37	e39	50	81	247	339	126	e58	48
28	45	e29	e37	e37	e39	49	79	311	342	117	e62	49
29	47	e28	e37	e36	---	47	76	416	338	107	e64	49
30	47	e29	e37	e34	---	49	86	603	337	101	e60	55
31	47	---	e36	e33	---	54	---	803	---	97	e56	---
TOTAL	1358	1193	1118	1141	989	1235	2541	6896	13394	5109	2210	1632
MEAN	43.81	39.77	36.06	36.81	35.32	39.84	84.70	222.5	446.5	164.8	71.29	54.40
MAX	53	59	40	39	39	54	129	803	896	327	95	72
MIN	35	28	30	33	31	33	63	80	289	97	56	47
AC-FT	2690	2370	2220	2260	1960	2450	5040	13680	26570	10130	4380	3240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

	MEAN	87.45	70.86	61.49	56.36	55.30	61.11	104.1	361.0	646.0	309.7	136.1	98.83
MAX	158	103	88.3	88.4	77.6	105	192	628	1181	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

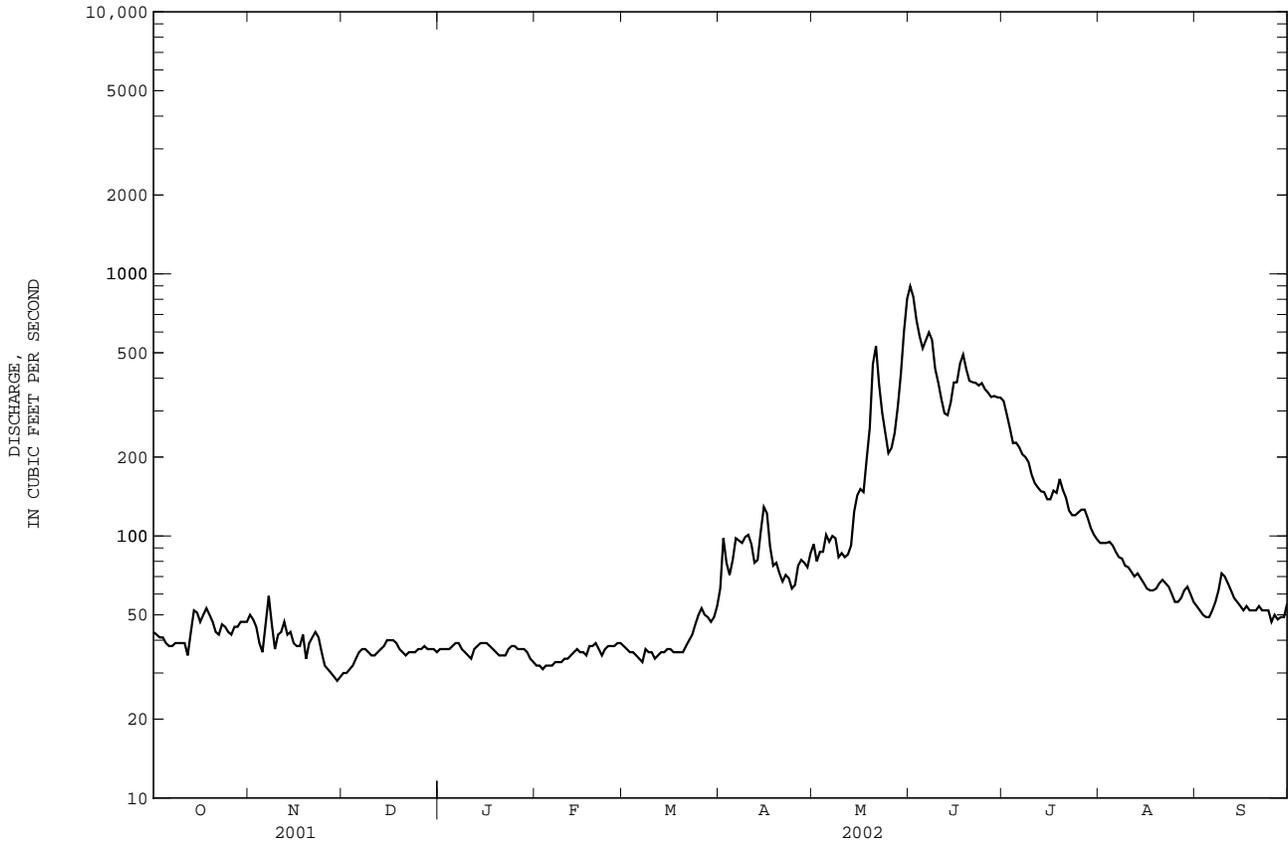
SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 1946 - 2002

ANNUAL TOTAL	38816		--	
ANNUAL MEAN	106.3		172.4	
HIGHEST ANNUAL MEAN	--		280	1951
LOWEST ANNUAL MEAN	--		90.0	1977
HIGHEST DAILY MEAN	896	Jun 1	1870	Jun 8 1972
LOWEST DAILY MEAN	28 <sup>e</sup>	Nov 29	26	Feb 5 1982
ANNUAL SEVEN-DAY MINIMUM	30	Nov 26	28	Feb 3 1982
MAXIMUM PEAK FLOW	1150	Jun 1	1940 <sup>a</sup>	Jun 8 1972
MAXIMUM PEAK STAGE	4.68	Jun 1	5.66	Jun 2 1956
ANNUAL RUNOFF (AC-FT)	76990		124900	
10 PERCENT EXCEEDS	301		440	
50 PERCENT EXCEEDS	50		82	
90 PERCENT EXCEEDS	35		50	

a Gage height, 5.48 ft.  
e Estimated.



## YELLOWSTONE RIVER BASIN

06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY

LOCATION.--Lat 43°26'30", long 109°27'29", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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 fair 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	239	137	138	e152	e145	208	329	4060	1780	493	277
2	198	234	145	e135	e151	e147	227	285	3500	1600	480	270
3	197	229	161	e135	151	e143	207	316	2810	1430	480	259
4	201	200	158	e135	148	e142	220	297	2340	1260	477	253
5	206	197	172	138	144	143	245	368	2160	1250	465	255
6	204	213	149	e140	146	140	322	326	2500	1180	444	264
7	201	243	156	e142	146	138	374	310	2690	1130	427	280
8	202	232	161	e142	148	137	338	306	2440	1130	424	380
9	201	187	158	e145	148	128	331	282	1820	1150	404	426
10	207	179	152	144	138	139	321	274	1500	1010	384	413
11	206	194	138	147	144	139	308	271	1260	959	366	377
12	207	209	136	149	139	148	274	276	1060	914	356	354
13	211	206	152	149	144	150	263	287	1010	866	356	334
14	222	199	154	e145	140	147	399	511	1270	852	327	310
15	230	194	148	144	131	145	530	653	1690	833	310	298
16	218	188	e150	e145	135	139	421	692	1720	825	300	294
17	223	185	e150	143	142	143	313	582	2120	905	296	290
18	235	196	151	147	141	142	262	846	2260	968	292	301
19	226	168	152	148	138	148	259	1300	1920	1290	289	289
20	223	138	154	e148	140	158	240	2130	1690	926	286	282
21	221	167	151	e145	131	153	222	2480	1740	863	300	277
22	213	179	141	144	144	158	235	1570	1860	795	320	283
23	219	174	138	e145	144	196	225	1090	1750	901	303	275
24	214	151	135	e148	142	188	210	890	1850	806	297	273
25	193	160	134	e148	132	169	208	696	1790	713	286	270
26	202	146	137	149	133	175	240	756	1840	759	276	273
27	218	152	136	147	e141	180	267	951	1700	732	277	267
28	228	121	134	149	e143	173	260	1290	1640	677	314	265
29	232	122	142	157	---	176	245	1720	1660	606	347	262
30	234	145	142	153	---	181	298	2610	1760	553	306	270
31	236	---	140	e153	---	190	---	3640	---	516	287	---
TOTAL	6623	5547	4564	4497	3976	4800	8472	28334	59410	30179	10969	8921
MEAN	213.6	184.9	147.2	145.1	142.0	154.8	282.4	914.0	1980	973.5	353.8	297.4
MAX	236	243	172	157	152	196	530	3640	4060	1780	493	426
MIN	193	121	134	135	131	128	207	271	1010	516	276	253
AC-FT	13140	11000	9050	8920	7890	9520	16800	56200	117800	59860	21760	17690

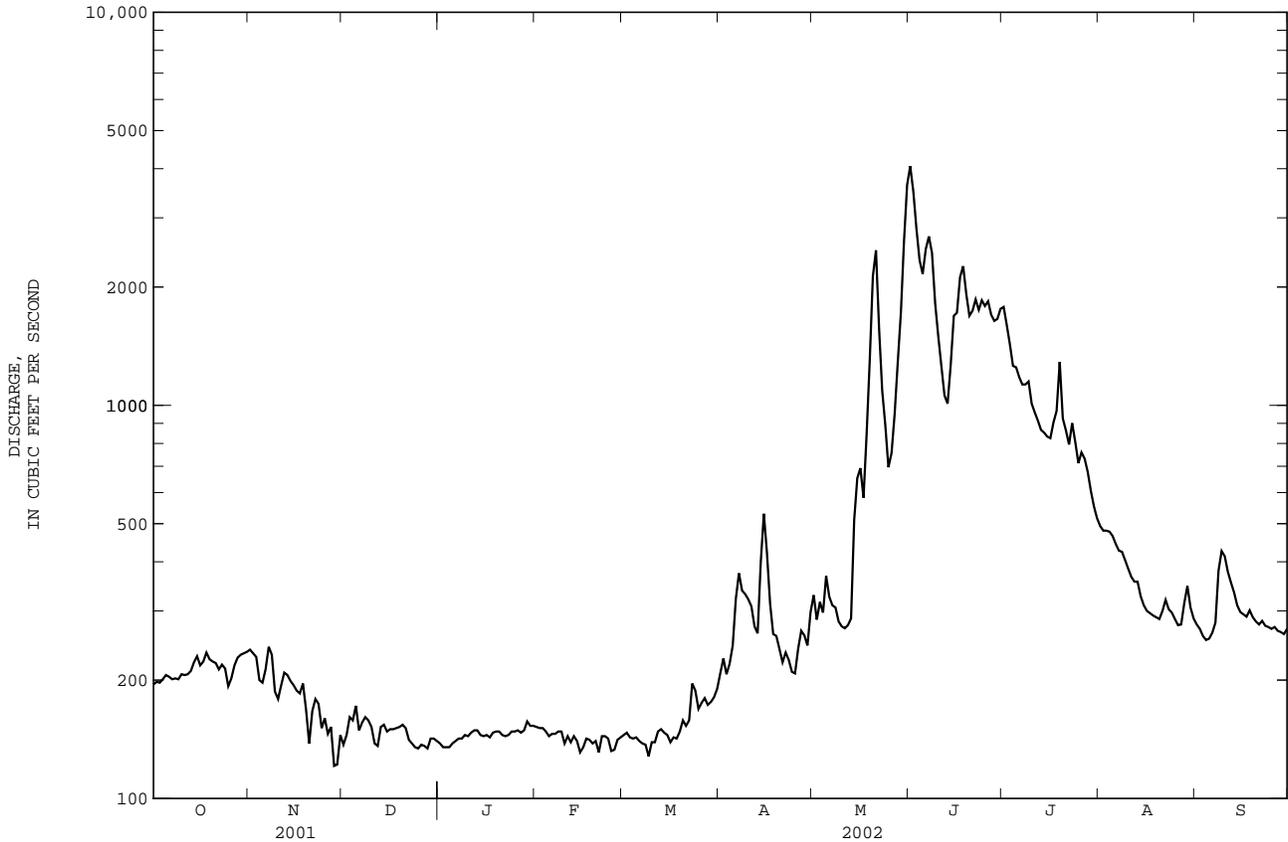
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	307.2	236.2	192.4	182.2	178.9	201.8	320.3	1318	2510	1345	573.0	384.1
MAX	421	303	242	222	218	246	429	2121	4559	2473	1020	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1991 - 2002	
ANNUAL TOTAL	122902		176292		--	
ANNUAL MEAN	336.7		483.0		646.8	
HIGHEST ANNUAL MEAN	--		--		982 1997	
LOWEST ANNUAL MEAN	--		--		345 2001	
HIGHEST DAILY MEAN	2420	May 16	4060	Jun 1	8770	Jun 9 1997
LOWEST DAILY MEAN	121	Nov 28	121	Nov 28	90	Jan 13 1993
ANNUAL SEVEN-DAY MINIMUM	136	Dec 22	136	Dec 22	96	Jan 9 1993
MAXIMUM PEAK FLOW	--		5110	Jun 1	11300	Jun 9 1997
MAXIMUM PEAK STAGE	--		7.03	Jun 1	9.97	Jun 9 1997
ANNUAL RUNOFF (AC-FT)	243800		349700		468600	
10 PERCENT EXCEEDS	730		1290		1700	
50 PERCENT EXCEEDS	205		232		277	
90 PERCENT EXCEEDS	154		141		164	

e Estimated.



## YELLOWSTONE RIVER BASIN

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

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986-92, 2001-2002 (discontinued).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
OCT 22...	1415	215	600	9.9	104	8.4	362	14.0	7.0	.14	<.013	<.002	<.007
NOV 13...	1120	211	600	11.8	116	8.4	378	13.0	4.5	.17	<.013	<.002	.009
DEC 03...	1400	159	601	11.6	104	8.7	385	1.0	1.0	.20	.018	<.002	.010
JAN 28...	1135	156	593	9.6	85	8.3	375	-10.0	.0	.11	.056	<.002	.020
FEB 27...	1050	141	601	11.3	98	8.3	448	-18.0	.0	.18	.050	<.002	.021
Date	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	2,6-DI-ETHYL ANILINE WAT FLT (0.7 U) (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC, DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD (0.7 U) (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD (0.7 U) (UG/L) (82680)	CARBO-FURAN WATER FLTRD (0.7 U) (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)
OCT 22...	.009	<1	<1	--	--	--	--	--	--	--	--	--	--
NOV 13...	.027	E7k	E7k	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005
DEC 03...	.007	<1	<1	--	--	--	--	--	--	--	--	--	--
JAN 28...	.009	E8k	E10k	--	--	--	--	--	--	--	--	--	--
FEB 27...	E.002	<1	<1	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005
Date	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD (0.7 U) (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD (0.7 U) (UG/L) (82677)	EPTC WATER FLTRD (0.7 U) (UG/L) (82668)	ETHAL-ALIN WAT FLT (0.7 U) (UG/L) (82663)	ETHO-PROP WATER FLTRD (0.7 U) (UG/L) (82672)	FONOFOS WATER DISS, REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD (0.7 U) (UG/L) (82666)	MALA-THON, DIS-SOLVED (UG/L) (39532)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 13...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027
DEC 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027
Date	METHYL AZIN-THION WAT FLT (0.7 U) (UG/L) (82686)	METHYL PARA-THION WAT FLT (0.7 U) (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD (0.7 U) (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD (0.7 U) (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD (0.7 U) (UG/L) (82669)	PENDI-ALIN WAT FLT (0.7 U) (UG/L) (82683)	PER-METHRIN CIS WAT FLT (0.7 U) (UG/L) (82687)	PHORATE WATER FLTRD (0.7 U) (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 13...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.01
DEC 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--	6.0
NOV 13...	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U	<.005	<.002	<.009	6.0
DEC 03...	--	--	--	--	--	--	--	--	--	--	--	--	12
JAN 28...	--	--	--	--	--	--	--	--	--	--	--	--	2.0
FEB 27...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	19

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 22...	3.5
NOV 13...	3.4
DEC 03...	5.2
JAN 28...	.84
FEB 27...	7.2

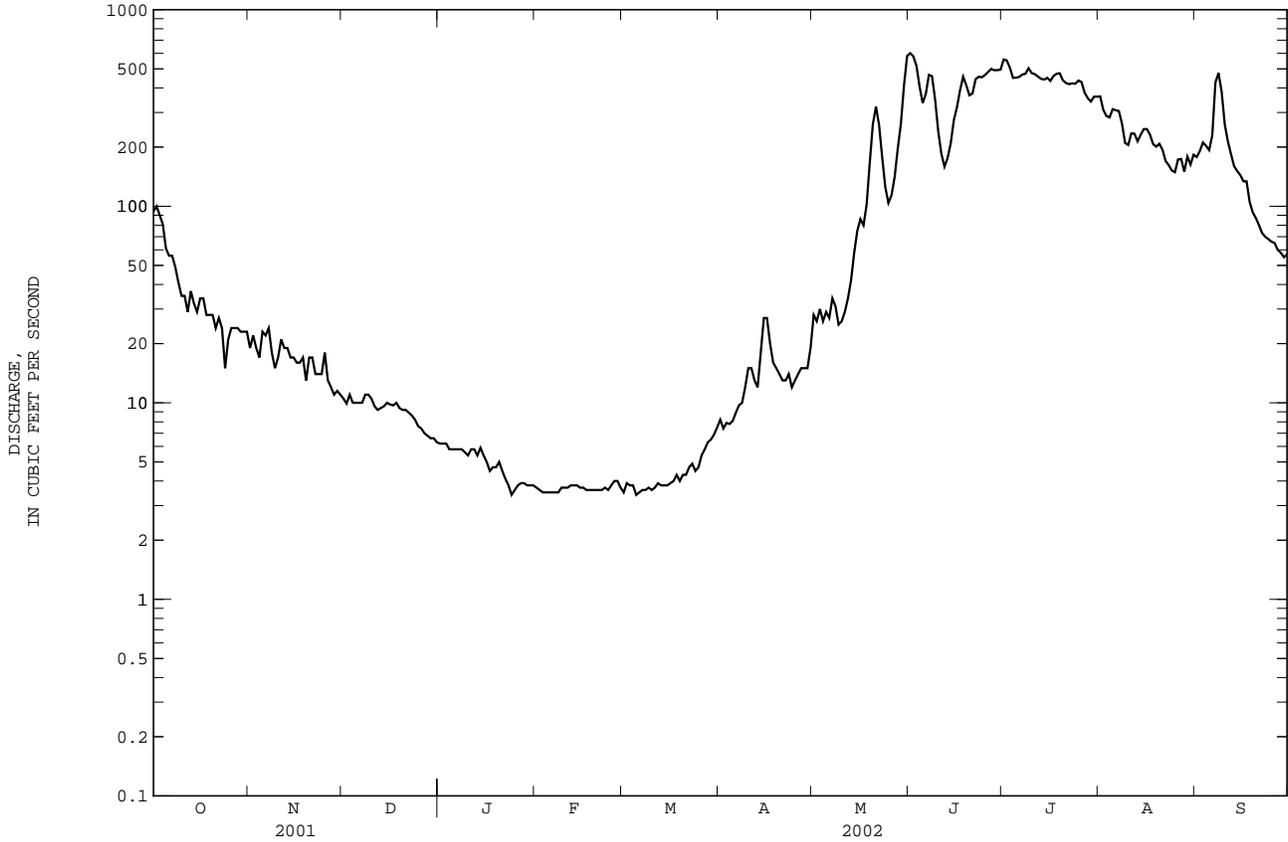
E -- Estimated value  
 U -- Analyzed for, not detected  
 k -- Counts outside acceptable range (Non-ideal colony count)



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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1958 - 2002	
ANNUAL TOTAL	39034.7	44202.7	--	
ANNUAL MEAN	106.9	121.1	139.5	
HIGHEST ANNUAL MEAN	--	--	179 1971	
LOWEST ANNUAL MEAN	--	--	95.2 1992	
HIGHEST DAILY MEAN	483 Jul 7	601 Jun 1	1250 Jun 15 1995	
LOWEST DAILY MEAN	2.6 <sup>e</sup> Feb 11-13	3.4 Jan 24	1.0 Jan 9 1977	
ANNUAL SEVEN-DAY MINIMUM	2.7 Feb 10	3.5 Feb 2	1.3 Jan 4 1977	
MAXIMUM PEAK FLOW	--	680 Jun 1	1510 Jul 13 1995	
MAXIMUM PEAK STAGE	--	3.68 Jun 1	4.50 Jul 13 1995	
ANNUAL RUNOFF (AC-FT)	77430	87680	101100	
10 PERCENT EXCEEDS	299	437	436	
50 PERCENT EXCEEDS	24	23	28	
90 PERCENT EXCEEDS	3.3	3.8	6.8	

e Estimated.



## YELLOWSTONE RIVER BASIN

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

LOCATION.--Lat 43°24'59", long 109°19'40", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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. Flow completely regulated by headworks.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	---	---	---	---	---	---	50	68	59	34	58
2	0.43	---	---	---	---	---	---	48	88	58	34	65
3	---	---	---	---	---	---	---	58	88	58	33	75
4	---	---	---	---	---	---	---	65	85	60	33	67
5	---	---	---	---	---	---	---	67	93	61	33	50
6	---	---	---	---	---	---	---	66	95	62	33	38
7	---	---	---	---	---	---	---	65	93	63	56	27
8	---	---	---	---	---	---	---	64	87	62	72	20
9	---	---	---	---	---	---	---	64	77	62	72	19
10	---	---	---	---	---	---	---	62	78	61	70	18
11	---	---	---	---	---	---	---	53	79	61	68	19
12	---	---	---	---	---	---	---	39	78	61	68	19
13	---	---	---	---	---	---	---	40	78	61	68	19
14	---	---	---	---	---	---	---	41	80	59	68	18
15	---	---	---	---	---	---	---	44	85	59	66	18
16	---	---	---	---	---	---	---	45	85	58	66	18
17	---	---	---	---	---	---	---	43	84	68	66	17
18	---	---	---	---	---	---	---	47	80	62	66	17
19	---	---	---	---	---	---	---	49	82	77	66	17
20	---	---	---	---	---	---	---	37	84	61	65	17
21	---	---	---	---	---	---	0.54	62	75	38	65	17
22	---	---	---	---	---	---	1.2	67	64	37	66	17
23	---	---	---	---	---	---	0.96	65	63	39	65	17
24	---	---	---	---	---	---	0.95	63	63	39	65	17
25	---	---	---	---	---	---	0.92	68	63	38	65	17
26	---	---	---	---	---	---	0.88	80	63	37	65	17
27	---	---	---	---	---	---	0.76	85	62	38	65	17
28	---	---	---	---	---	---	0.66	87	61	37	64	17
29	---	---	---	---	---	---	35	88	61	36	60	17
30	---	---	---	---	---	---	47	88	58	35	58	11
31	---	---	---	---	---	---	---	77	---	35	59	---
TOTAL	---	---	---	---	---	---	---	1877	2300	1642	1834	780
MEAN	---	---	---	---	---	---	---	60.55	76.67	52.97	59.16	26.00
MAX	---	---	---	---	---	---	---	88	95	77	72	75
MIN	---	---	---	---	---	---	---	37	58	35	33	11
AC-FT	---	---	---	---	---	---	---	3720	4560	3260	3640	1550

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)\*

	1997	1998	1999	2001	2002
MEAN	64.52	66.44	54.71	57.94	46.98
MAX	73.3	76.7	65.4	60.1	62.2
(WY)	2001	2001	1997	1997	1998
MIN	59.7	54.5	45.5	53.3	26.0
(WY)	1998	1999	2001	1999	2002

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

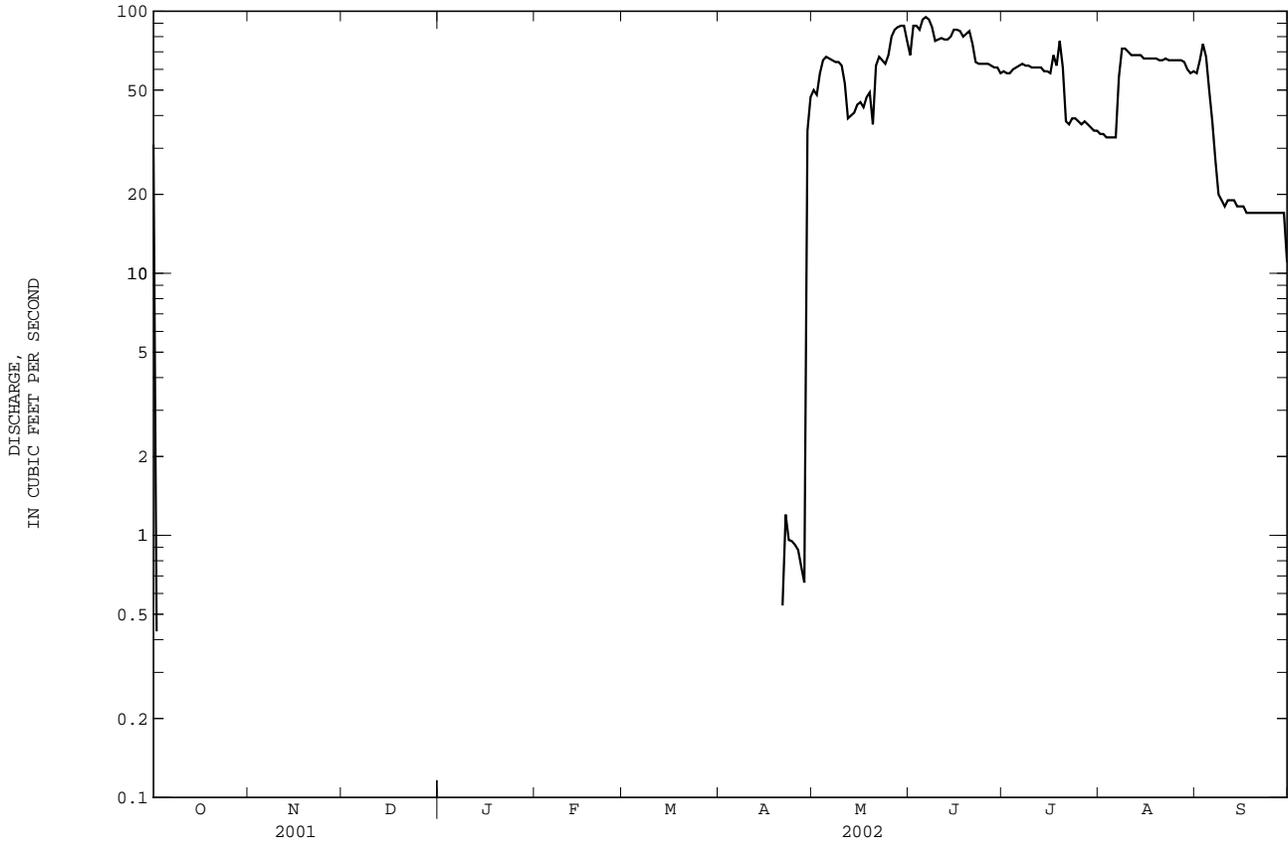
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1997 - 2002\*

HIGHEST DAILY MEAN	95	Jun 6	105	Jun 3 1998
LOWEST DAILY MEAN	0.54	Apr 21	0.54	Apr 21 2002
MAXIMUM PEAK FLOW	100	Jun 2	250	May 1 1998
MAXIMUM PEAK STAGE	2.14	Jun 2	2.52	May 1 1998

\* For period of operation.





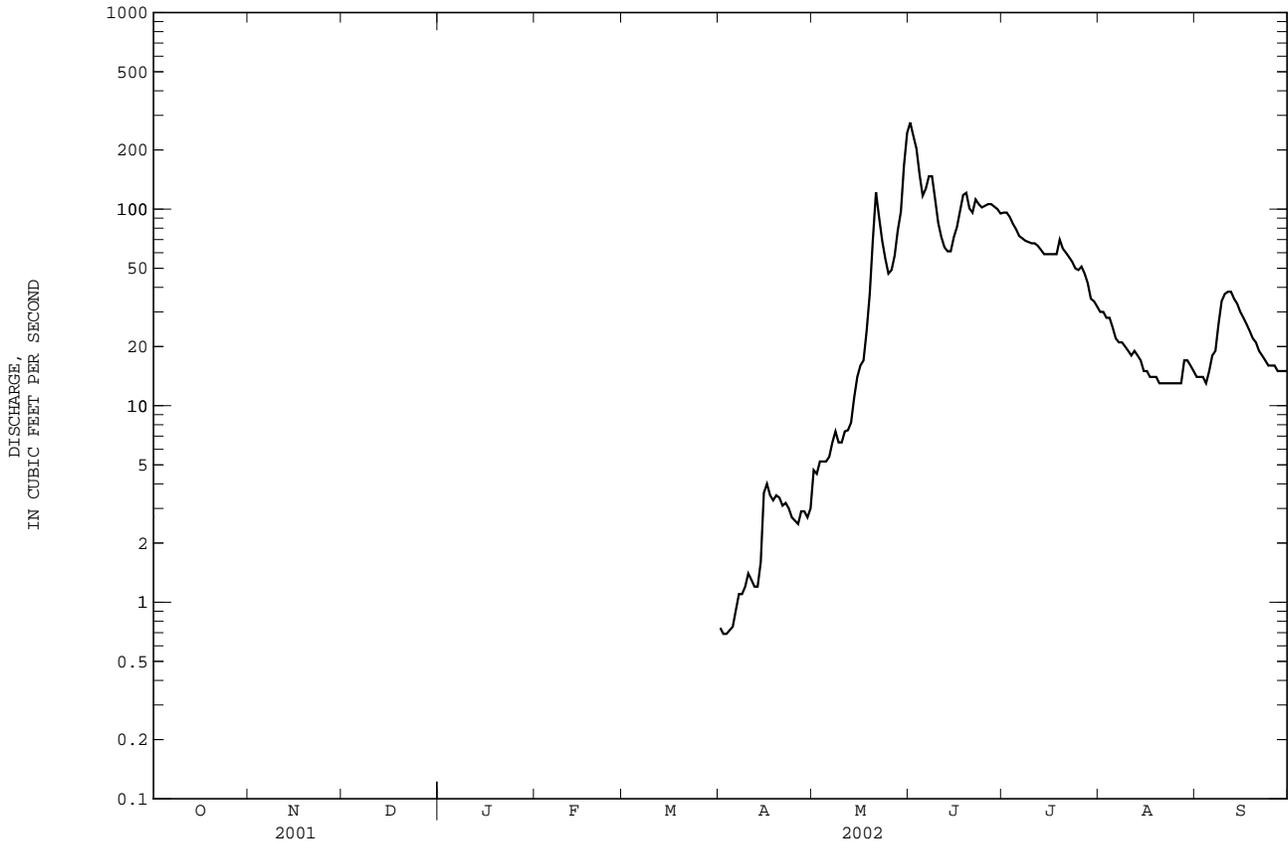
06222500 DRY CREEK NEAR BURRIS, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1921 - 2002*
ANNUAL MEAN	--	44.57
HIGHEST ANNUAL MEAN	--	73.0 1995
LOWEST ANNUAL MEAN	--	20.1 1940
HIGHEST DAILY MEAN	276 Jun 1	1240 Jun 7 1921
LOWEST DAILY MEAN	0.69 Apr 2,3	0.00 Mar 1 to Apr 11 1934
MAXIMUM PEAK FLOW	328 Jun 1	1400 <sup>a</sup> Jun 12 1921
MAXIMUM PEAK STAGE	4.44 Jun 1	5.95 <sup>b</sup> Jun 17 1999
ANNUAL RUNOFF (AC-FT)	--	32290

\* For period of operation.

a Gage height, 3.9 ft, from floodmarks, site and datum then in use, from rating curve extended above 580 ft<sup>3</sup>/s.

b From floodmarks.



YELLOWSTONE RIVER BASIN

06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY

LOCATION.--Lat 43°20'38", long 109°17'25", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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 to September 2002 (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. Flow is diverted from Dry Creek and Dinwoody Canal for irrigation.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.0	268	241	211	166
2	---	---	---	---	---	---	---	32	264	242	211	167
3	---	---	---	---	---	---	---	42	256	246	206	170
4	---	---	---	---	---	---	---	24	240	239	203	174
5	---	---	---	---	---	---	---	23	228	232	200	180
6	---	---	---	---	---	---	---	24	237	231	200	184
7	---	---	---	---	---	---	---	39	246	232	200	188
8	---	---	---	---	---	---	---	36	253	231	199	190
9	---	---	---	---	---	---	---	31	243	233	194	196
10	---	---	---	---	---	---	---	27	227	233	191	215
11	---	---	---	---	---	---	---	26	215	231	189	211
12	---	---	---	---	---	---	---	23	214	229	189	203
13	---	---	---	---	---	---	---	21	210	227	190	199
14	---	---	---	---	---	---	---	22	214	225	188	193
15	---	---	---	---	---	---	---	26	220	226	187	185
16	---	---	---	---	---	---	---	29	233	227	187	177
17	---	---	---	---	---	---	---	31	253	229	187	169
18	---	---	---	---	---	---	---	40	261	236	185	162
19	---	---	---	---	---	---	---	48	265	258	182	151
20	---	---	---	---	---	---	---	65	255	251	181	138
21	---	---	---	---	---	---	---	101	242	245	181	138
22	---	---	---	---	---	---	---	152	254	241	179	118
23	---	---	---	---	---	---	---	140	247	238	175	104
24	---	---	---	---	---	---	---	138	246	234	172	92
25	---	---	---	---	---	---	---	148	251	235	166	86
26	---	---	---	---	---	---	---	169	252	241	161	80
27	---	---	---	---	---	---	---	167	255	235	161	75
28	---	---	---	---	---	---	---	181	253	225	166	71
29	---	---	---	---	---	---	---	194	252	217	165	68
30	---	---	---	---	---	---	---	232	246	214	166	63
31	---	---	---	---	---	---	---	249	---	212	164	---
TOTAL	---	---	---	---	---	---	---	2480.0	7300	7236	5736	4513
MEAN	---	---	---	---	---	---	---	80.00	243.3	233.4	185.0	150.4
MAX	---	---	---	---	---	---	---	249	268	258	211	215
MIN	---	---	---	---	---	---	---	0.00	210	212	161	63
AC-FT	---	---	---	---	---	---	---	4920	14480	14350	11380	8950

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)\*

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1.443	---	---	---	---	3.010	99.45	191.5	204.2	190.3	132.3				
MAX	2.29	---	---	---	---	6.24	154	247	233	217	188				
(WY)	1993	---	---	---	---	1989	1994	1994	2002	1994	1990				
MIN	0.60	---	---	---	---	0.000	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

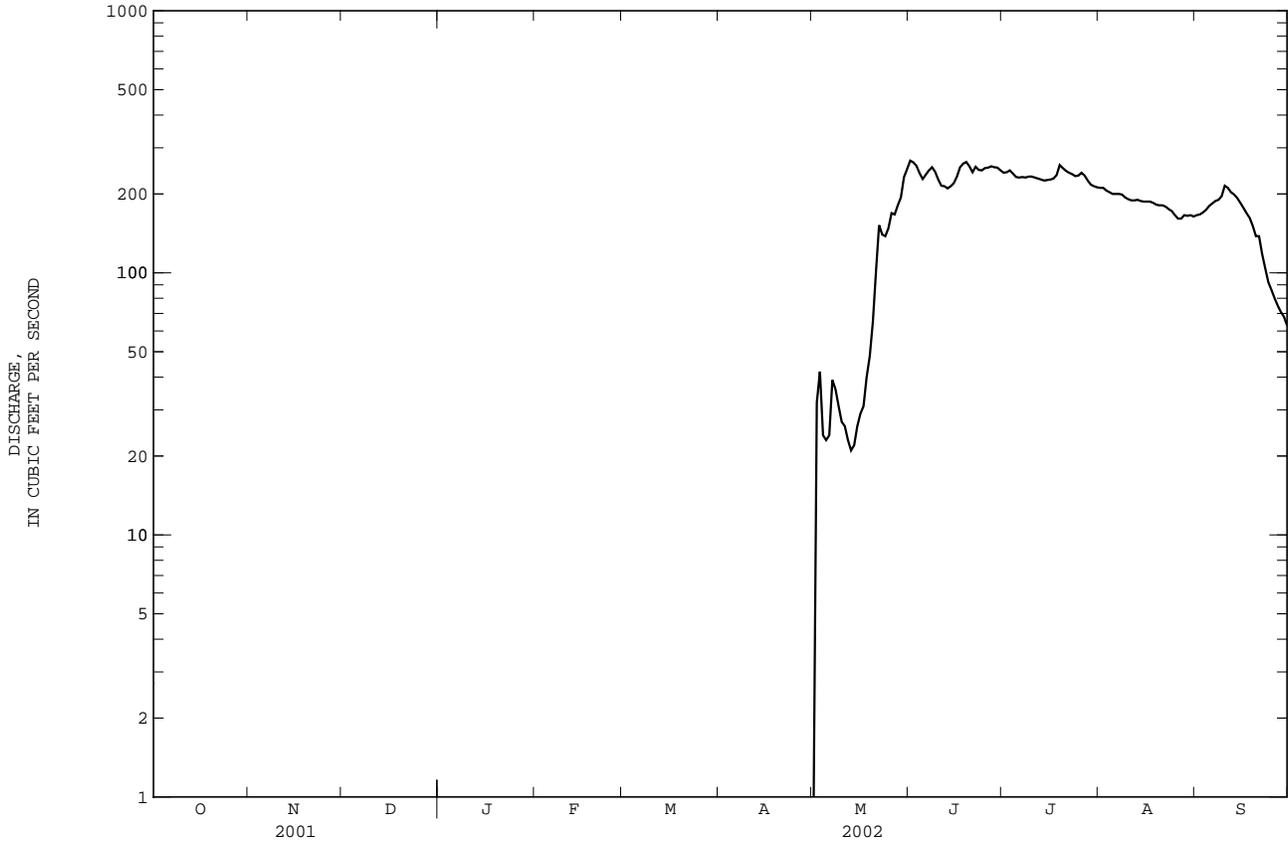
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1988 - 2002\*

HIGHEST DAILY MEAN	268	Jun 1	285	Jun 23 1994
LOWEST DAILY MEAN	0.00	May 1	0.00	Many days, most years
MAXIMUM PEAK FLOW	295	May 31	301	Jun 23 1994
MAXIMUM PEAK STAGE	3.34	May 31	3.88	Jun 23 1994

\* For period of operation.





06222600 WIND RIVER ABOVE CROW CREEK, NEAR LENORE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PROPA-CHLOR, WATER, DISS, REC (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (82685)	SI-MAZINE, WATER, DISS, REC (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI-MENT, SUS-PENDEDED (80154)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	8.0
NOV 13...	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U	<.005	<.002	<.009	7.0
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	28
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	20

Date	SEDI-MENT, DIS-CHARGE, SUS-PENDEDED (T/DAY) (80155)
OCT 24...	5.5
NOV 13...	4.7
DEC 05...	--
JAN 30...	9.7

E -- Estimated value  
 U -- Analyzed for, not detected  
 k -- Counts outside acceptable range (Non-ideal colony count)



06223500 WILLOW CREEK NEAR CROWHEART, WY--Continued

SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1922 - 2002\*

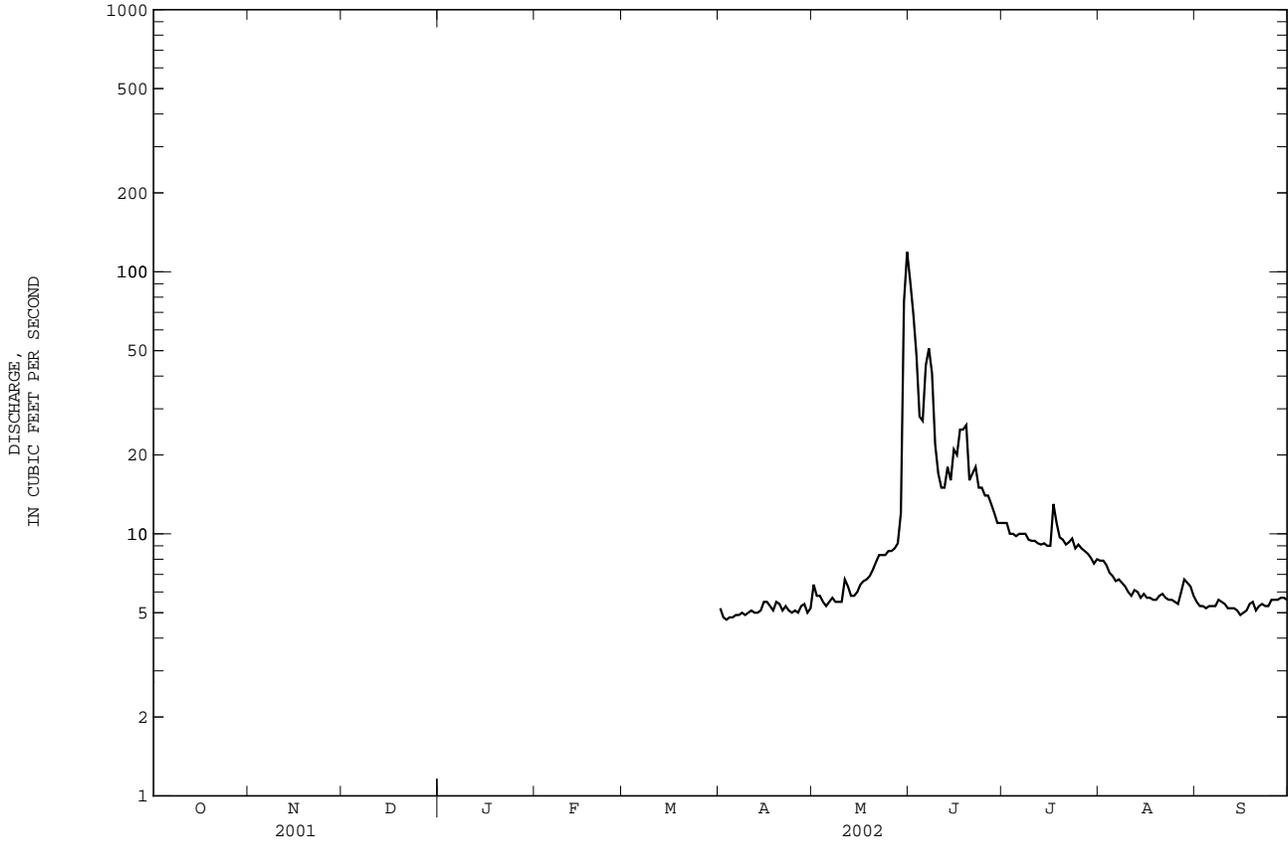
ANNUAL MEAN	--	16.46
HIGHEST ANNUAL MEAN	--	31.0 1995
LOWEST ANNUAL MEAN	--	4.60 1940
HIGHEST DAILY MEAN	119 May 31	468 Jun 12 1991
LOWEST DAILY MEAN	4.70 Apr 3	2.0 Dec 1 1939
ANNUAL SEVEN-DAY MINIMUM	--	2.0 Dec 1 1939
MAXIMUM PEAK FLOW	182 May 30	1100 <sup>a</sup> May 31 1939
MAXIMUM PEAK STAGE	3.40 May 30	5.40 <sup>b</sup> May 31 1939
ANNUAL RUNOFF (AC-FT)	--	11930

\* For period of operation.

a On basis of flow-over-dam measurement of peak flow.

b Site and datum then in use.

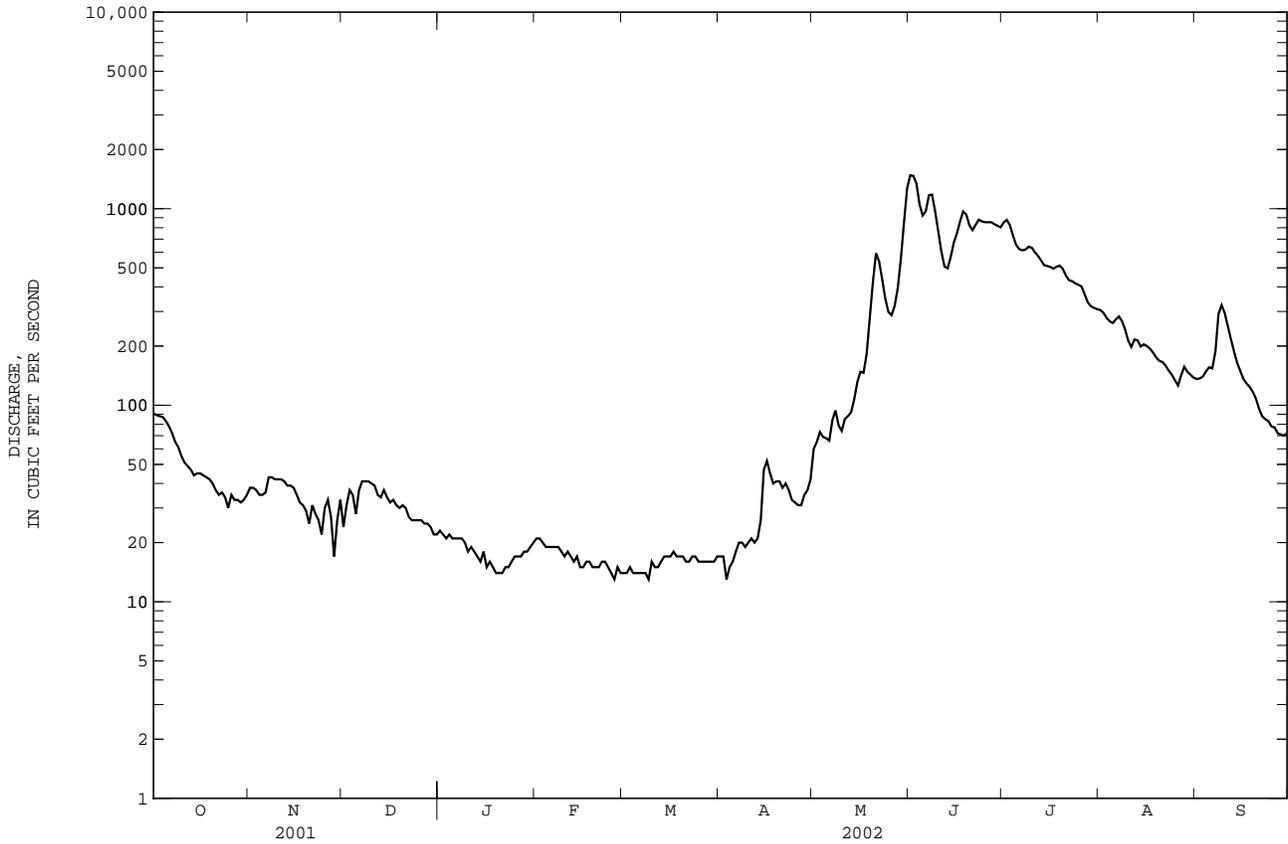
e Estimated.





06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1942 - 2002	
ANNUAL TOTAL	64481		68264		--	
ANNUAL MEAN	176.7		187.0		291.1	
HIGHEST ANNUAL MEAN	--		--		415 1986	
LOWEST ANNUAL MEAN	--		--		174 1977	
HIGHEST DAILY MEAN	1620	May 16	1480	Jun 1	3560	Jun 9 1981
LOWEST DAILY MEAN	10 <sup>e</sup>	Feb 10	13	Feb 26	6.2	Jan 9 1977
ANNUAL SEVEN-DAY MINIMUM	11	Feb 4	14	Mar 3	6.5	Mar 10 1977
MAXIMUM PEAK FLOW	--		1580	Jun 1	4470	Jun 9 1981
MAXIMUM PEAK STAGE	--		5.11	Jun 1	7.98	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	127900		135400		210900	
10 PERCENT EXCEEDS	539		621		900	
50 PERCENT EXCEEDS	41		41		75	
90 PERCENT EXCEEDS	13		16		22	



YELLOWSTONE RIVER BASIN

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to 2002 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 23...	1240	36	604	10.1	103	7.0	62	8.5	6.0	--	--	--	--
NOV 16...	1145	37	615	10.7	97	7.2	81	11.0	2.5	--	--	--	--
DEC 20...	1230	32	--	--	--	7.3	79	1.0	.5	--	--	--	--
JAN 29...	1250	21	631	10.4	86	7.4	118	-3.0	.0	--	--	--	--
MAR 01...	1215	15	610	9.5	84	7.7	146	-12.0	1.0	--	--	--	--
APR 26...	1330	32	--	--	--	--	100	16.0	9.0	--	--	--	--
MAY 28...	1130	394	--	--	--	--	31	21.0	10.0	--	--	--	--
AUG 28...	1400	130	--	8.1	--	7.9	39	--	16.0	16	4.24	1.29	.54

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	E.08	.050
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	.17	.179
DEC 20...	--	--	--	--	--	--	--	--	--	--	--	.12	.104
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	E.05	.149
MAR 01...	--	--	--	--	--	--	--	--	--	--	--	.12	.150
APR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 28...	.1	.97	14	1.04	1.68	3.9	.03	7.86	22	<.04	E.09	--	.06

Date	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, SOLVED (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)
OCT 23...	<.002	--	<.007	E.002	E7k	E20k	--	--	--	--	--	--	--
NOV 16...	<.002	--	E.005	.004	<1	E1k	--	<.002	<.004	<.002	<.005	<.007	<.010
DEC 20...	<.002	--	<.007	E.003	E7k	E3k	--	--	--	--	--	--	--
JAN 29...	<.002	--	<.007	.007	<1	E7k	--	--	--	--	--	--	--
MAR 01...	<.002	--	<.007	<.004	<1	E3k	--	<.006	<.006	<.004	<.005	<.007	<.010
APR 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 28...	<.008	<.06	E.01	<.06	--	--	<10	--	--	--	--	--	--



## YELLOWSTONE RIVER BASIN

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (T/DAY) (80155)
OCT 23...	--	--	--	--	--
NOV 16...	<.005	<.002	<.009	1.0	.10
DEC 20...	--	--	--	1.0	.09
JAN 29...	--	--	--	1.0	.06
MAR 01...	<.005	<.002	<.009	7.0	.29
APR 26...	--	--	--	--	--
MAY 28...	--	--	--	--	--
AUG 28...	--	--	--	--	--

E -- Estimated value

U -- Analyzed for, not detected

k -- Counts outside acceptable range (Non-ideal colony count)

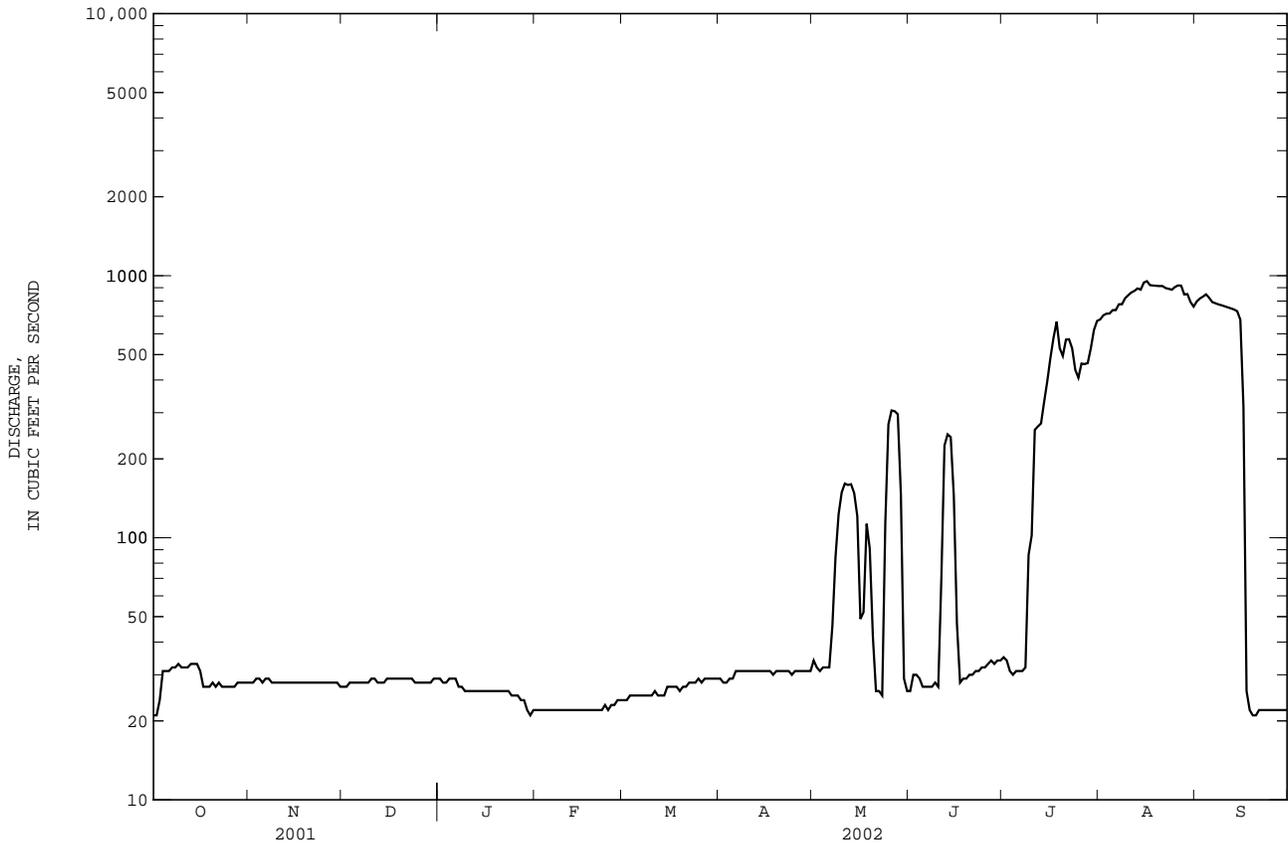


YELLOWSTONE RIVER BASIN

06225000 BULL LAKE CREEK NEAR LENORE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1918 - 2002	
ANNUAL TOTAL	81123		59642		--	
ANNUAL MEAN	222.3		163.4		273.8	
HIGHEST ANNUAL MEAN	--		--		427 1969	
LOWEST ANNUAL MEAN	--		--		100 1941	
HIGHEST DAILY MEAN	1230	Jul 31	953	Aug 16	3900	Jun 16 1918
LOWEST DAILY MEAN	13	Mar 21	21	Oct 1,2	0.00 <sup>a</sup>	Feb 28 to Apr 7 1937
ANNUAL SEVEN-DAY MINIMUM	19	Sep 6	22	Sep 18	0.00 <sup>a</sup>	Feb 28 1937
MAXIMUM PEAK FLOW	--		1000 <sup>b</sup> Aug 16		6200 <sup>c</sup> Aug 8 1951	
MAXIMUM PEAK STAGE	--		3.40 <sup>d</sup> Dec 13		7.09 Aug 8 1951	
ANNUAL RUNOFF (AC-FT)	160900		118300		198300	
10 PERCENT EXCEEDS	785		753		806	
50 PERCENT EXCEEDS	28		29		106	
90 PERCENT EXCEEDS	20		22		20	

- a Result of regulation.
- b Gage height, 3.37 ft.
- c From rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Result of automatic spillway gates releasing at Bull Lake Dam.
- d Backwater from ice.
- e Estimated.



YELLOWSTONE RIVER BASIN

06225000 BULL LAKE CREEK NEAR LENORE, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1990, 2001-02 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	
OCT 24...	1115	26	616	11.3	104	7.5	147	4.5	3.0	.15	<.013	<.002	<.007	
NOV 15...	1045	28	620	10.8	105	7.8	158	14.0	5.5	.17	.063	<.002	<.007	
DEC 05...	1120	41	619	12.2	103	7.8	162	-1.0	.0	.22	<.013	<.002	<.007	
JAN 29...	1520	22	631	11.6	97	7.9	161	-3.0	.5	.14	<.013	<.002	<.007	
FEB 28...	1010	21	609	11.6	102	7.8	139	-17.0	1.0	.15	<.013	<.002	<.007	
Date	Time	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	2,6-DI-ETHYL ANILINE WAT FLT (0.7 U) (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC, DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD (0.7 U) (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD (0.7 U) (UG/L) (82680)	CARBO-FURAN WATER FLTRD (0.7 U) (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)
OCT 24...	.008	<1	<1	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	.010	E2k	E10k	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	
DEC 05...	.006	E12k	E8k	--	--	--	--	--	--	--	--	--	--	
JAN 29...	.008	E2k	E1k	--	--	--	--	--	--	--	--	--	--	
FEB 28...	<.004	E19k	E12k	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	
Date	Time	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD (0.7 U) (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD (0.7 U) (UG/L) (82677)	EPTC WATER FLTRD (0.7 U) (UG/L) (82668)	ETHAL-ALIN WAT FLT (0.7 U) (UG/L) (82663)	ETHO-PROP WATER FLTRD (0.7 U) (UG/L) (82672)	FONOFOS WATER DISS, REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD (0.7 U) (UG/L) (82666)	MALA-THON, DIS-SOLVED (UG/L) (39532)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEB 28...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	
Date	Time	METHYL AZIN-THION WAT FLT (0.7 U) (UG/L) (82686)	METHYL PARA-THION WAT FLT (0.7 U) (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD (0.7 U) (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD (0.7 U) (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD (0.7 U) (UG/L) (82669)	PENDI-ALIN WAT FLT (0.7 U) (UG/L) (82683)	PER-METHRIN CIS WAT FLT (0.7 U) (UG/L) (82687)	PHORATE WATER FLTRD (0.7 U) (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.01	
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEB 28...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.01	

YELLOWSTONE RIVER BASIN

06225000 BULL LAKE CREEK NEAR LENORE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (82676) (UG/L)	PROPA-CHLOR, WATER, DISS, REC (04024) (UG/L)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (82679) (UG/L)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (82685) (UG/L)	SI-MAZINE, WATER, DISS, REC (04035) (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (82670) (UG/L)	TER-BACIL WATER FLTRD 0.7 U GF, REC (82665) (UG/L)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (82675) (UG/L)	TER-BUTHYL- AZINE, WATER, DISS, REC (04022) (UG/L)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (82681) (UG/L)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (82678) (UG/L)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (82661) (UG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (80154) (MG/L)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	3.0
NOV 15...	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U	<.005	<.002	<.009	1.0
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	2.0
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	--	1.0
FEB 28...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	4.0

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 24...	.21
NOV 15...	.08
DEC 05...	.22
JAN 29...	.06
FEB 28...	.23

E -- Estimated value  
 U -- Analyzed for, not detected  
 k -- Counts outside acceptable range (Non-ideal colony count)

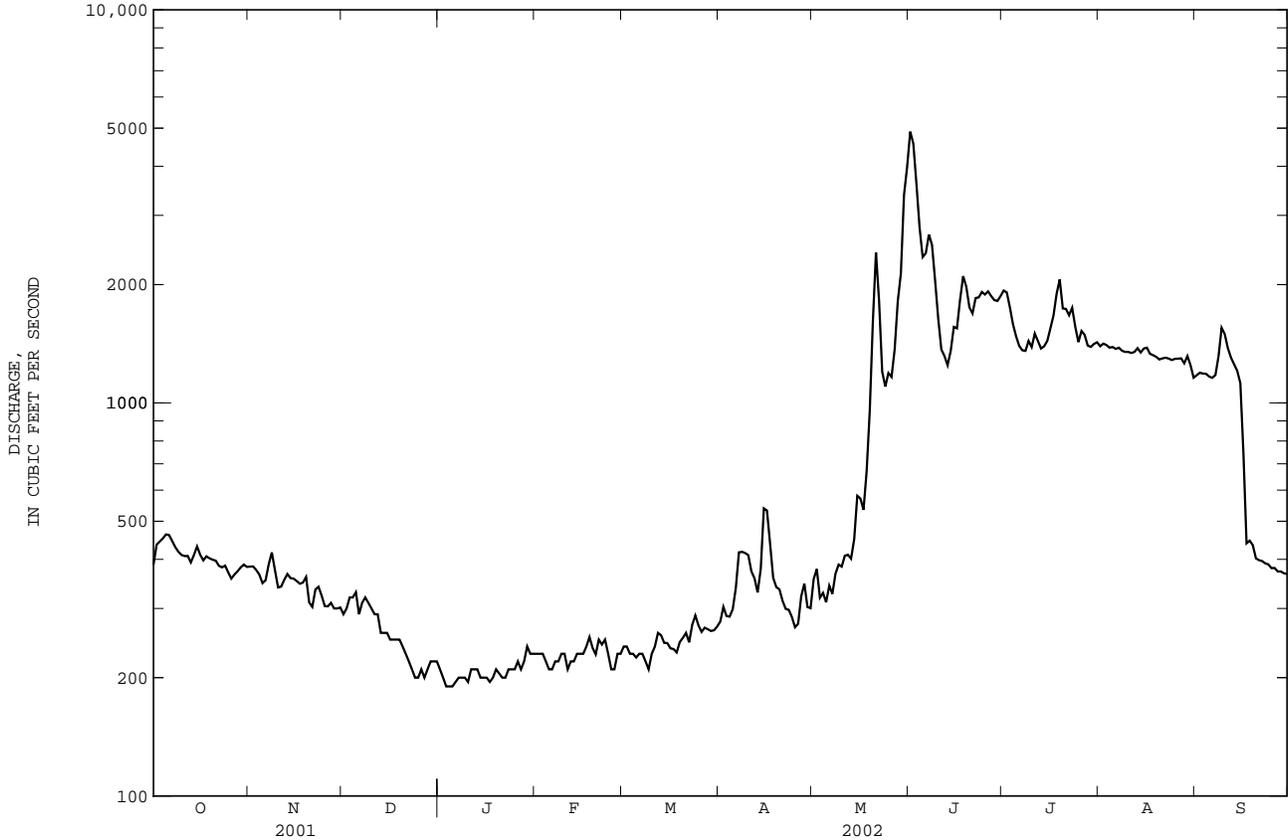


YELLOWSTONE RIVER BASIN

06225500 WIND RIVER NEAR CROWHEART, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1946 - 2002	
ANNUAL TOTAL	239158		272449		--	
ANNUAL MEAN	655.2		746.4		1199	
HIGHEST ANNUAL MEAN	--		--		1657	
LOWEST ANNUAL MEAN	--		--		658	
HIGHEST DAILY MEAN	2520	May 16	4900	Jun 1	11400	Jun 18,19 1999
LOWEST DAILY MEAN	155 <sup>e</sup>	Feb 27	190 <sup>e</sup>	Jan 3-5	130	Feb 5 1982
ANNUAL SEVEN-DAY MINIMUM	168	Feb 24	195	Jan 2	143	Dec 30 1981
MAXIMUM PEAK FLOW	--		6230	Jun 1	14300 <sup>a</sup>	Jun 13 1991
MAXIMUM PEAK STAGE	--		9.08	Jun 1	11.23	Jun 19 1999
ANNUAL RUNOFF (AC-FT)	474400		540400		868300	
10 PERCENT EXCEEDS	1470		1710		2770	
50 PERCENT EXCEEDS	358		376		575	
90 PERCENT EXCEEDS	198		210		295	

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





YELLOWSTONE RIVER BASIN

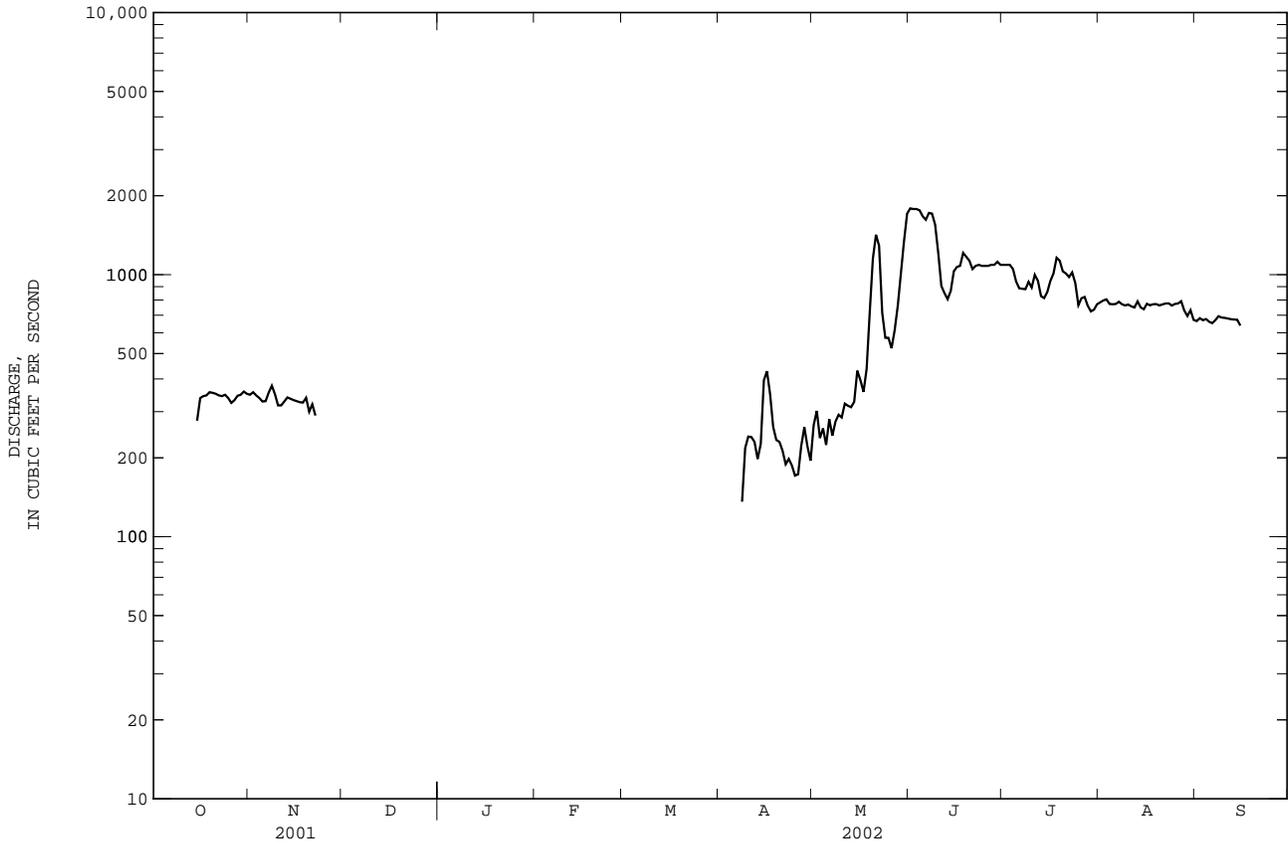
06226000 WYOMING CANAL NEAR LENORE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR*		FOR 2002 WATER YEAR*		WATER YEARS 1941 - 2002*	
ANNUAL MEAN	--		--		539.7 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		--		669 <sup>a</sup> 1972	
LOWEST ANNUAL MEAN	--		--		461 <sup>a</sup> 1975	
HIGHEST DAILY MEAN	1780	May 17	1790	Jun 1	1860	Jun 11, 12 1990
LOWEST DAILY MEAN	0.00 Many days		0.00 Many days		0.00 Many days, most years	
MAXIMUM PEAK FLOW	--		--		2060 Jun 5 1990	
MAXIMUM PEAK STAGE	--		--		13.79 Jun 5 1990	

\* For period of operation.

a Water years 1977, 1978, and 1988 to current year not included.

e Estimated.



YELLOWSTONE RIVER BASIN

06226100 WIND RIVER BELOW WYOMING CANAL DIVERSION, NEAR LENORE, WY

LOCATION.--Lat 43°13'19", long 108°57'00", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec. 24, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080005, about 0.5 mi downstream from diversion, 9 mi west of Morton, and 10 mi southeast of Willow Creek.

PERIOD OF RECORD.--Water years 2001-02 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L) (00671)
OCT 24...	1005	38	618	11.7	103	7.6	394	6.0	1.5	.20	<.013	<.002	<.007
NOV 15...	1205	32	620	11.5	110	8.2	409	17.0	4.5	.14	<.013	<.002	<.007
DEC 12...	1220	357	640	8.1	68	8.6	411	7.0	1.0	.36	.017	<.002	.015
JAN 30...	1250	240	625	12.2	102	8.6	424	-10.0	.0	.28	.048	E.002	<.007
FEB 27...	1345	202	601	11.7	102	8.2	424	-8.0	.0	.20	.030	E.002	<.007
Date	PHOS-PHORUS TOTAL (MG/L) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	2,6-DI-ETHYL ANILINE, WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER, FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN, WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL, WATER, FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN, WATER, FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)
OCT 24...	.008	E5k	E7k	--	--	--	--	--	--	--	--	--	--
NOV 15...	.009	E2k	E2k	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005
DEC 12...	.004	E1k	E2k	--	--	--	--	--	--	--	--	--	--
JAN 30...	<.004	<1	<1	--	--	--	--	--	--	--	--	--	--
FEB 27...	<.004	<1	<1	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005
Date	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA, WATER, FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON, WATER, FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC, WATER, FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP, WATER, FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS, WATER, DISS, REC (UG/L) (04095)	LINDANE, DIS-SOLVED (UG/L) (39341)	LIN-URON, WATER, FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027
Date	METHYL AZIN-PHOS, WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION, WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR, WATER, DISSOLV (UG/L) (39415)	METRI-BUZIN, SENCOR, WATER, DISSOLV (UG/L) (82630)	MOL-INATE, WATER, FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE, WATER, FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE, DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE, WATER, FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN, CIS, WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE, WATER, FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.01
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01

## YELLOWSTONE RIVER BASIN

06226100 WIND RIVER BELOW WYOMING CANAL DIVERSION, NEAR LENORE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	8.0
NOV 15...	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U	<.005	<.002	<.009	3.0
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	24
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	44
FEB 27...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	34

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 24...	.83
NOV 15...	.26
DEC 12...	23.1
JAN 30...	28.5
FEB 27...	18.5

E -- Estimated value  
 U -- Analyzed for, not detected  
 k -- Counts outside acceptable range (Non-ideal colony count)

YELLOWSTONE RIVER BASIN

06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEAR, WY

LOCATION.--Lat 43°09'02", long 108°43'41", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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 to September 2002 (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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	---	---	---	---	---	---	12	23	24	20	14
2	---	---	---	---	---	---	---	11	12	24	20	14
3	---	---	---	---	---	---	---	11	19	23	20	14
4	---	---	---	---	---	---	---	11	15	22	19	16
5	---	---	---	---	---	---	---	11	20	22	19	17
6	---	---	---	---	---	---	---	10	25	21	15	19
7	---	---	---	---	---	---	---	11	28	21	15	20
8	---	---	---	---	---	---	---	11	28	21	16	20
9	---	---	---	---	---	---	---	12	25	21	16	21
10	---	---	---	---	---	---	---	12	23	20	16	21
11	---	---	---	---	---	---	---	13	23	21	16	20
12	---	---	---	---	---	---	---	12	22	24	16	18
13	---	---	---	---	---	---	---	12	22	29	16	17
14	---	---	---	---	---	---	---	12	22	30	16	17
15	---	---	---	---	---	---	---	12	23	30	16	16
16	---	---	---	---	---	---	---	10	23	29	17	17
17	---	---	---	---	---	---	---	9.0	26	29	19	16
18	---	---	---	---	---	---	---	11	28	32	19	16
19	---	---	---	---	---	---	---	11	29	25	18	17
20	---	---	---	---	---	---	---	17	27	18	18	17
21	---	---	---	---	---	---	---	25	28	18	18	17
22	---	---	---	---	---	---	---	17	29	17	18	17
23	---	---	---	---	---	---	---	18	30	19	18	16
24	---	---	---	---	---	---	6.0	20	30	20	18	16
25	---	---	---	---	---	---	12	20	30	20	19	16
26	---	---	---	---	---	---	12	20	27	20	19	16
27	---	---	---	---	---	---	11	20	25	19	19	16
28	---	---	---	---	---	---	12	23	24	19	19	16
29	---	---	---	---	---	---	11	23	23	21	20	16
30	---	---	---	---	---	---	11	29	24	21	18	7.6
31	---	---	---	---	---	---	---	33	---	21	15	---
TOTAL	---	---	---	---	---	---	---	479.0	733	701	548	500.6
MEAN	---	---	---	---	---	---	---	15.45	24.43	22.61	17.68	16.69
MAX	---	---	---	---	---	---	---	33	30	32	20	21
MIN	---	---	---	---	---	---	---	9.0	12	17	15	7.6
AC-FT	---	---	---	---	---	---	---	950	1450	1390	1090	993

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)\*

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1.250	---	---	---	---	---	---	15.25	22.77	25.46	24.63	19.83
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

YELLOWSTONE RIVER BASIN

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

SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1991 - 2002\*

HIGHEST DAILY MEAN  
 LOWEST DAILY MEAN

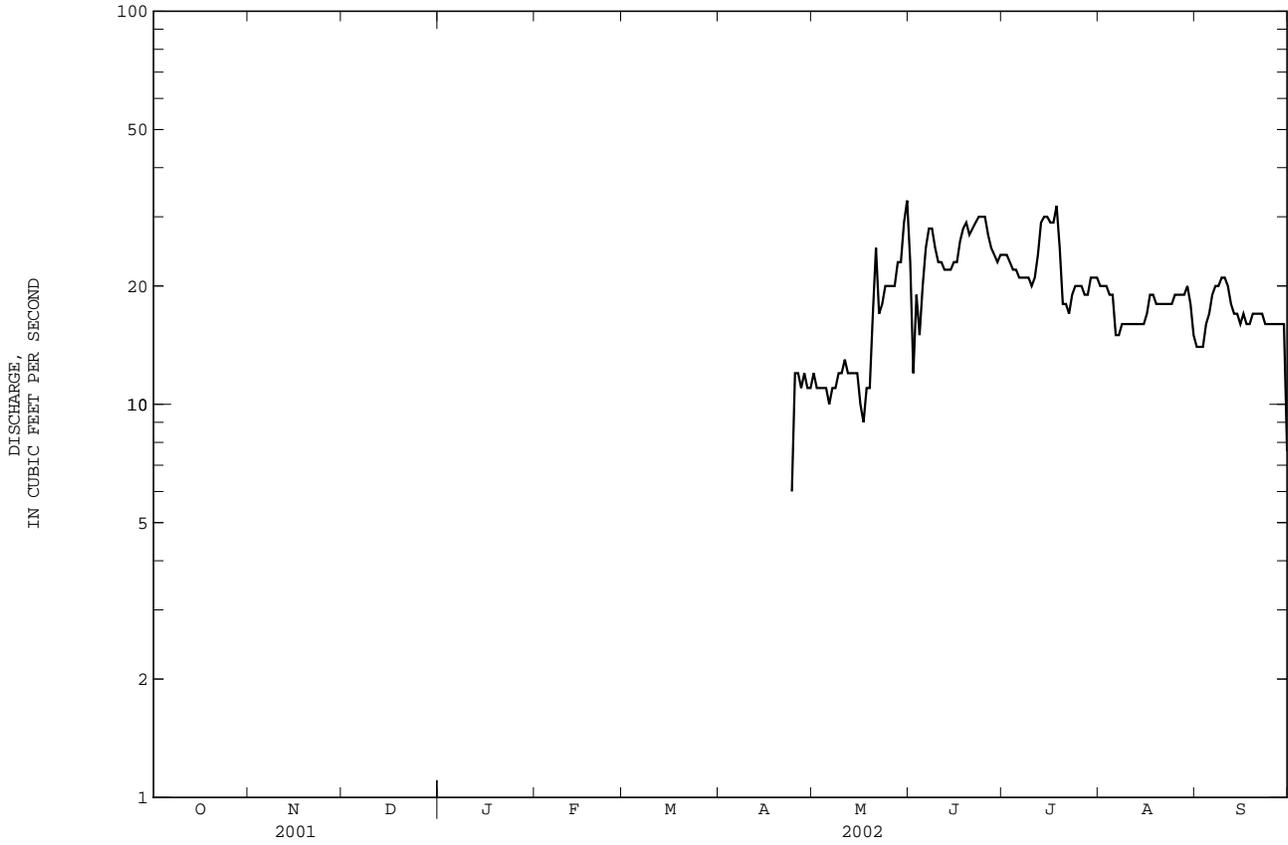
33 May 31  
 6.0 Apr 24

48 Jun 25 1991  
 0.00 Many days,  
 most years  
 56 Jul 23 1996  
 2.26 Jun 3 2002

MAXIMUM PEAK FLOW  
 MAXIMUM PEAK STAGE

51 Jun 3  
 2.26 Jun 3

\* For period of operation.



06227600 WIND RIVER NEAR KINNEAR, WY

LOCATION.--Lat 43°08'38", long 108°42'26", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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 and Muddy creeks.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319	47	290	e180	e170	e210	292	107	3040	921	503	448
2	384	47	308	e170	e180	e220	e300	100	2960	891	509	451
3	407	45	354	e180	e190	e220	e270	96	1920	678	512	449
4	421	45	354	e190	e220	e220	e250	91	974	510	515	446
5	434	45	300	e190	e230	e230	e250	88	539	475	514	444
6	430	44	305	e190	e220	e240	e270	84	600	453	508	442
7	410	44	329	e200	e210	e250	e320	83	924	412	504	435
8	388	44	296	e200	e220	e240	354	94	876	392	501	467
9	377	42	e280	e210	e200	e240	203	104	697	398	498	798
10	284	41	e260	e210	e190	e230	185	103	486	415	496	817
11	210	40	e240	e220	e190	e230	152	115	e430	413	498	688
12	194	39	e220	e210	e185	e240	161	101	e360	402	500	592
13	189	39	e210	e200	e180	e250	153	90	337	419	504	537
14	186	38	e210	e190	e185	e260	146	85	343	436	513	494
15	165	38	e230	e200	e195	e240	139	95	395	435	532	464
16	104	39	e200	e200	e190	e240	133	158	395	435	523	515
17	83	39	e115	e190	e190	e240	127	155	557	435	472	474
18	76	41	e190	e180	e190	e250	125	166	845	557	466	460
19	69	40	e210	e170	e185	e240	133	273	807	838	448	456
20	64	39	e210	e170	e185	e250	132	273	622	624	455	416
21	63	112	e190	e190	e190	e260	127	700	646	601	456	394
22	63	297	e210	e220	e210	e270	124	e620	773	578	458	394
23	60	315	e190	e260	e210	e270	108	354	789	618	457	394
24	55	307	e170	e240	e180	e260	96	363	691	576	457	387
25	53	291	e180	e250	e160	e270	95	382	e890	575	454	382
26	52	298	e170	e280	e200	275	95	380	961	577	453	387
27	52	281	e160	e240	e210	283	100	383	876	575	452	385
28	51	283	e160	e200	e215	288	103	451	809	571	453	379
29	50	273	e170	e185	---	277	96	442	749	565	547	379
30	50	284	e180	e175	---	280	93	581	832	569	518	391
31	48	---	e180	e160	---	281	---	1670	---	554	426	---
TOTAL	5791	3577	7071	6250	5480	7754	5132	8787	26123	16898	15102	14165
MEAN	186.8	119.2	228.1	201.6	195.7	250.1	171.1	283.5	870.8	545.1	487.2	472.2
MAX	434	315	354	280	230	288	354	1670	3040	921	547	817
MIN	48	38	115	160	160	210	93	83	337	392	426	379
AC-FT	11490	7090	14030	12400	10870	15380	10180	17430	51810	33520	29950	28100

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)\*

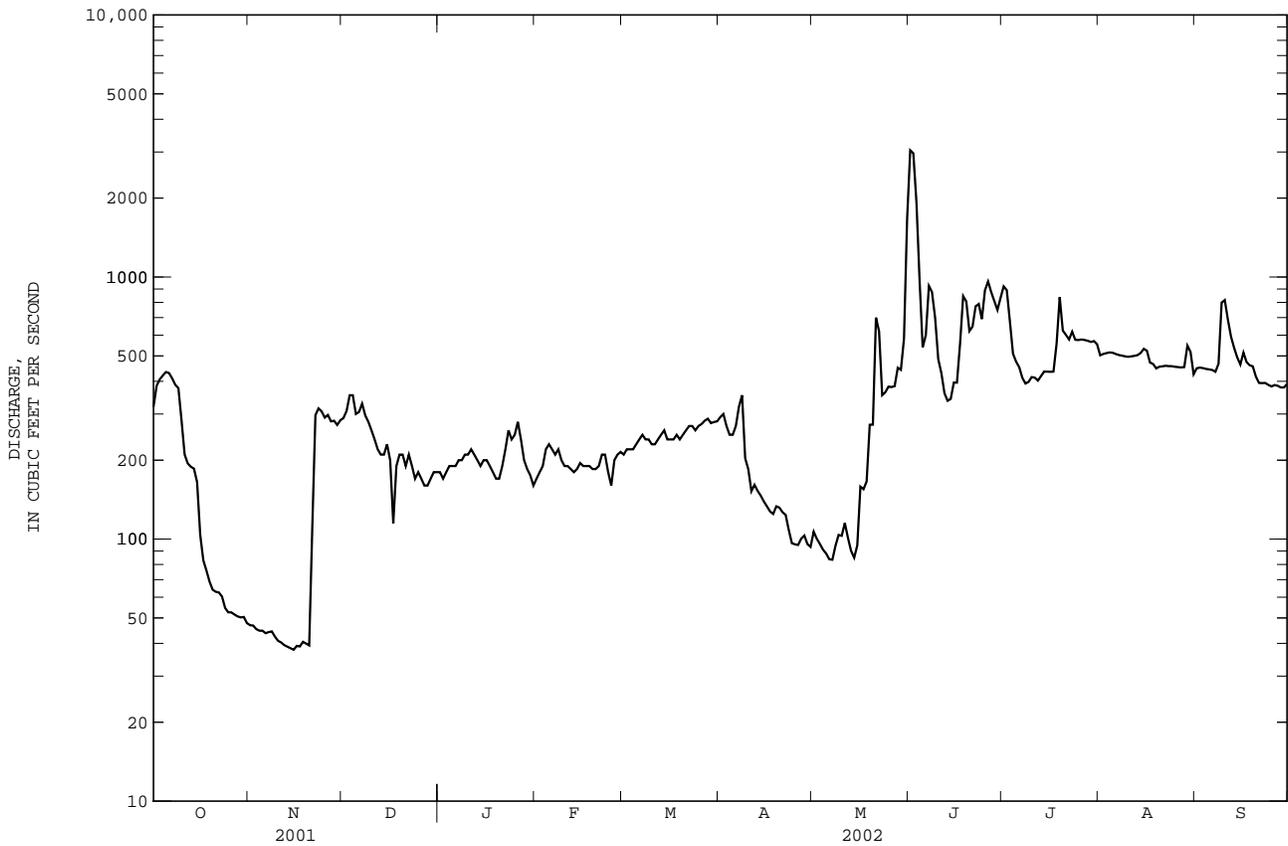
MEAN	361.0	412.5	310.6	285.5	291.8	321.4	260.5	977.1	2664	1697	573.6	401.0
MAX	850	625	380	360	378	418	758	2356	6611	4802	1230	564
(WY)	1998	1998	1996	1996	1998	1996	1974	1999	1999	1995	1976	1976
MIN	164	119	228	193	196	194	72.9	283	373	346	325	216
(WY)	2001	2002	2002	1993	2002	1992	1978	2002	2001	2001	2001	1977

YELLOWSTONE RIVER BASIN

06227600 WIND RIVER NEAR KINNEAR, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1974 - 2002*	
ANNUAL TOTAL	96159		122130		--	
ANNUAL MEAN	263.4		334.6		689.5	
HIGHEST ANNUAL MEAN	--		--		1272 1999	
LOWEST ANNUAL MEAN	--		--		277 2001	
HIGHEST DAILY MEAN	825	May 16	3040	Jun 1	11100	Jun 20 1999
LOWEST DAILY MEAN	38	Nov 14,15	38	Nov 14,15	28	Apr 24 1978
ANNUAL SEVEN-DAY MINIMUM	39	Nov 11	39	Nov 11	35	Apr 19 1978
MAXIMUM PEAK FLOW	--		4730	Jun 1	13900 <sup>a</sup>	Jun 13 1991
MAXIMUM PEAK STAGE	--		6.46	Jun 1	8.79 <sup>b</sup>	Jun 10 1997
ANNUAL RUNOFF (AC-FT)	190700		242200		499500	
10 PERCENT EXCEEDS	382		579		1190	
50 PERCENT EXCEEDS	282		260		360	
90 PERCENT EXCEEDS	81		84		185	

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



06227600 WIND RIVER NEAR KINNEAR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1985-92, 2001-02 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	
OCT 12...	1155	195	635	12.5	116	7.9	471	8.0	4.5	.24	.042	<.002	<.007	
NOV 09...	0930	42	635	12.1	101	8.1	774	-1.5	.5	.17	<.013	<.002	<.007	
DEC 05...	1240	269	627	12.5	104	8.5	486	-3.0	.0	.26	E.011	<.002	<.007	
JAN 30...	1255	173	635	10.7	88	8.5	459	-14.0	.0	.14	.041	<.002	<.007	
FEB 28...	1320	212	609	11.5	98	8.5	403	-18.0	.0	.18	.061	E.002	<.007	
Date		PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)
OCT 12...	.025	Elk	E3k	--	--	--	--	--	--	--	--	--	--	--
NOV 09...	.011	E45k	E2k	<.002	<.004	<.002	<.005	E.003	<.010	<.002	<.041	<.020	<.005	
DEC 05...	.007	<1	E1k	--	--	--	--	--	--	--	--	--	--	
JAN 30...	.009	<1	<1	--	--	--	--	--	--	--	--	--	--	
FEB 28...	<.004	E7k	E1k	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	
Date		CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THON, DIS-SOLVED (UG/L) (39532)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 09...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEB 28...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	
Date		METHYL AZIN-THION WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 09...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.01	
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEB 28...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	

## YELLOWSTONE RIVER BASIN

06227600 WIND RIVER NEAR KINNEAR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PROPA-CHLOR, WATER, DISS, REC (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (82685)	SI-MAZINE, WATER, DISS, REC (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (82675)	TER-BUTHYL- AZINE, WATER, DISS, REC (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (80154)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--	21
NOV 09...	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U	<.005	<.002	<.009	9.0
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	19
JAN 30...	--	--	--	--	--	--	--	--	--	--	--	--	11
FEB 28...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	57

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 12...	11.1
NOV 09...	1.0
DEC 05...	13.8
JAN 30...	5.1
FEB 28...	32.6

E -- Estimated value  
 U -- Analyzed for, not detected  
 k -- Counts outside acceptable range (Non-ideal colony count)

06227810 LETHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY

LOCATION.--Lat 43°01'34", long 108°31'12", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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 fair. Flow is diverted from Wind River for irrigation.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	16	51	34	28	28
2	---	---	---	---	---	---	---	16	37	34	28	28
3	---	---	---	---	---	---	---	15	28	33	29	28
4	---	---	---	---	---	---	---	14	26	32	29	28
5	---	---	---	---	---	---	---	14	23	31	30	28
6	---	---	---	---	---	---	---	13	30	31	30	28
7	---	---	---	---	---	---	---	13	40	29	30	28
8	---	---	---	---	---	---	---	14	42	28	30	28
9	---	---	---	---	---	---	---	17	37	28	30	29
10	---	---	---	---	---	---	---	17	27	29	30	29
11	---	---	---	---	---	---	---	20	26	30	30	28
12	---	---	---	---	---	---	---	18	25	30	30	27
13	---	---	---	---	---	---	---	18	19	31	30	27
14	---	---	---	---	---	---	---	17	19	31	29	26
15	---	---	---	---	---	---	---	17	30	31	29	26
16	---	---	---	---	---	---	---	21	37	31	29	26
17	---	---	---	---	---	---	---	21	39	32	29	27
18	---	---	---	---	---	---	---	22	41	33	29	26
19	---	---	---	---	---	---	---	22	43	33	29	26
20	---	---	---	---	---	---	---	23	40	31	29	26
21	---	---	---	---	---	---	---	35	38	30	29	26
22	---	---	---	---	---	---	---	12	35	40	29	26
23	---	---	---	---	---	---	---	19	29	41	29	26
24	---	---	---	---	---	---	---	17	29	41	28	26
25	---	---	---	---	---	---	---	16	30	42	28	27
26	---	---	---	---	---	---	---	15	29	39	28	26
27	---	---	---	---	---	---	---	16	30	34	28	25
28	---	---	---	---	---	---	---	17	31	34	29	25
29	---	---	---	---	---	---	---	16	34	33	29	25
30	---	---	---	---	---	---	---	15	35	34	29	18
31	---	---	---	---	---	---	---	46	---	29	28	---
TOTAL	---	---	---	---	---	---	---	711	1036	938	905	797
MEAN	---	---	---	---	---	---	---	22.94	34.53	30.26	29.19	26.57
MAX	---	---	---	---	---	---	---	46	51	34	30	29
MIN	---	---	---	---	---	---	---	13	19	28	28	18
AC-FT	---	---	---	---	---	---	---	1410	2050	1860	1800	1580

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)\*

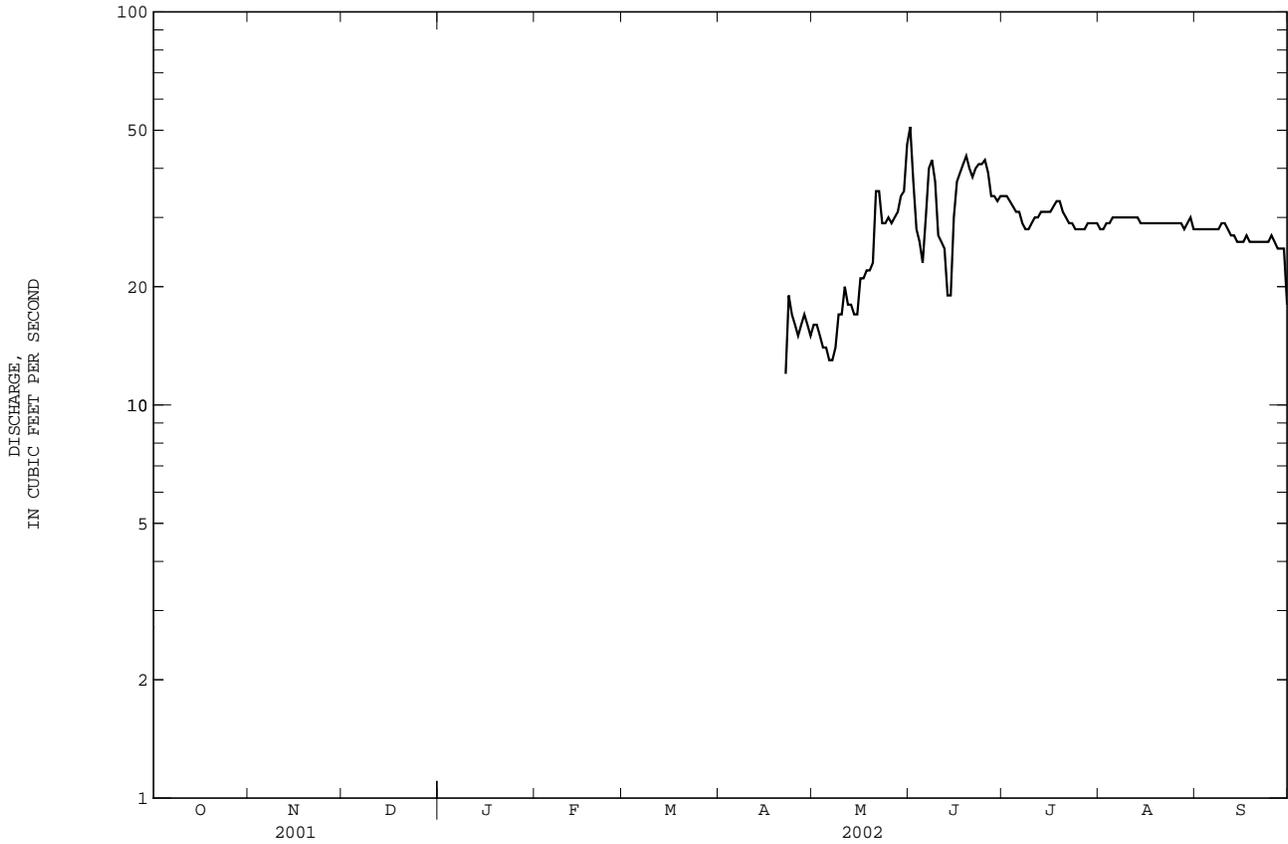
MEAN	0.602	---	---	---	---	---	0.600	24.08	26.34	28.85	26.11	26.24
MAX	0.87	---	---	---	---	---	0.60	35.3	41.6	44.6	47.7	42.9
(WY)	1994	---	---	---	---	---	1992	1992	2001	1994	1994	1994
MIN	0.33	---	---	---	---	---	0.60	20.2	12.8	19.4	8.74	10.3
(WY)	1993	---	---	---	---	---	1992	1993	1995	1993	1998	1999

YELLOWSTONE RIVER BASIN

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

SUMMARY STATISTICS	FOR 2002 WATER YEAR*		WATER YEARS 1991 - 2002*	
HIGHEST DAILY MEAN	51	Jun 1	66	May 25 1997
LOWEST DAILY MEAN	10	Apr 22	0.00	Many days, most years
MAXIMUM PEAK FLOW	59	May 31	74 <sup>a</sup>	Jun 13 1991
MAXIMUM PEAK STAGE	2.70	May 31	3.19	May 24 1997 Sep 8 1997

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



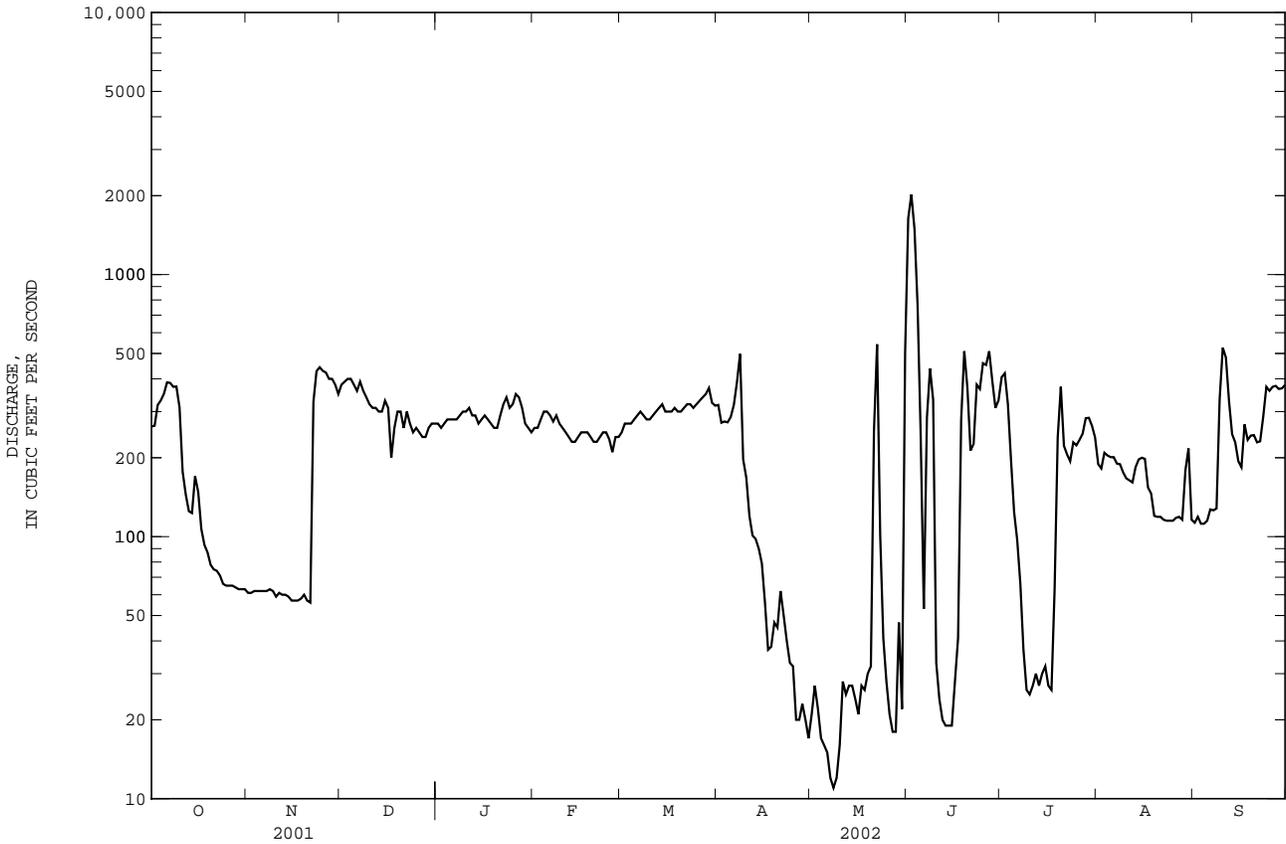


YELLOWSTONE RIVER BASIN

06228000 WIND RIVER AT RIVERTON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1912 - 2002	
ANNUAL TOTAL	56600		81527		--	
ANNUAL MEAN	155.1		223.4		796.7	
HIGHEST ANNUAL MEAN	--		--		1626	1913
LOWEST ANNUAL MEAN	--		--		156	2001
HIGHEST DAILY MEAN	555	Mar 26	2020	Jun 2	11400	Jun 14 1935
LOWEST DAILY MEAN	12	May 7	11	May 8	9.8	May 28 1977
ANNUAL SEVEN-DAY MINIMUM	18	Aug 23	14	May 4	12	Jul 13 1977
MAXIMUM PEAK FLOW	--		2640 <sup>a</sup>	Jun 1	13300 <sup>b</sup>	Jun 15 1935
MAXIMUM PEAK STAGE	--		8.43 <sup>c</sup>	Dec 20	10.86 <sup>d</sup>	Jun 10 1997
ANNUAL RUNOFF (AC-FT)	112300		161700		577200	
10 PERCENT EXCEEDS	370		375		2040	
50 PERCENT EXCEEDS	76		240		400	
90 PERCENT EXCEEDS	23		27		159	

- a Gage height, 6.59 ft.
- b Gage height, 10.15 ft, site and datum then in use.
- c Backwater from ice.
- d Discharge 10,100 ft<sup>3</sup>/s, present datum.
- e Estimated.





YELLOWSTONE RIVER BASIN

06228000 WIND RIVER AT RIVERTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
DEC 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 25...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	<.010	<.006	<.011	M	<.004	<.010	<.011	<.02	<.011	E.01	<.034	<.02	U
DEC 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 25...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--

THIO-  
BENCARB  
WATER  
FLTRD  
0.7 U  
GF, REC  
(UG/L)

TRIAL-  
LATE  
WATER  
FLTRD  
0.7 U  
GF, REC  
(UG/L)

TRI-  
FLUR-  
ALIN  
WAT FLT  
0.7 U  
GF, REC  
(MG/L)

SEDI-  
MENT,  
DIS-  
CHARGE,  
SUS-  
SUS-  
PENDE  
PENDE  
(T/DAY)

Value qualifier codes used in this report:

(82681) (82678) (82661) (80154) (80155)

OCT 15...	--	--	--	22	8.3
NOV 08...	<.005	<.002	<.009	12	2.1
DEC 17...	--	--	--	103	42.8
JAN 16...	--	--	--	42	32.8
FEB 25...	<.005	<.002	<.009	55	34.9
AUG 13...	--	--	--	--	--

E -- Estimated value  
M -- Presence verified, not quantified  
U -- Analyzed for, not detected  
k -- Counts outside acceptable range (Non-ideal colony count)

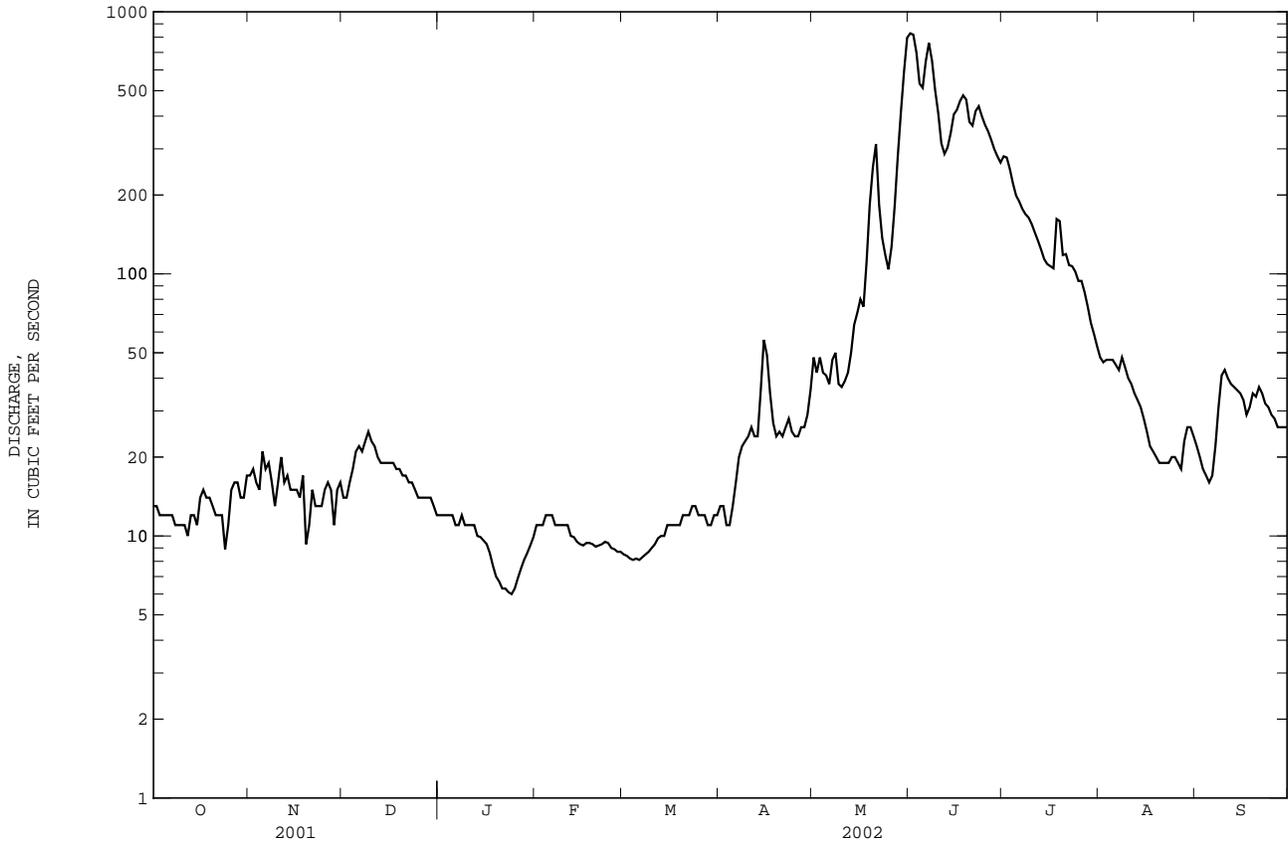


YELLOWSTONE RIVER BASIN

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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1977 - 2002	
ANNUAL TOTAL	21326.9		27603.1		--	
ANNUAL MEAN	58.43		75.62		125.8	
HIGHEST ANNUAL MEAN	--		--		188	
LOWEST ANNUAL MEAN	--		--		60.5	
HIGHEST DAILY MEAN	792	May 16	828	Jun 1	1960	Jun 13 1991
LOWEST DAILY MEAN	8.9	Oct 24	6.0	Jan 24	4.5	Feb 1 1977
ANNUAL SEVEN-DAY MINIMUM	9.7	Feb 2	6.4	Jan 20	4.5	Feb 1 1977
MAXIMUM PEAK FLOW	--		970	Jun 1	2230	Jun 13 1991
MAXIMUM PEAK STAGE	--		6.21	Jun 1	8.48	Jun 13 1991
INSTANTANEOUS LOW FLOW	--		5.8	Jan 24	5.8	Jan 24 2002
ANNUAL RUNOFF (AC-FT)	42300		54750		91150	
10 PERCENT EXCEEDS	174		271		374	
50 PERCENT EXCEEDS	18		19		37	
90 PERCENT EXCEEDS	12		9.3		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 SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 fair, except those for estimated daily discharges, which are poor. Flow regulated by Washakie Reservoir.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	13	16	14	13	13	e28	188	271	179	29
2	12	11	13	16	14	13	13	e22	564	258	176	29
3	18	11	13	16	14	13	13	e28	596	258	173	29
4	13	11	15	16	14	13	12	e21	457	258	170	29
5	13	11	15	16	14	13	12	e20	420	256	167	28
6	13	11	15	16	14	13	12	e19	491	252	165	29
7	12	11	15	16	14	13	12	e26	619	236	162	28
8	11	11	15	16	14	13	12	e29	555	229	158	28
9	11	11	14	16	14	13	12	e19	440	213	155	28
10	11	10	15	16	14	13	12	e18	367	201	152	28
11	11	11	16	16	14	13	12	e19	294	200	105	28
12	11	11	16	16	14	13	12	e20	275	197	30	28
13	11	11	16	16	14	14	12	e30	309	197	22	28
14	10	11	16	16	14	14	12	47	348	194	27	28
15	11	11	16	16	14	14	13	60	347	192	27	28
16	10	11	16	16	14	14	13	56	347	190	28	28
17	10	11	16	16	14	14	13	53	348	190	28	28
18	10	11	16	16	14	13	13	53	352	187	28	28
19	10	11	16	15	14	13	13	59	370	185	28	26
20	11	11	16	15	14	13	13	63	357	178	29	21
21	10	11	16	15	14	13	13	83	352	173	29	21
22	11	11	16	15	14	13	13	119	354	147	29	21
23	11	11	16	15	14	13	13	119	352	64	29	21
24	11	11	16	15	14	13	13	119	351	27	29	21
25	11	11	16	15	13	13	13	111	349	27	29	21
26	10	12	16	15	13	13	13	106	349	27	30	21
27	10	13	16	15	13	14	e14	106	347	27	30	21
28	10	13	16	15	14	13	e14	110	333	27	30	21
29	9.9	13	16	15	---	13	e15	132	301	145	30	21
30	10	13	16	15	---	13	e19	166	291	224	29	21
31	10	---	16	14	---	13	---	172	---	182	29	---
TOTAL	343.9	338	479	482	389	409	389	2033	11423	5412	2332	766
MEAN	11.09	11.27	15.45	15.55	13.89	13.19	12.97	65.58	380.8	174.6	75.23	25.53
MAX	18	13	16	16	14	14	19	172	619	271	179	29
MIN	9.9	10	13	14	13	13	12	18	188	27	22	21
AC-FT	682	670	950	956	772	811	772	4030	22660	10730	4630	1520

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)

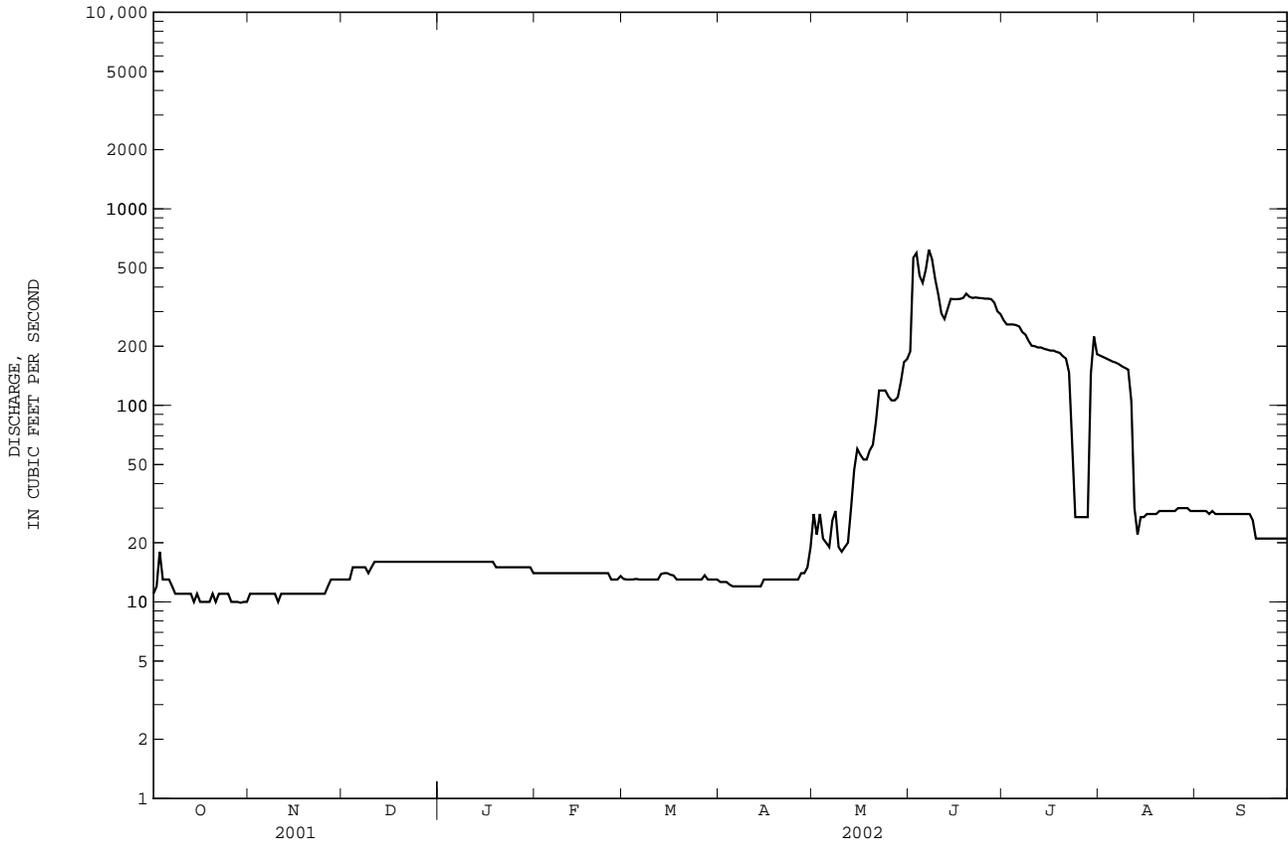
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	38.37	27.82	23.77	19.28	15.71	15.16	29.34	188.1	525.4	335.9	146.1	82.16		
MAX	81.9	46.0	36.7	34.5	29.0	21.8	71.4	298	897	774	264	146		
(WY)	1999	1998	1991	1997	1997	1994	1994	1999	1991	1995	1993	1993		
MIN	11.1	4.68	5.19	6.18	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		

YELLOWSTONE RIVER BASIN

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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1989 - 2002	
ANNUAL TOTAL	19918.1		24795.9		--	
ANNUAL MEAN	54.57		67.93		120.9	
HIGHEST ANNUAL MEAN	--		--		189 1999	
LOWEST ANNUAL MEAN	--		--		58.5 2001	
HIGHEST DAILY MEAN	320	Jun 3	619	Jun 7	1930	Jun 13 1991
LOWEST DAILY MEAN	9.6	Feb 2,3	9.9	Oct 29	3.5	Mar 17 1991
ANNUAL SEVEN-DAY MINIMUM	9.7	Feb 2	10	Oct 25	3.6	Mar 16 1991
MAXIMUM PEAK FLOW	--		661	Jun 7	2120	Jun 13 1991
MAXIMUM PEAK STAGE	--		4.07	Jun 7	6.43	Jun 13 1991
INSTANTANEOUS LOW FLOW	--		5.0	Oct 2	5.0	Oct 2 2001
ANNUAL RUNOFF (AC-FT)	39510		49180		87580	
10 PERCENT EXCEEDS	226		232		327	
50 PERCENT EXCEEDS	14		16		34	
90 PERCENT EXCEEDS	11		11		11	

e Estimated.



06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43°00'02", long 108°55'56", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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 except those for estimated daily discharges, which are poor. Flow is diverted from the South Fork Little Wind River for irrigation.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	1.1	e1.8	224	289	185	29
2	---	---	---	---	---	---	e1.0	e1.9	263	282	185	28
3	---	---	---	---	---	---	e1.0	e1.9	251	284	180	28
4	---	---	---	---	---	---	e1.0	e2.0	286	283	176	28
5	---	---	---	---	---	---	e1.0	e2.0	291	281	172	27
6	---	---	---	---	---	---	e1.0	e2.0	314	279	170	28
7	---	---	---	---	---	---	e1.0	e2.0	348	264	e168	28
8	---	---	---	---	---	---	e1.0	e2.0	305	259	e167	29
9	---	---	---	---	---	---	e1.0	e2.0	264	242	e154	31
10	---	---	---	---	---	---	e1.0	e2.0	296	227	e100	33
11	---	---	---	---	---	---	e0.90	e2.0	285	223	e70	36
12	---	---	---	---	---	---	e1.0	e2.1	266	220	e52	39
13	---	---	---	---	---	---	e1.1	e2.1	289	217	e36	40
14	---	---	---	---	---	---	e1.1	e28	325	215	e38	41
15	---	---	---	---	---	---	e1.2	e53	317	209	e38	41
16	---	---	---	---	---	---	e1.2	53	318	205	e40	41
17	---	---	---	---	---	---	e1.3	49	328	203	e38	41
18	---	---	---	---	---	---	e1.3	46	336	204	e37	42
19	---	---	---	---	---	---	e1.3	47	353	205	e36	41
20	---	---	---	---	---	---	e1.3	51	348	197	e35	33
21	---	---	---	---	---	---	e1.4	62	345	195	e32	32
22	---	---	---	---	---	---	e1.4	117	342	179	e30	32
23	---	---	---	---	---	---	e1.5	141	339	104	28	31
24	---	---	---	---	---	---	e1.5	140	339	57	29	30
25	---	---	---	---	---	---	e1.5	133	338	58	28	29
26	---	---	---	---	---	---	e1.5	123	336	57	28	29
27	---	---	---	---	---	---	e1.6	122	343	55	29	29
28	---	---	---	---	---	---	e1.6	127	341	55	30	29
29	---	---	---	---	---	---	e1.7	148	310	123	30	28
30	---	---	---	---	---	---	e1.8	197	302	222	30	29
31	---	---	---	---	---	---	---	219	---	180	29	---
TOTAL	---	---	---	---	---	---	37.30	1881.8	9342	6073	2400	982
MEAN	---	---	---	---	---	---	1.243	60.70	311.4	195.9	77.42	32.73
MAX	---	---	---	---	---	---	1.8	219	353	289	185	42
MIN	---	---	---	---	---	---	0.90	1.8	224	55	28	27
AC-FT	---	---	---	---	---	---	74	3730	18530	12050	4760	1950

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)\*

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	33.36	21.57	---	---	---	---	16.09	107.2	210.4	223.3	156.5	95.57		
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		

YELLOWSTONE RIVER BASIN

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

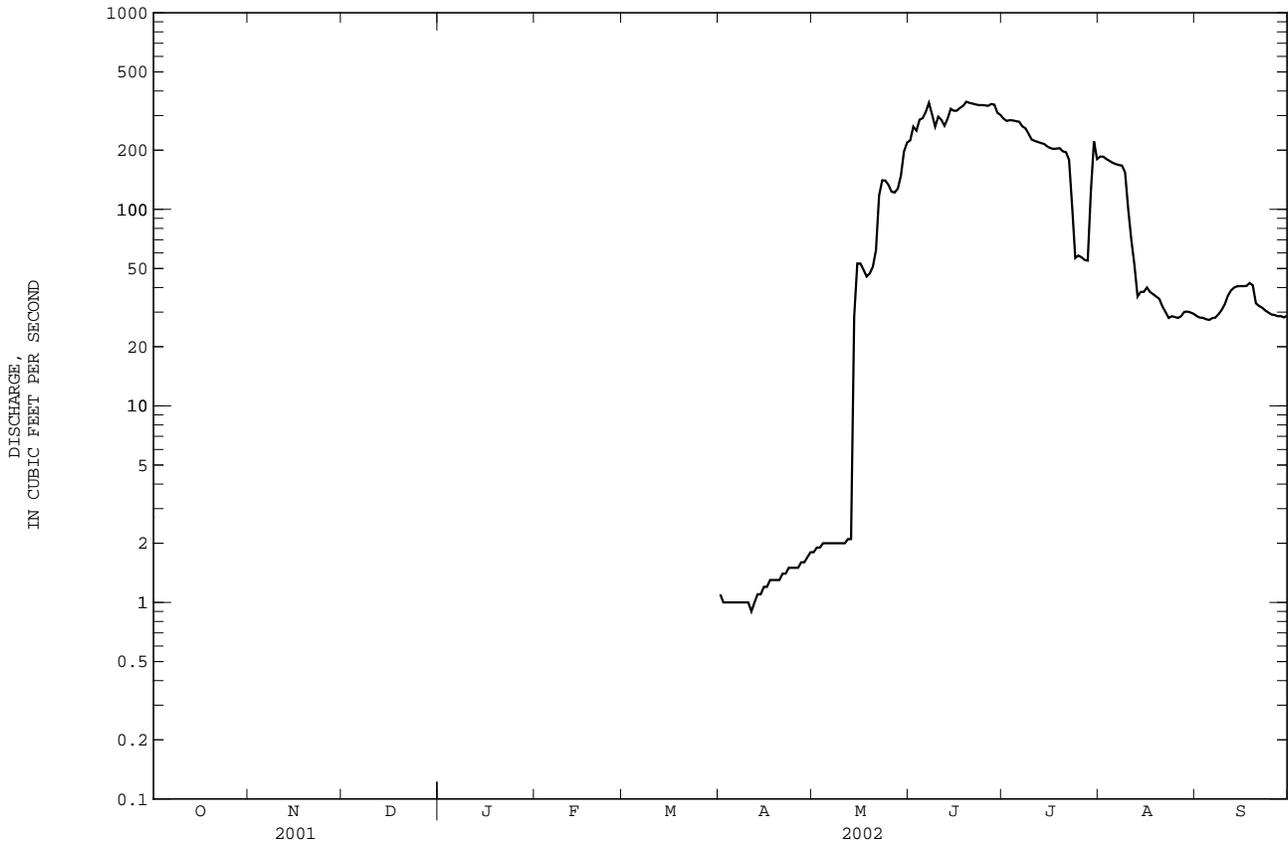
SUMMARY STATISTICS

FOR 2002 WATER YEARS\*

WATER YEARS 1989 - 2002\*

HIGHEST DAILY MEAN	353	Jun 19	390	Jun 29 1996
LOWEST DAILY MEAN	0.90 <sup>e</sup>	Apr 11	0.00	Apr 1 1991
MAXIMUM PEAK FLOW	401	Jun 2	446	Jun 12 1996
MAXIMUM PEAK STAGE	4.06	Jun 2	4.11	Jun 24 1999

\* For period of operation.  
 e Estimated.



06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43°01'43", long 109°00'02", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	17	e15	13	e12	16	22	50	855	243	62	24
2	17	17	e17	12	e13	e15	23	49	851	238	59	23
3	16	17	e17	e14	e13	e15	20	57	830	235	55	22
4	16	17	e16	16	e13	e15	21	53	681	225	53	21
5	16	17	e16	15	e14	e15	22	48	578	208	51	20
6	15	17	e17	15	e14	15	27	46	574	195	49	20
7	15	19	e17	15	e15	15	31	50	633	183	48	21
8	14	19	e16	14	15	15	36	56	635	172	47	23
9	14	19	e16	14	15	e15	39	48	562	156	44	26
10	14	19	e15	13	19	e16	39	45	475	145	41	31
11	14	20	e15	13	17	16	37	50	392	135	39	38
12	14	19	e15	13	16	17	34	53	322	126	37	44
13	13	19	e16	e12	20	17	34	58	284	120	36	49
14	13	18	e17	e12	16	e17	40	61	273	114	33	50
15	13	18	e16	12	e16	e16	56	62	285	108	32	50
16	13	17	e15	e13	e16	e16	54	67	315	106	30	49
17	13	17	e16	e13	16	e16	43	68	344	104	27	49
18	13	17	e16	e13	16	e16	37	78	375	111	25	49
19	13	15	e16	e13	16	e17	37	99	390	110	24	45
20	13	16	e16	13	16	e18	38	152	370	101	23	42
21	13	17	e16	13	16	18	36	209	347	99	22	40
22	13	16	e16	13	16	17	38	227	333	95	22	37
23	13	15	e15	e14	17	20	41	210	328	94	21	35
24	13	12	e16	e14	17	21	39	191	319	89	22	33
25	12	15	e16	14	15	21	36	171	303	87	21	30
26	15	16	e16	13	e14	22	36	165	292	84	20	30
27	15	14	e16	13	e15	22	37	179	285	80	21	28
28	15	e13	e16	e12	e15	21	37	217	273	77	24	27
29	14	e14	16	e11	---	21	40	291	267	74	25	27
30	14	e15	14	e10	---	21	42	493	252	69	25	27
31	15	---	13	e11	---	22	---	755	---	66	24	---
TOTAL	438	501	490	406	433	544	1072	4358	13023	4049	1062	1010
MEAN	14.13	16.70	15.81	13.10	15.46	17.55	35.73	140.6	434.1	130.6	34.26	33.67
MAX	17	20	17	16	20	22	56	755	855	243	62	50
MIN	12	12	13	10	12	15	20	45	252	66	20	20
AC-FT	869	994	972	805	859	1080	2130	8640	25830	8030	2110	2000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)

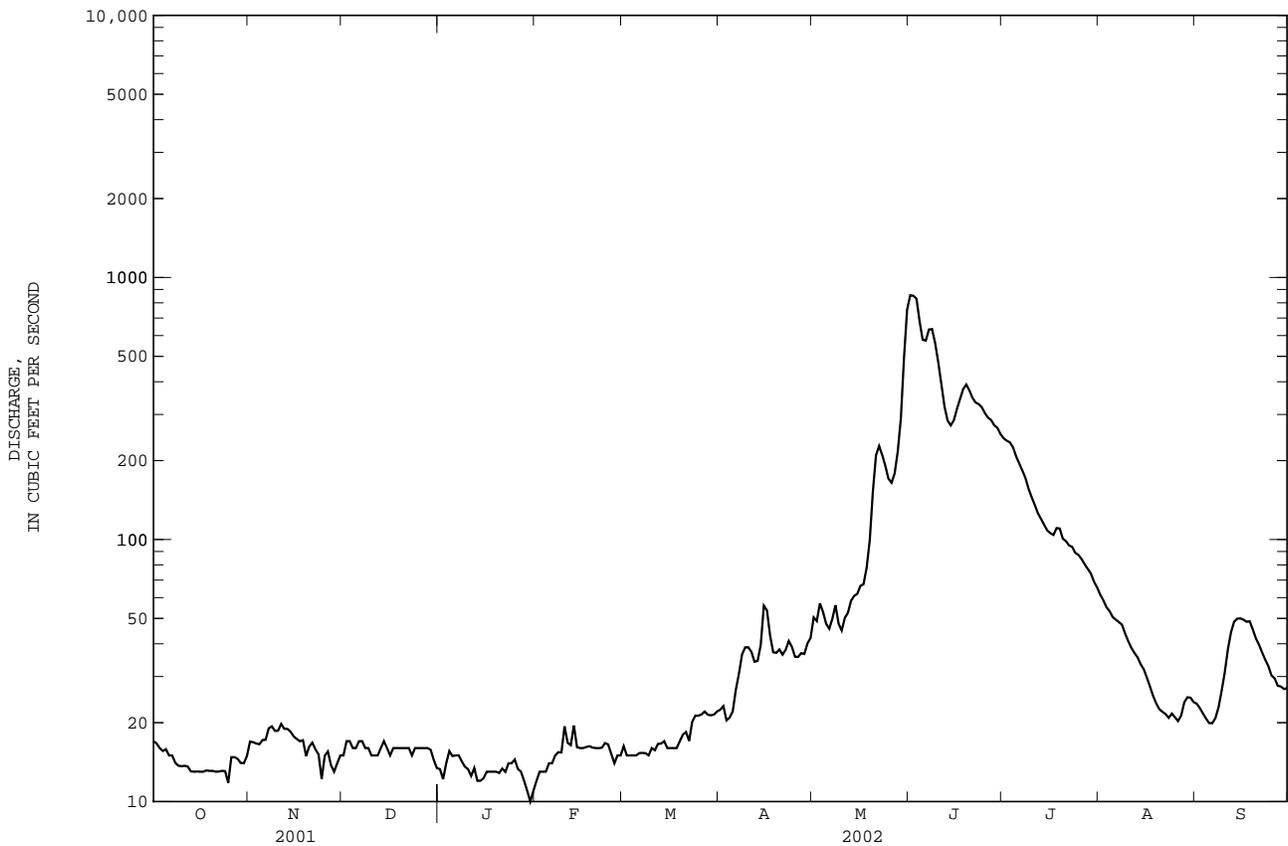
	1989	1989	1989	1989	1989	2001	1993	2002	2001	1994	2002	2001
MEAN	47.80	33.36	24.83	19.38	18.16	25.42	52.05	271.8	611.8	322.2	118.1	64.42
MAX	76.1	57.3	50.1	31.9	29.5	38.8	84.5	420	1091	758	227	118
(WY)	1999	1999	1996	1996	1999	1995	1994	2000	1999	1995	1997	1997
MIN	13.5	14.7	13.6	8.95	8.53	13.1	27.5	141	176	74.9	34.3	24.5
(WY)	1989	1989	1989	1989	1989	2001	1993	2002	2001	1994	2002	2001

YELLOWSTONE RIVER BASIN

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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1989 - 2002	
ANNUAL TOTAL	21978.6	27386	--	
ANNUAL MEAN	60.22	75.03	134.4	
HIGHEST ANNUAL MEAN	--	--	208	1999
LOWEST ANNUAL MEAN	--	--	61.7	2001
HIGHEST DAILY MEAN	762 May 16	855 Jun 1	2070	Jun 13 1991
LOWEST DAILY MEAN	9.0 <sup>e</sup> Feb 9	10 <sup>e</sup> Jan 30	6.5	Feb 3 1989
ANNUAL SEVEN-DAY MINIMUM	9.5 Feb 8	12 Jan 26	7.4	Feb 2 1989
MAXIMUM PEAK FLOW	--	896 Jun 3	2360 <sup>a</sup>	Jun 13 1991
MAXIMUM PEAK STAGE	--	5.79 Jun 3	7.19	Jun 17 1999
INSTANTANEOUS LOW FLOW	--	10 Jan 30	10	Jan 30 2002
ANNUAL RUNOFF (AC-FT)	43590	54320	97350	
10 PERCENT EXCEEDS	151	230	375	
50 PERCENT EXCEEDS	19	21	43	
90 PERCENT EXCEEDS	10	13	16	

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 SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--Annual maximum, water years 1961-68, 1970-84. May 1990 to September 1999, April to September 2002 (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 except those for estimated period, which are poor.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e4.2	5.5	12	e5.4	3.5	3.6
2	---	---	---	---	---	---	4.1	5.4	13	e5.2	3.5	3.7
3	---	---	---	---	---	---	4.1	5.4	12	e5.4	3.5	3.6
4	---	---	---	---	---	---	4.2	5.3	11	e5.2	3.6	3.6
5	---	---	---	---	---	---	4.2	5.3	11	e5.0	3.5	3.6
6	---	---	---	---	---	---	4.2	5.5	e9.8	e4.7	3.5	3.6
7	---	---	---	---	---	---	4.3	5.7	e10	e4.6	3.6	3.7
8	---	---	---	---	---	---	4.4	5.6	e10	e4.5	3.6	3.7
9	---	---	---	---	---	---	4.4	5.5	e10	e4.3	3.6	3.7
10	---	---	---	---	---	---	4.5	5.6	e9.4	e4.1	3.5	3.7
11	---	---	---	---	---	---	4.5	6.0	e8.8	e3.9	3.5	3.8
12	---	---	---	---	---	---	4.5	5.7	e8.2	e3.7	3.6	3.8
13	---	---	---	---	---	---	4.5	5.7	e8.0	e3.6	3.6	3.7
14	---	---	---	---	---	---	4.6	6.0	e8.0	e3.6	3.6	3.7
15	---	---	---	---	---	---	5.0	6.2	e8.2	e3.5	3.6	3.7
16	---	---	---	---	---	---	4.9	6.3	e8.4	e3.6	3.5	3.7
17	---	---	---	---	---	---	4.8	6.4	e8.6	e3.7	3.5	3.8
18	---	---	---	---	---	---	4.7	6.7	e8.8	e3.8	3.5	4.0
19	---	---	---	---	---	---	4.7	7.2	e8.6	e3.8	3.5	4.0
20	---	---	---	---	---	---	4.7	7.5	e8.2	3.7	3.6	3.9
21	---	---	---	---	---	---	4.8	7.8	e8.0	3.6	3.6	3.8
22	---	---	---	---	---	---	4.8	7.8	e7.6	3.6	3.5	3.7
23	---	---	---	---	---	---	4.8	7.9	e7.2	3.6	3.6	3.7
24	---	---	---	---	---	---	4.8	8.0	e7.0	3.7	3.6	3.7
25	---	---	---	---	---	---	4.8	8.0	e6.8	3.7	3.6	3.7
26	---	---	---	---	---	---	4.9	8.0	e6.6	3.7	3.6	3.7
27	---	---	---	---	---	---	4.9	8.1	e6.4	3.7	3.8	3.7
28	---	---	---	---	---	---	5.0	8.0	e6.2	3.6	3.8	3.7
29	---	---	---	---	---	---	4.9	8.3	e6.0	3.6	3.8	3.6
30	---	---	---	---	---	---	5.0	8.8	e5.6	3.5	3.7	3.5
31	---	---	---	---	---	---	---	10	---	3.5	3.7	---
TOTAL	---	---	---	---	---	---	138.2	209.2	259.4	125.1	111.2	111.4
MEAN	---	---	---	---	---	---	4.607	6.748	8.647	4.035	3.587	3.713
MAX	---	---	---	---	---	---	5.0	10	13	5.4	3.8	4.0
MIN	---	---	---	---	---	---	4.1	5.3	5.6	3.5	3.5	3.5
AC-FT	---	---	---	---	---	---	274	415	515	248	221	221

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

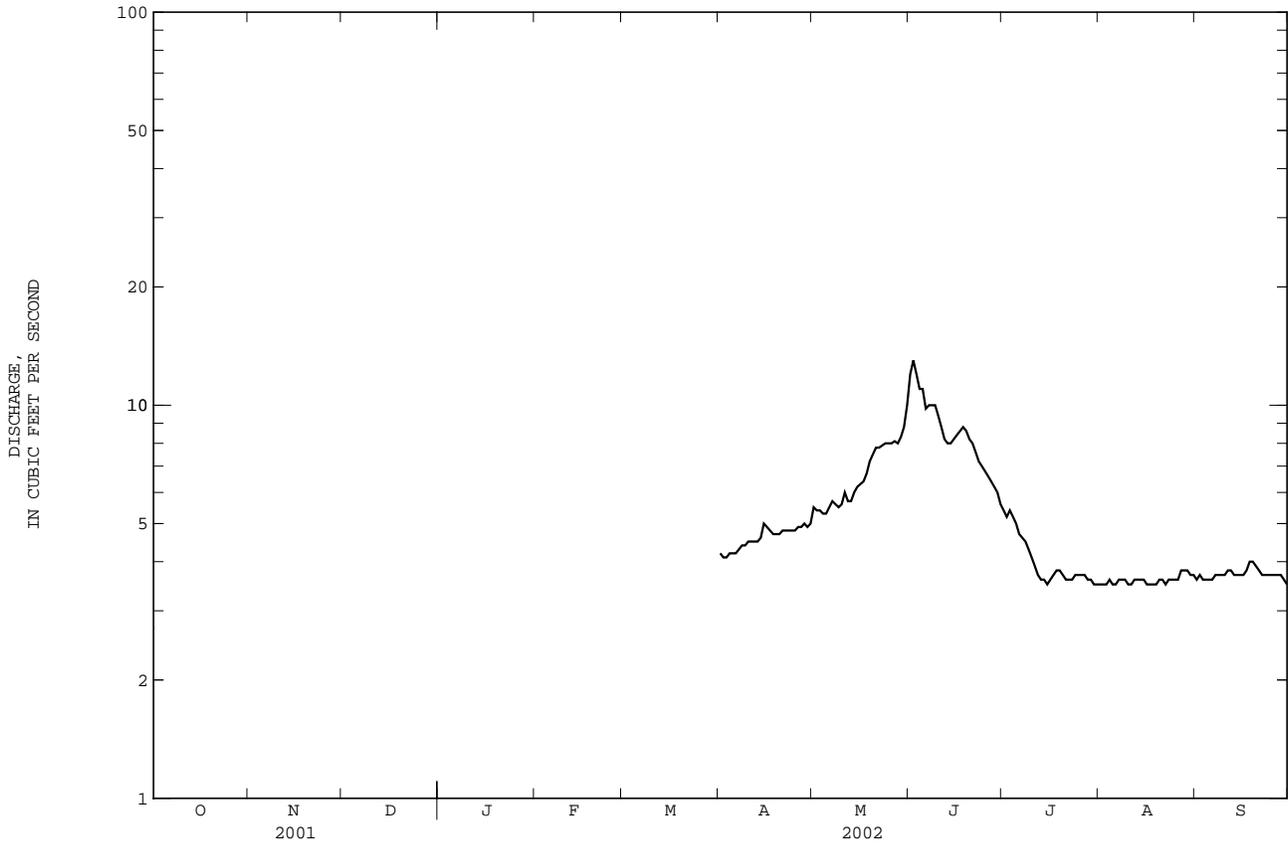
	1990	1991	1992	1993	1994	1995	1996
MEAN	5.788	5.282	4.788	4.574	4.377	4.543	5.552
MAX	8.45	7.37	6.26	5.97	5.15	5.52	7.47
(WY)	1996	1996	1996	1996	1996	1996	1996
MIN	3.77	4.12	3.78	3.71	3.44	3.78	4.05
(WY)	1991	1991	1995	1991	1991	1991	1991

YELLOWSTONE RIVER BASIN

06229900 TROUT CREEK NEAR FORT WASHAKIE, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1990 - 1996*
ANNUAL MEAN	--	10.42
HIGHEST ANNUAL MEAN	--	17.3 1995
LOWEST ANNUAL MEAN	--	5.95 1994
HIGHEST DAILY MEAN	13.0 Jun 2	316 Jun 2 1991
LOWEST DAILY MEAN	3.5 Several days	3.0 Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	--	3.3 Feb 14 1991
MAXIMUM PEAK FLOW	13.0	500 <sup>a</sup> Jun 2 1991
MAXIMUM PEAK STAGE	4.49 Jun 2	7.49 Jun 2 1991
ANNUAL RUNOFF (AC-FT)	--	7550

\* For period of operation.  
 a From rating curve extended above 160 ft<sup>3</sup>/s on basis of slope-conveyance computation of peak flow.  
 e Estimated.



06232600 POPO AGIE RIVER AT HUDSON SIDING, NEAR LANDER, WY

LOCATION.--Lat 42°51'59", long 108°41'04", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.30, T.2 S., R.2 E., Fremont County, Hydrologic Unit 10080003, Wind River Indian Reservation, on left bank at bridge on private road, 1.2 mi downstream from North Popo Agie River, and 3.2 mi northeast of Lander.

PERIOD OF RECORD.--October 1984 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
JAN 29...	1010	30	630	11.6	96	7.9	633	-15.0	.0	.41	.18	<.008	.08
MAR 25...	1240	49	627	13.8	125	8.6	743	8.0	3.0	.25	.12	<.008	.06
JUN 26...	1350	250	620	6.0	82	8.3	344	34.0	20.0	E.03	<.05	E.004	.03
AUG 21...	1130	19	626	13.7	178	8.4	974	29.0	18.0	.07	.32	.070	.15

Date	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)
JAN 29...	E11k	83
MAR 25...	<1	<1
JUN 26...	35	45
AUG 21...	E6k	31

E -- Estimated value  
 k -- Counts outside acceptable range (Non-ideal colony count)

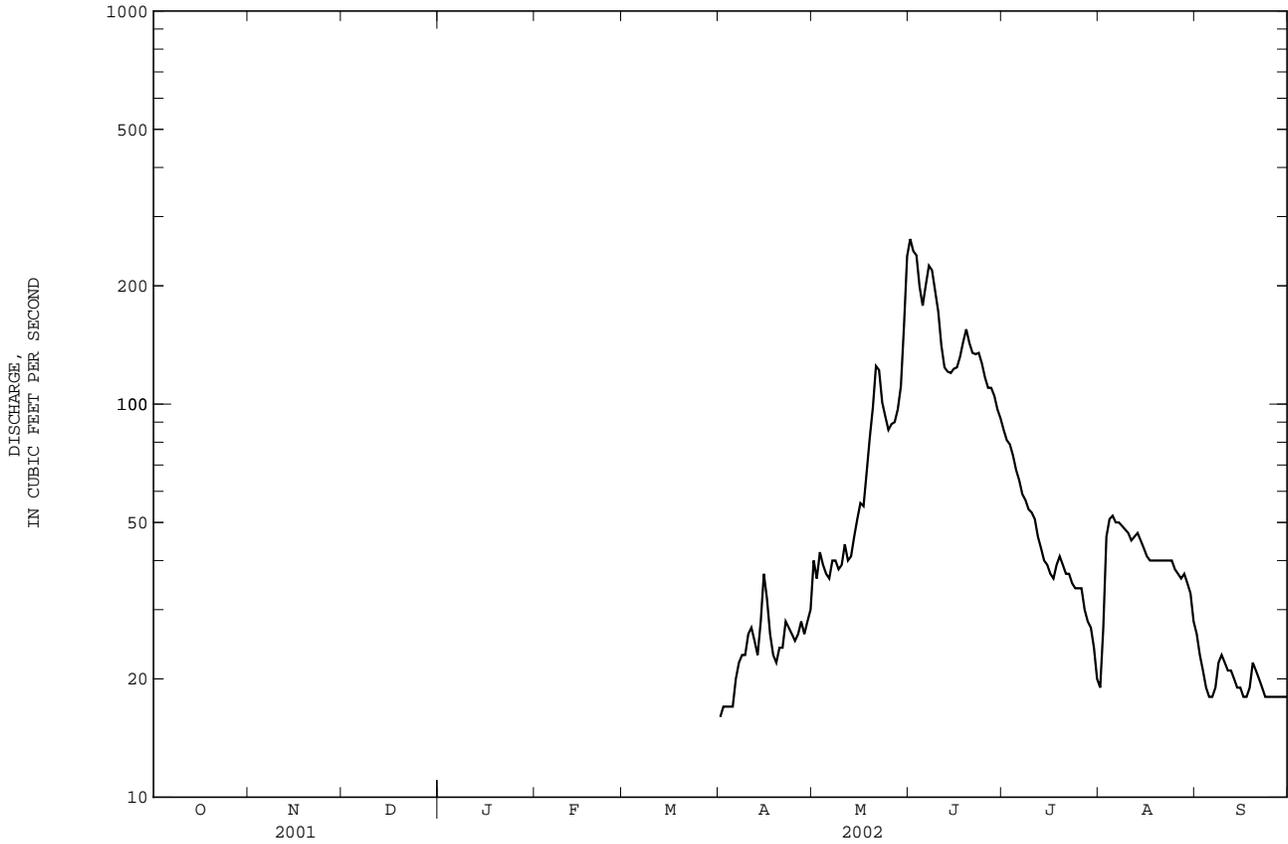


06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY--Continued

SUMMARY STATISTICS

	FOR 2002 WATER YEAR*		WATER YEARS 1946 - 2002*	
ANNUAL MEAN	--		80.37	
HIGHEST ANNUAL MEAN	--		131	1965
LOWEST ANNUAL MEAN	--		37.0	1960
HIGHEST DAILY MEAN	263	Jun 1	1590	Jun 16 1963
LOWEST DAILY MEAN	16	Apr 1	12	Several days, 1960, 1963
MAXIMUM PEAK FLOW	296	Jun 1	2010	Jun 16 1963
MAXIMUM PEAK STAGE	3.62	Jun 1	6.64	Jun 16 1963
ANNUAL RUNOFF (AC-FT)	--		58230	

\* For period of operation.



## YELLOWSTONE RIVER BASIN

06233900 POPO AGIE RIVER NEAR ARAPAHOE, WY

LOCATION.--Lat 42°56'47", long 108°30'34", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec. 27, T.1 S., R.3 E., Fremont County, Hydrologic Unit 10080003, Wind River Indian Reservation, on left bank 1.4 mi southwest of Arapahoe School and 3.0 mi upstream from Little Wind River.

Drainage Area.--796 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1980-92, 2001-02.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (MG/L) (00301)	PH WATER (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	
OCT 11...	1340	46	633	12.2	126	7.8	1140	10.0	8.5	.38	E.010	<.002	<.007	
NOV 09...	1115	89	639	12.3	109	7.7	106	2.0	3.0	.26	E.009	<.002	<.007	
DEC 13...	1055	63	636	11.7	96	8.1	788	4.0	.0	.24	.150	.005	<.007	
JAN 29...	1120	699	636	11.0	90	7.8	798	1.0	.0	.33	.263	.005	.011	
FEB 25...	1035	93	641	12.2	100	8.2	930	-17.0	.0	.57	.422	.011	E.006	
Date		PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	2,6-DI-ETHYL ANILINE WAT FLT (GF, REC) (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD (GF, REC) (UG/L) (82673)	CAR-BARYL WATER FLTRD (GF, REC) (UG/L) (82680)	CARBO-FURAN WATER FLTRD (GF, REC) (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	
OCT 11...	.035	E7k	51	--	--	--	--	--	--	--	--	--	--	
NOV 09...	.018	<1	33	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	
DEC 13...	.004	39	50	--	--	--	--	--	--	--	--	--	--	
JAN 29...	.008	E2k	83	--	--	--	--	--	--	--	--	--	--	
FEB 25...	E.003	37	41	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	
Date		CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD (GF, REC) (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD (GF, REC) (UG/L) (82677)	EPTC WATER FLTRD (GF, REC) (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT (GF, REC) (UG/L) (82663)	ETHO-PROP WATER FLTRD (GF, REC) (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD (GF, REC) (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
OCT 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 09...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEB 25...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	
Date		METHYL AZIN-THION WAT FLT (GF, REC) (UG/L) (82686)	METHYL PARA-THION WAT FLT (GF, REC) (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD (GF, REC) (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD (GF, REC) (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD (GF, REC) (UG/L) (82669)	PENDI-METH-ALIN WAT FLT (GF, REC) (UG/L) (82683)	PER-METHRIN CIS WAT FLT (GF, REC) (UG/L) (82687)	PHORATE WATER FLTRD (GF, REC) (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 09...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEB 25...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.010	<.004	<.022	<.006	<.011	

06233900 POPO AGIE RIVER NEAR ARAPAHOE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PROPA-CHLOR, WATER, DISS, REC (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (82685)	SI-MAZINE, WATER, DISS, REC (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI-MENT, SUS-PENDEDED (80154)
OCT 11...	--	--	--	--	--	--	--	--	--	--	--	--	78
NOV 09...	<.004	<.010	<.011	<.02	<.011	E.01	<.034	<.02	U	<.005	<.002	<.009	60
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	21
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	--	7.0
FEB 25...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	19

Date	SEDI-MENT, DIS-CHARGE, SUS-PENDEDED (T/DAY) (80155)
OCT 11...	9.6
NOV 09...	14.5
DEC 13...	3.5
JAN 29...	13.2
FEB 25...	4.8

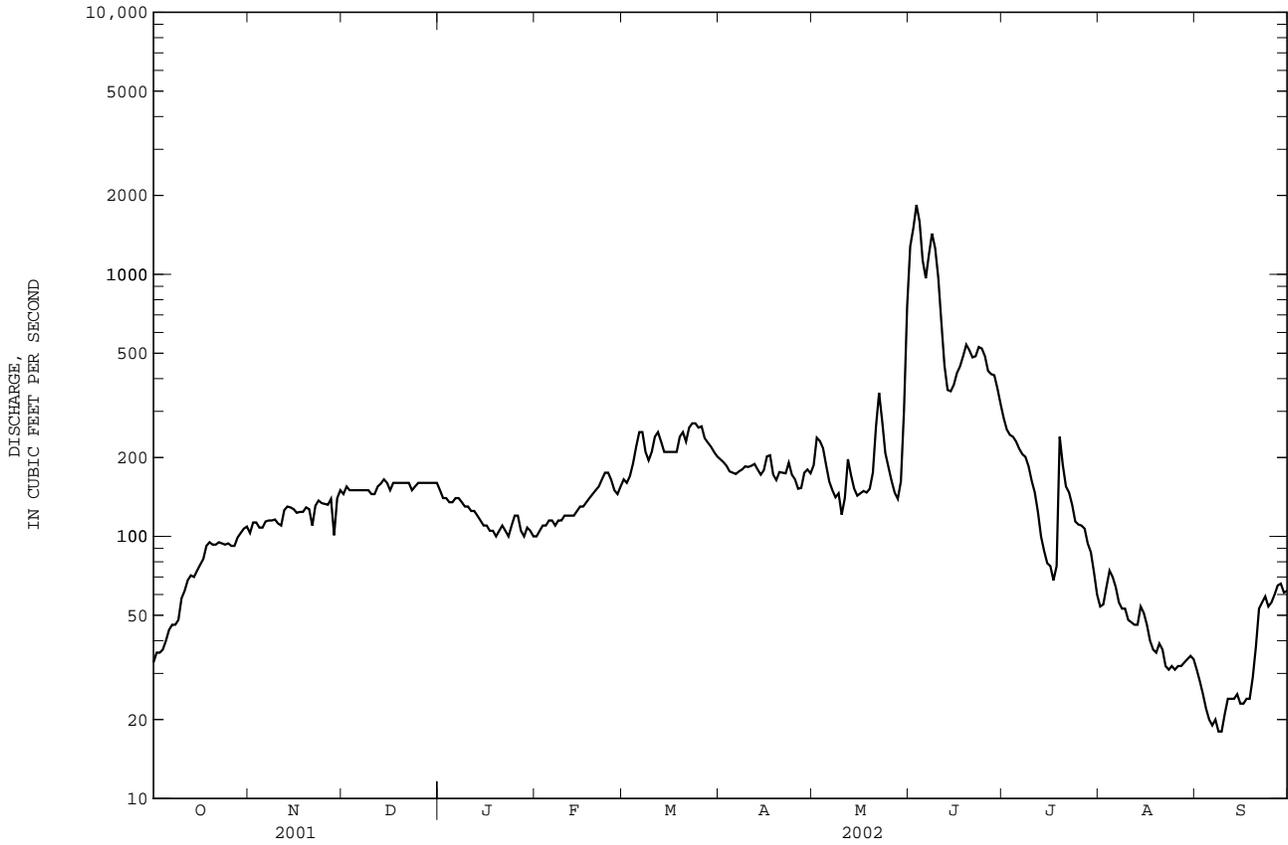
E -- Estimated value  
M -- Presence verified, not quantified  
U -- Analyzed for, not detected  
k -- Counts outside acceptable range (Non-ideal colony count)



06235500 LITTLE WIND RIVER NEAR RIVERTON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	56949		66034		--	
ANNUAL MEAN	156.0		180.9		570.2	
HIGHEST ANNUAL MEAN	--		--		1021 1983	
LOWEST ANNUAL MEAN	--		--		175 2001	
HIGHEST DAILY MEAN	1990	May 17	1840	Jun 3	12800	Jun 17 1963
LOWEST DAILY MEAN	17	Aug 30	18	Sep 8,9	17	Aug 30 2001
ANNUAL SEVEN-DAY MINIMUM	18	Aug 27	20	Sep 4	18	Aug 27 2001
MAXIMUM PEAK FLOW	--		1930	Jun 3	14700	Jun 17 1963
MAXIMUM PEAK STAGE	--		4.98	Jun 3	10.85	Jun 17 1963
ANNUAL RUNOFF (AC-FT)	113000		131000		413100	
10 PERCENT EXCEEDS	239		270		1420	
50 PERCENT EXCEEDS	133		140		261	
90 PERCENT EXCEEDS	27		38		140	

e Estimated.





06235500 LITTLE WIND RIVER NEAR RIVERTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (82667)	METO- LACHLOR WATER (UG/L) (39415)	METRI- BUZIN WATER (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)
OCT 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 15...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 25...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
JUN 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (82670)	TER- BACIL, WATER FLTRD 0.7 U GF, REC (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 11...	--	--	--	--	--	--	--	--	--	--	--	--	88
NOV 15...	<.004	<.010	<.011	<.02	<.011	M	<.034	<.02	U	<.005	<.002	<.009	53
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	33
JAN 29...	--	--	--	--	--	--	--	--	--	--	--	--	28
FEB 25...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	7.0
JUN 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--	--

SEDI-  
MENT,  
DIS-  
CHARGE,  
SUS-  
PENDE  
(T/DAY)  
(80155)

Date	Value
OCT 11...	14.3
NOV 15...	19.5
DEC 13...	14.2
JAN 29...	8.1
FEB 25...	3.1
JUN 26...	--
AUG 21...	--

E -- Estimated value  
M -- Presence verified, not quantified  
U -- Analyzed for, not detected  
k -- Counts outside acceptable range (Non-ideal colony count)

## YELLOWSTONE RIVER BASIN

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY

LOCATION.--Lat 43°07'45", long 108°13'24", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

## 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e400	210	521	e415	e300	e330	532	217	2860	701	347	268
2	e420	212	547	e400	e300	e340	502	295	3830	714	323	273
3	e470	213	611	e410	e300	e360	490	294	3650	673	355	259
4	e480	212	618	e410	e300	e360	511	250	2770	514	362	243
5	e500	211	567	e410	e310	e370	500	201	1700	438	368	241
6	e530	212	502	e420	e320	e400	511	180	1130	399	364	246
7	e520	218	580	e420	e330	e370	552	167	1420	362	357	246
8	e500	217	533	e425	e340	e370	644	153	2000	324	366	247
9	422	216	505	e430	e340	e370	487	148	1780	287	356	322
10	398	212	538	e430	e340	e370	405	148	1170	258	348	546
11	328	209	546	e420	e350	e375	375	157	838	224	339	529
12	282	218	576	e400	e350	e400	341	197	610	211	336	443
13	270	233	465	e385	e345	e400	331	189	488	182	364	395
14	265	228	431	e370	e330	e390	305	161	443	169	378	368
15	282	227	e460	e350	e330	e420	292	154	452	169	379	334
16	290	220	e480	e330	e330	e440	284	154	526	159	372	320
17	246	219	e460	e330	e330	e470	281	172	569	151	341	381
18	231	223	e420	e300	e340	e500	265	174	781	161	315	403
19	229	228	e425	e320	e340	e540	256	172	1090	422	298	389
20	221	227	e460	e340	e340	e560	279	216	994	656	289	405
21	218	206	e420	e350	e340	e580	281	467	813	479	294	397
22	216	352	e460	e360	e340	e600	261	1120	816	475	279	396
23	214	527	e460	e380	e320	e640	256	696	956	412	275	419
24	206	549	e420	e400	e310	e650	229	530	981	442	273	460
25	203	534	e420	e410	e300	626	217	468	1010	440	279	435
26	205	520	e415	e410	e290	588	206	420	917	474	273	444
27	202	523	e405	e400	e300	579	197	379	924	472	275	453
28	207	452	e400	e380	e320	595	206	353	885	472	276	445
29	210	471	e415	e360	---	573	215	396	782	451	314	445
30	213	503	e420	e340	---	538	198	459	683	419	365	448
31	214	---	e420	e320	---	536	---	994	---	384	330	---
TOTAL	9592	9002	14900	11825	9085	14640	10409	10081	37868	12094	10190	11200
MEAN	309.4	300.1	480.6	381.5	324.5	472.3	347.0	325.2	1262	390.1	328.7	373.3
MAX	530	549	618	430	350	650	644	1120	3830	714	379	546
MIN	202	206	400	300	290	330	197	148	443	151	273	241
AC-FT	19030	17860	29550	23450	18020	29040	20650	20000	75110	23990	20210	22220

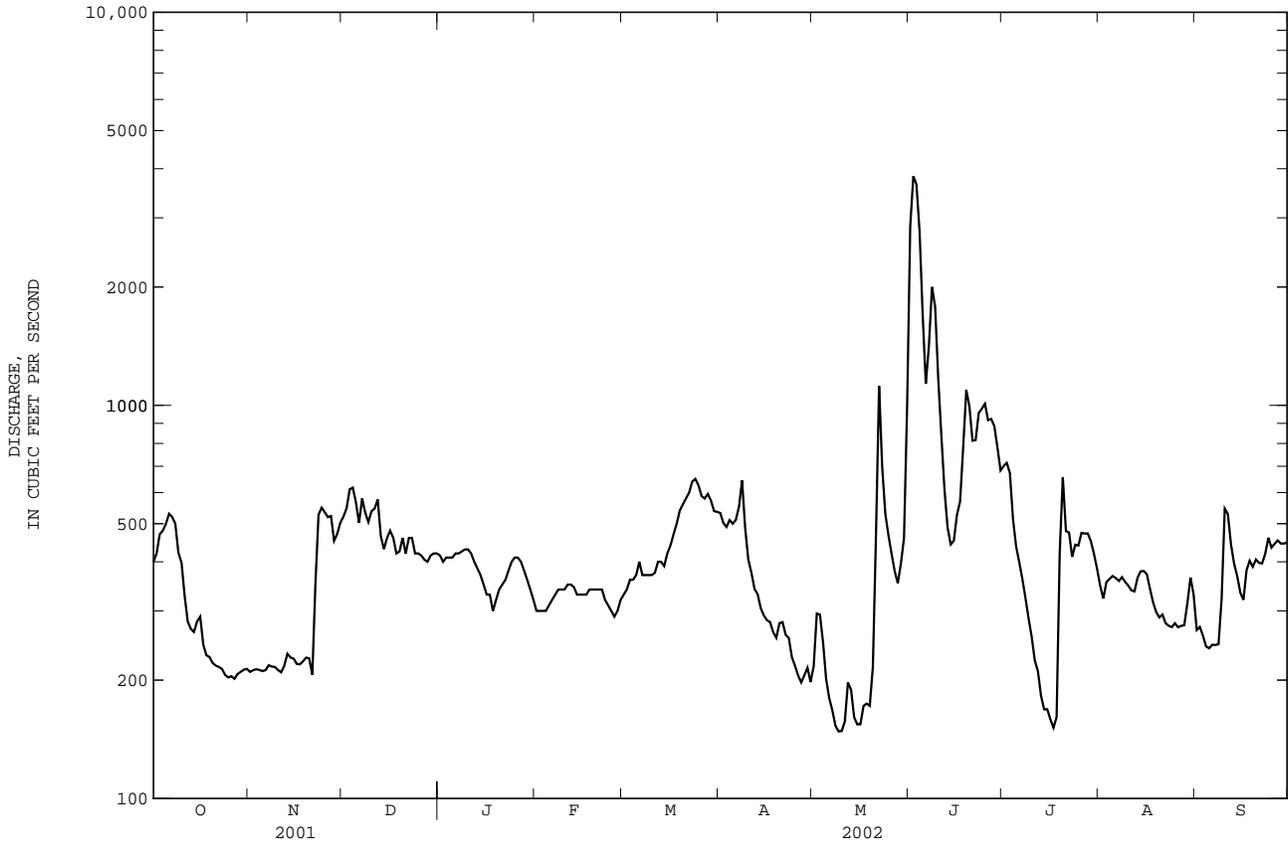
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	741.0	769.5	559.6	532.3	541.4	680.7	612.1	1674	4500	1941	618.0	537.1	
MAX	1455	1212	719	665	755	1096	1074	4175	9432	6650	1696	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1990 - 2002	
ANNUAL TOTAL	125770		160886		--	
ANNUAL MEAN	344.6		440.8		1174	
HIGHEST ANNUAL MEAN	--		--		2063	
LOWEST ANNUAL MEAN	--		--		372	
HIGHEST DAILY MEAN	2240	May 17	3830	Jun 2	17900	Jun 14 1991
LOWEST DAILY MEAN	113	Aug 29, 30	148	May 9, 10	113	Aug 29, 30 2001
ANNUAL SEVEN-DAY MINIMUM	121	Aug 27	164	May 6	121	Aug 27 2001
MAXIMUM PEAK FLOW	--	--	4380	Jun 2	18700	Jun 14 1991
MAXIMUM PEAK STAGE	--	--	4.64	Jun 2	9.31	Jun 14 1991
ANNUAL RUNOFF (AC-FT)	249500		319100		850200	
10 PERCENT EXCEEDS	533		614		2270	
50 PERCENT EXCEEDS	346		370		610	
90 PERCENT EXCEEDS	141		212		315	

e Estimated.





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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (82667)	METO- LACHLOR WATER (UG/L) (39415)	METRI- BUZIN SENCOR WATER (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.01
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 26...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIUIRON WATER FLTRD 0.7 U GF, REC (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--	9.0
NOV 14...	<.004	<.010	<.011	<.02	<.011	E.01	<.034	<.02	U	<.005	<.002	<.009	15
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	58
JAN 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 26...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	309
APR 22...	--	--	--	--	--	--	--	--	--	--	--	--	48
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--	3920

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 12...	6.7
NOV 14...	9.1
DEC 04...	96.6
JAN 18...	--
FEB 26...	227
APR 22...	33.8
MAY 03...	3110

E -- Estimated value  
 U -- Analyzed for, not detected  
 k -- Counts outside acceptable range (Non-ideal colony count)

## YELLOWSTONE RIVER BASIN

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

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN											
	CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)										
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	177	107	1160	9120	52	102	---	---	---	---
2	---	---	951	828	1330	13900	647	1160	---	---	---	---
3	---	---	3700	2930	802	8040	1170	2080	---	---	---	---
4	---	---	2500	1710	541	4140	1360	1900	---	---	---	---
5	---	---	1050	578	335	1570	556	661	---	---	---	---
6	---	---	365	178	284	868	334	360	---	---	---	---
7	---	---	166	75.0	265	1010	295	284	---	---	---	---
8	---	---	96	40.0	273	1480	610	530	---	---	---	---
9	---	---	155	62.0	203	975	712	550	---	---	---	---
10	---	---	82	33.0	132	423	635	443	---	---	---	---
11	---	---	62	27.0	116	258	144	90.0	---	---	---	---
12	---	---	517	290	81	135	130	74.0	---	---	---	---
13	---	---	1030	532	65	86.0	238	116	---	---	---	---
14	---	---	445	194	56	66.0	135	62.0	---	---	---	---
15	---	---	163	68.0	62	76.0	149	68.0	---	---	---	---
16	---	---	77	32.0	66	94.0	153	66.0	---	---	---	---
17	---	---	78	36.0	51	79.0	126	52.0	---	---	---	---
18	---	---	80	38.0	115	253	125	54.0	---	---	---	---
19	---	---	61	29.0	178	534	107	122	---	---	---	---
20	---	---	68	38.0	115	313	471	876	---	---	---	---
21	---	---	78	113	66	145	647	865	---	---	---	---
22	---	---	282	891	56	124	1110	1430	---	---	---	---
23	---	---	197	380	85	224	537	597	---	---	---	---
24	---	---	51	74.0	90	242	365	439	---	---	---	---
25	---	---	53	66.0	100	275	337	400	---	---	---	---
26	---	---	61	69.0	79	201	327	418	---	---	---	---
27	---	---	e37	e38.0	66	167	236	301	---	---	---	---
28	---	---	35	34.0	58	141	257	329	---	---	---	---
29	---	---	68	80.0	58	123	201	246	---	---	---	---
30	---	---	80	101	53	99.0	182	206	---	---	---	---
31	---	---	371	1130	---	---	175	182	---	---	---	---
TOTAL	---	---	---	10801.0	---	45161.0	---	15063.0	---	---	---	---

e Estimated

06244500 FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY

LOCATION.--Lat 43°18'05", long 108°42'08", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	4.6	6.1	e4.3	e5.4	e8.7	12	7.7	4.1	0.51	0.38	1.7
2	3.6	4.6	e6.2	e4.3	e5.4	e8.7	11	8.7	4.2	0.37	0.36	1.1
3	3.7	4.3	e6.2	e4.4	e5.7	e9.2	11	7.8	4.2	0.32	0.27	1.0
4	3.9	4.8	e6.1	e4.5	e5.8	e9.8	11	7.2	4.7	0.32	0.20	1.0
5	4.3	5.2	e5.9	e4.7	e6.0	e10	11	6.7	4.5	0.31	0.26	1.1
6	4.6	5.5	e5.8	e4.8	e6.2	e10	11	6.5	4.0	0.33	0.44	1.8
7	4.8	5.9	e5.6	e5.0	e6.4	e11	11	6.5	3.5	0.33	0.43	2.2
8	4.6	6.1	e5.4	e5.0	e6.6	e11	9.9	6.4	3.2	0.33	0.67	2.5
9	4.6	6.6	e5.3	e5.2	e6.9	e10	9.9	6.4	3.3	0.34	0.50	2.6
10	4.5	6.6	e5.2	e5.6	e7.0	e10	9.7	6.3	3.6	0.35	0.44	2.6
11	4.5	6.7	e5.0	e5.4	e7.3	e11	9.5	7.7	3.5	0.35	0.27	3.4
12	4.3	6.8	e4.8	e5.2	e7.4	e12	9.0	7.3	3.3	0.35	0.21	2.9
13	4.5	6.8	e4.7	e5.0	e7.1	e13	8.4	7.2	3.1	0.35	0.42	2.8
14	4.4	6.6	e4.6	e5.0	e6.8	e13	8.1	6.7	3.0	0.35	0.48	2.5
15	4.3	6.7	e5.2	e5.0	e6.7	e12	7.8	6.2	2.7	0.36	0.44	2.3
16	4.3	6.8	e5.0	e4.8	e6.7	e12	7.9	6.0	2.6	0.36	0.32	2.2
17	4.3	6.9	e4.7	e4.8	e7.0	e12	8.1	6.1	2.4	0.36	0.17	2.5
18	4.3	7.2	e4.6	e5.0	e7.4	e12	7.7	6.1	2.0	0.37	0.18	3.5
19	4.1	7.3	e4.6	e5.0	e7.5	e12	8.6	5.8	1.7	0.37	0.16	4.2
20	4.1	7.2	e4.5	e5.3	e7.7	e13	9.4	5.6	1.7	0.37	0.25	4.3
21	4.0	6.7	e4.6	e5.4	e8.1	e14	9.1	5.3	1.8	0.53	e0.60	4.0
22	4.1	7.4	e4.5	e5.6	e8.3	e13	8.4	5.2	2.0	12	e1.2	3.8
23	4.2	7.3	e4.4	e5.8	e8.6	13	7.9	5.2	1.8	103	1.4	4.1
24	4.1	7.3	e4.4	e6.0	e9.1	13	7.4	5.7	1.6	31	1.5	4.3
25	4.0	7.2	e4.2	e5.8	e9.0	12	6.8	5.5	1.3	e4.6	1.3	4.4
26	4.0	7.3	e4.0	e6.1	e8.5	13	6.9	5.2	1.1	e2.0	1.1	4.9
27	4.2	6.8	e4.2	e6.4	e8.3	14	7.1	5.1	0.97	e1.5	1.0	5.1
28	4.1	6.4	e4.2	e6.8	e8.7	12	8.4	4.9	0.99	e1.3	1.8	5.2
29	4.1	6.3	e4.4	e6.4	---	11	8.0	4.8	0.86	e0.70	2.8	5.3
30	4.2	6.1	e4.5	e5.8	---	12	7.0	4.6	0.65	e0.50	2.8	5.4
31	4.6	---	e4.4	e5.5	---	12	---	4.2	---	e0.43	2.2	---
TOTAL	130.9	192.0	153.3	163.9	201.6	359.4	269.0	190.6	78.37	164.66	24.55	94.7
MEAN	4.223	6.400	4.945	5.287	7.200	11.59	8.967	6.148	2.612	5.312	0.792	3.157
MAX	4.8	7.4	6.2	6.8	9.1	14	12	8.7	4.7	103	2.8	5.4
MIN	3.6	4.3	4.0	4.3	5.4	8.7	6.8	4.2	0.65	0.31	0.16	1.0
AC-FT	260	381	304	325	400	713	534	378	155	327	49	188

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2002, BY WATER YEAR (WY)

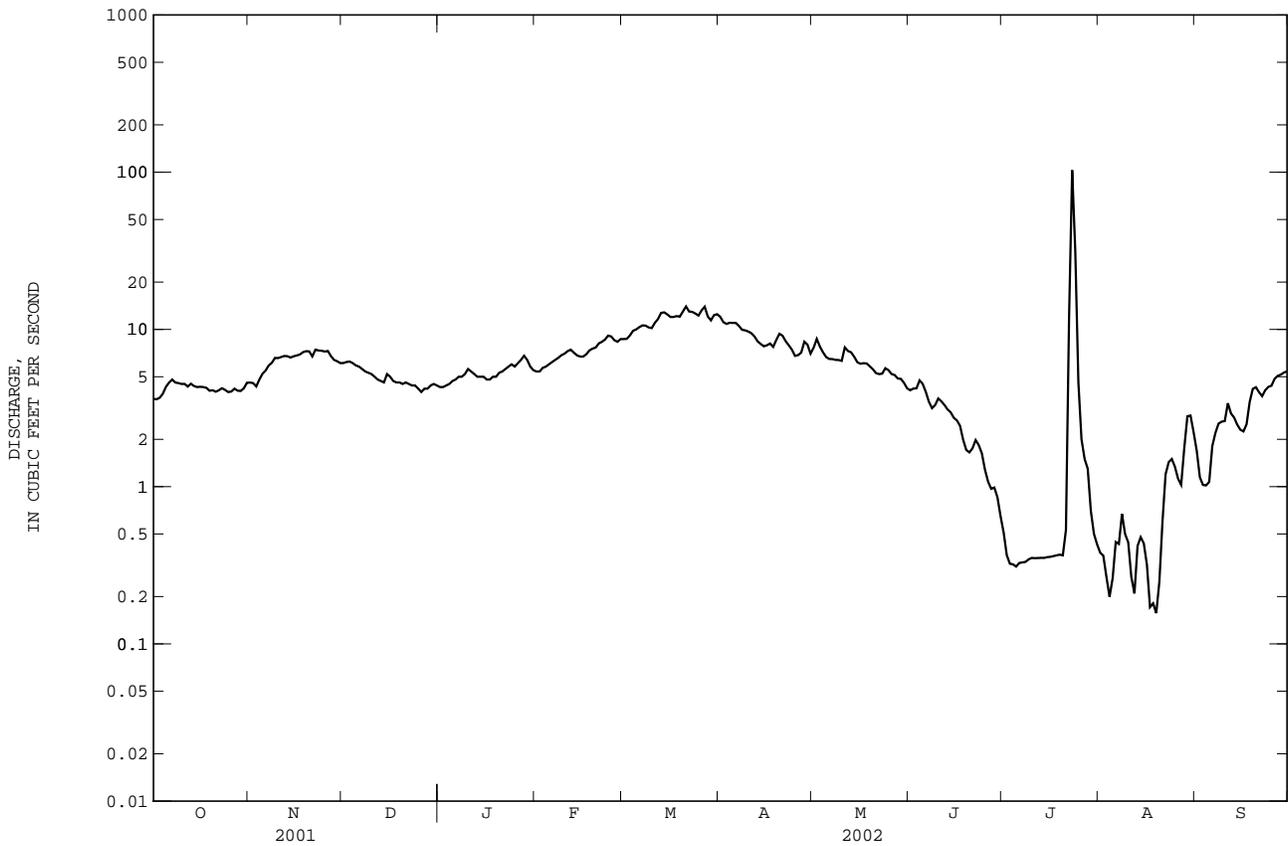
MEAN	3.111	3.475	2.510	2.536	4.037	5.946	4.905	5.378	5.765	2.134	1.063	2.819
MAX	6.98	10.2	6.69	7.72	10.6	13.3	8.97	53.4	48.8	17.8	7.53	14.5
(WY)	1994	1992	1993	1994	1991	1993	2002	1991	1991	1997	1997	1973
MIN	0.000	0.000	0.000	0.000	0.000	0.27	0.097	0.38	0.043	0.000	0.000	0.000
(WY)	1955	1955	1953	1951	1956	1954	1954	1955	1952	1956	1954	1952

YELLOWSTONE RIVER BASIN

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

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1950 - 2002
ANNUAL TOTAL	1774.90	2022.98	--
ANNUAL MEAN	4.863	5.542	3.630
HIGHEST ANNUAL MEAN	--	--	12.4
LOWEST ANNUAL MEAN	--	--	0.25
HIGHEST DAILY MEAN	15 Mar 16	103 Jul 23	273 Sep 20 1950
LOWEST DAILY MEAN	0.07 Aug 1,2	0.16 Aug 19	0.00 Several days, most years
ANNUAL SEVEN-DAY MINIMUM	0.08 Jul 31	0.29 Aug 14	0.00 Several days, most years
MAXIMUM PEAK FLOW	--	194 Jul 23	1750 <sup>a</sup> Sep 6 1951
MAXIMUM PEAK STAGE	--	4.29 Jul 23	5.60 <sup>b</sup> Sep 6 1951
ANNUAL RUNOFF (AC-FT)	3520	4010	2630
10 PERCENT EXCEEDS	8.8	10	7.8
50 PERCENT EXCEEDS	4.6	5.0	2.3
90 PERCENT EXCEEDS	0.16	0.44	0.00

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



06253000 FIVEMILE CREEK NEAR SHOSHONI, WY

LOCATION.--Lat 43°13'20", long 108°13'06", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>, of which 133 mi<sup>2</sup> 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 discharge, 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<sup>3</sup>/s, from estimate provided by Bureau of Reclamation, gage height not determined.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	47	e44	e34	e31	e36	42	79	96	140	122	171
2	60	47	e44	e34	e32	e37	40	78	104	144	122	170
3	58	46	e44	e33	e33	e38	39	82	111	146	127	168
4	58	46	e45	e36	e33	e38	39	77	135	137	121	165
5	58	47	e43	e36	e34	e38	39	78	130	137	127	163
6	58	48	e42	e36	e35	e39	40	80	121	142	124	154
7	58	48	e40	e38	e35	e39	40	96	117	137	129	161
8	57	46	e40	e40	e35	e40	39	103	114	131	133	152
9	56	45	e38	e39	e35	e37	38	114	116	124	136	156
10	55	42	e38	e37	e36	e39	37	98	123	124	136	171
11	55	47	e38	e37	e35	e41	35	103	121	119	133	168
12	54	47	e38	e35	e35	e42	35	97	127	120	137	167
13	55	47	e37	e35	e35	e43	35	92	132	134	142	175
14	53	47	e36	e35	e34	e43	34	93	129	129	146	165
15	52	47	e35	e35	e34	e39	34	101	125	130	144	170
16	51	47	e35	e35	e34	e40	48	97	126	137	147	166
17	51	47	e37	e36	e34	e40	77	92	128	140	140	120
18	51	48	e35	e36	e35	e40	65	98	116	144	138	108
19	50	48	e35	e36	e35	e41	48	90	126	166	135	149
20	49	47	e35	e37	e36	e42	53	84	125	157	143	161
21	49	48	e36	e35	e36	e42	59	97	119	157	158	150
22	49	49	e36	e35	e38	e40	69	139	118	172	152	146
23	49	48	e35	e34	e40	e42	57	138	118	208	156	141
24	48	49	e35	e35	e40	e44	59	129	120	233	166	141
25	46	47	e34	e35	e39	e44	62	106	118	175	174	147
26	46	46	e35	e36	e32	e42	67	102	127	166	181	146
27	46	45	e35	e37	e33	e40	68	104	137	176	181	137
28	46	e44	e36	e37	e34	e41	74	118	140	190	169	123
29	45	e41	e37	e32	---	e42	72	102	137	172	166	106
30	46	e41	e36	e28	---	41	78	121	134	152	174	86
31	48	---	e32	e29	---	42	---	107	---	131	180	---
TOTAL	1618	1392	1166	1093	978	1252	1522	3095	3690	4670	4539	4503
MEAN	52.19	46.40	37.61	35.26	34.93	40.39	50.73	99.84	123.0	150.6	146.4	150.1
MAX	61	49	45	40	40	44	78	139	140	233	181	175
MIN	45	41	32	28	31	36	34	77	96	119	121	86
AC-FT	3210	2760	2310	2170	1940	2480	3020	6140	7320	9260	9000	8930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

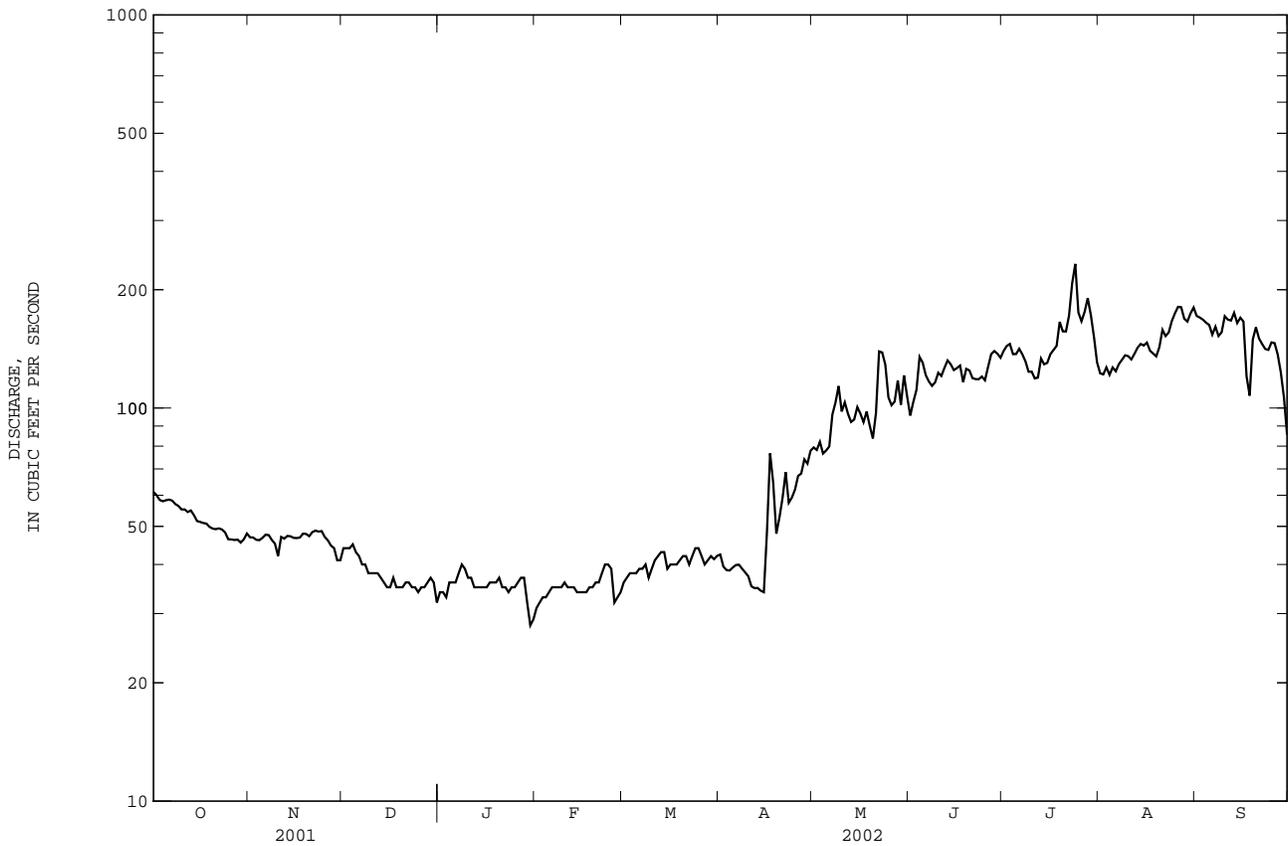
MEAN	145.5	79.39	58.74	50.51	48.42	52.36	81.41	178.3	276.2	326.8	333.1	286.2
MAX	298	135	114	89.9	79.5	87.2	201	275	442	524	525	527
(WY)	2000	1998	1998	1998	1959	1963	1999	1999	1976	1983	1983	1999
MIN	18.0	14.8	8.25	2.60	6.24	17.8	12.7	28.1	97.4	141	139	88.4
(WY)	1942	1942	1942	1942	1942	1942	1942	1942	1941	1977	1977	1941

YELLOWSTONE RIVER BASIN

06253000 FIVEMILE CREEK NEAR SHOSHONI, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	39318		29518		--	
ANNUAL MEAN	107.7		80.87		161.6	
HIGHEST ANNUAL MEAN	--		--		253 1999	
LOWEST ANNUAL MEAN	--		--		54.8 1942	
HIGHEST DAILY MEAN	230	Jul 5	233	Jul 24	964	Sep 11 1973
LOWEST DAILY MEAN	32 <sup>e</sup>	Dec 31	28 <sup>e</sup>	Jan 30	1.0	Jan 4 1942
ANNUAL SEVEN-DAY MINIMUM	35	Dec 25	31	Jan 29	1.4	Jan 1 1942
MAXIMUM PEAK FLOW	--		279 <sup>a</sup>	Jul 24	3390 <sup>b</sup>	Jun 15 1962
MAXIMUM PEAK STAGE	--		4.57 <sup>c</sup>	Feb 20	9.61 <sup>c</sup>	Dec 27 1954
ANNUAL RUNOFF (AC-FT)	77990		58550		117100	
10 PERCENT EXCEEDS	213		155		362	
50 PERCENT EXCEEDS	63		51		102	
90 PERCENT EXCEEDS	45		35		40	

- a Gage height, 3.29 ft.
- b Gage height, 7.85 ft.
- c Backwater from ice.
- e Estimated.



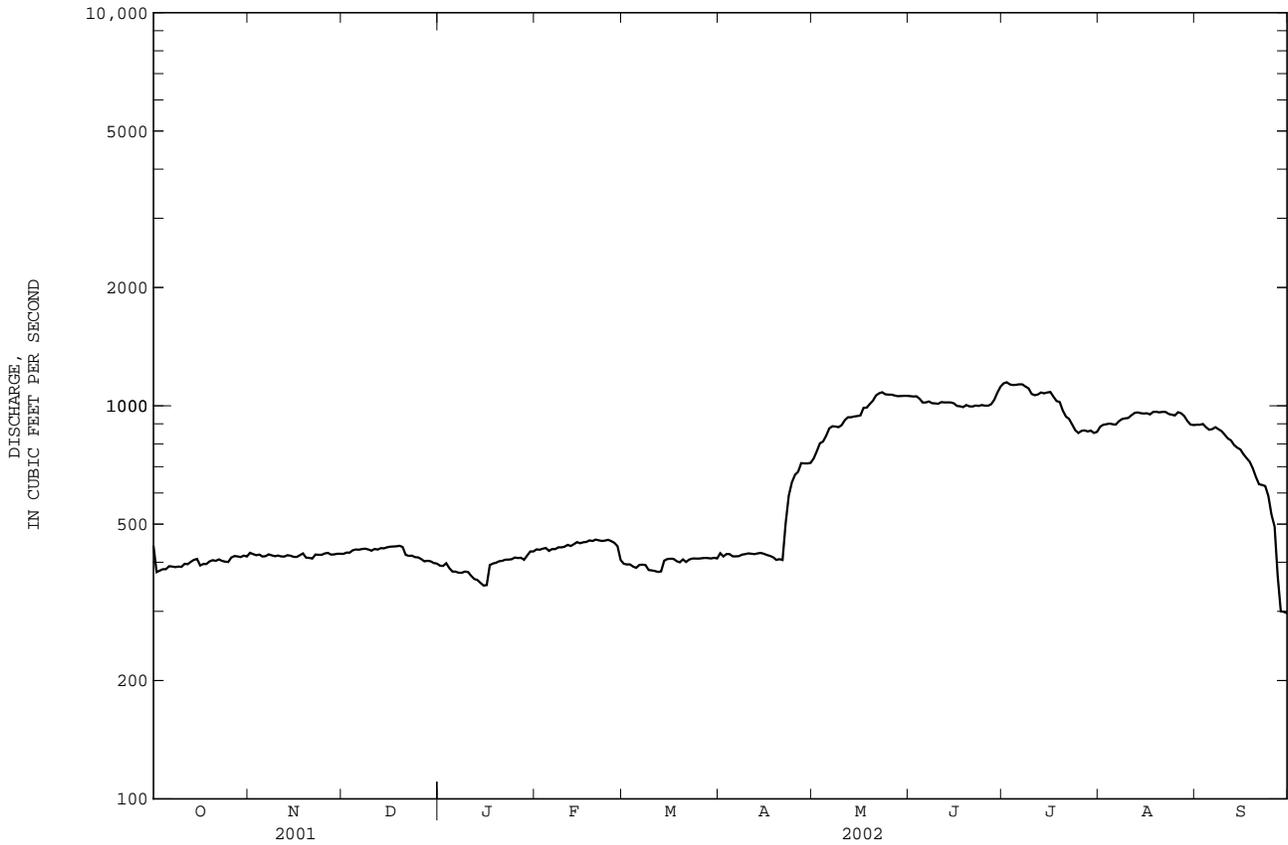


YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1951 - 2002	
ANNUAL TOTAL	278146		231441		--	
ANNUAL MEAN	762.0		634.1		1414	
HIGHEST ANNUAL MEAN	--		--		2349 1983	
LOWEST ANNUAL MEAN	--		--		612 1961	
HIGHEST DAILY MEAN	1290	Jul 3	1150	Jul 2	13200	Jul 7 1967
LOWEST DAILY MEAN	377	Oct 2	297	Sep 30	4.7	Apr 3 1962
ANNUAL SEVEN-DAY MINIMUM	385	Oct 2	360	Jan 10	106	Oct 12 1951
MAXIMUM PEAK FLOW	--		1180	Jul 1	13500	Jul 7 1967
MAXIMUM PEAK STAGE	--		4.71	Jul 1	13.35	Jul 7 1967
ANNUAL RUNOFF (AC-FT)	551700		459100		1024000	
10 PERCENT EXCEEDS	1220		1030		2170	
50 PERCENT EXCEEDS	703		436		1150	
90 PERCENT EXCEEDS	412		393		630	

e Estimated.



06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953-54, 1956, 1960-92, 2001-02 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	
OCT 25...	0940	390	647	9.0	95	8.2	790	3.5	10.5	.45	.089	.008	.046	
NOV 14...	1215	604	641	14.0	143	8.7	783	14.5	8.5	.47	.040	.004	<.007	
DEC 04...	1100	410	641	11.7	108	8.8	808	.5	4.5	.36	<.013	.003	<.007	
JAN 17...	1115	366	636	9.7	85	8.5	811	-1.0	2.5	.37	.028	E.002	E.006	
MAR 01...	1230	396	648	12.4	110	8.1	865	-10.0	3.5	.41	.053	.007	.032	
Date		PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)
OCT 25...	.071	Elk	E2k	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	.048	E3k	<1	<.002	<.004	<.002	<.005	E.005	<.010	<.002	<.041	<.020	<.005	
DEC 04...	.007	<1	<1	--	--	--	--	--	--	--	--	--	--	
JAN 17...	<.004	Elk	Elk	--	--	--	--	--	--	--	--	--	--	
MAR 01...	<.004	E2k	--	<.006	<.006	<.004	<.005	.008	<.010	<.002	<.041	<.020	<.005	
Date		CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THON, DIS-SOLVED (UG/L) (39532)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.018	<.003	E.002	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAR 01...	<.018	<.003	E.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	
Date		METHYL AZIN-THION WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAR 01...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	

## YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	7.0
NOV 14...	<.004	<.010	<.011	<.02	<.011	M	<.034	<.02	U	<.005	<.002	<.009	16
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	8.0
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	1.0
MAR 01...	<.004	<.010	<.011	<.02	<.005	E.01	<.034	<.02	U	<.005	<.002	<.009	--

SEDI-  
MENT,  
DIS-  
CHARGE,  
SUS-  
PENDEDED  
(T/DAY)  
(80155)

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 25...	7.4
NOV 14...	26.1
DEC 04...	8.9
JAN 17...	.99
MAR 01...	--

E -- Estimated value  
M -- Presence verified, not quantified  
U -- Analyzed for, not detected  
k -- Counts outside acceptable range (Non-ideal colony count)

YELLOWSTONE RIVER BASIN

143

06259050 WIND RIVER AT WEDDING OF WATERS, NEAR THERMOPOLIS, WY

LOCATION.--Lat 43°33'48", long 108°12'46", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.8, T.7 N., R.6 W., Crook County, Hydrologic Unit 10080007, at the Wind River Indian Reservation boundary about 4.5 mi south of Thermopolis on U.S. Highway 20.

PERIOD OF RECORD.--July 2001 to September 2002 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L) (00671)
OCT 25...	1055	529	650	10.9	110	8.0	783	7.0	8.5	.32	.094	.003	.033
NOV 14...	1030	643	648	12.5	123	8.4	780	13.0	7.5	.37	E.009	<.002	<.007
DEC 04...	0950	524	648	11.8	108	8.4	800	4.0	4.5	.33	.032	E.002	<.007
JAN 17...	1245	451	636	9.7	86	8.4	801	-2.0	3.0	.39	.066	.003	.007
FEB 26...	1430	1050	646	12.7	106	8.6	813	-18.0	1.0	.42	.120	.008	.026
Date	PHOS-PHORUS TOTAL (MG/L) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	2,6-DI-ETHYL ANILINE, WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER, FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN, WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER, FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER, FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)
OCT 25...	.047	Elk	Elk	--	--	--	--	--	--	--	--	--	--
NOV 14...	.034	E4k	E33k	<.002	<.004	<.002	<.005	E.006	<.010	<.002	<.041	<.020	<.005
DEC 04...	.006	Elk	<1	--	--	--	--	--	--	--	--	--	--
JAN 17...	<.004	<1	<1	--	--	--	--	--	--	--	--	--	--
FEB 26...	<.004	<1	<1	<.006	<.006	<.004	<.005	.009	<.010	<.002	<.041	<.020	<.005
Date	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER, FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER, FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER, FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN, WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER, FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER, DISS, REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER, FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.018	<.003	E.002	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 26...	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027
Date	METHYL AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER, FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER, FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER, FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER, FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 26...	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M

## YELLOWSTONE RIVER BASIN

06259050 WIND RIVER AT WEDDING OF WATERS, NEAR THERMOPOLIS, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (82676)	PROPA-CHLOR, WATER, DISS, REC (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (82685)	SI-MAZINE, WATER, DISS, REC (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (82675)	TER-BUTHYL- AZINE, WATER, DISS, REC (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (80154)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.004	<.010	<.011	<.02	<.011	M	<.034	<.02	U	<.005	<.002	<.009	9.0
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	5.0
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	6.0
FEB 26...	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U	<.005	<.002	<.009	4.0

SEDI-  
MENT,  
DIS-  
CHARGE,  
SUS-  
PENDEDED  
(T/DAY)  
(80155)

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 25...	--
NOV 14...	15.6
DEC 04...	7.1
JAN 17...	7.3
FEB 26...	11.4

E -- Estimated value  
M -- Presence verified, not quantified  
U -- Analyzed for, not detected  
k -- Counts outside acceptable range (Non-ideal colony count)

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<sup>2</sup>.

PERIOD OF RECORD.--April 1959 to current year (no winter records since 1988).

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. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

Nov. 8 . . . 0.21

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.9	7.4	97	41	4.4	3.2
2	---	---	---	---	---	---	17	6.5	108	37	4.7	2.9
3	---	---	---	---	---	---	17	5.6	114	29	4.5	2.4
4	---	---	---	---	---	---	16	4.8	104	23	5.8	2.0
5	---	---	---	---	---	---	13	2.4	96	25	5.3	1.9
6	---	---	---	---	---	---	6.2	2.5	108	23	4.5	2.5
7	---	---	---	---	---	---	0.0	2.3	101	22	3.9	2.8
8	---	---	---	---	---	---	0.0	2.1	97	21	5.3	2.8
9	---	---	---	---	---	---	0.0	1.9	75	21	4.4	3.7
10	---	---	---	---	---	---	0.0	5.5	37	16	4.0	3.3
11	---	---	---	---	---	---	4.0	2.8	27	15	3.5	2.7
12	---	---	---	---	---	---	5.7	1.5	24	13	3.6	2.4
13	---	---	---	---	---	---	9.3	1.5	30	11	5.5	2.3
14	---	---	---	---	---	---	14	6.9	38	11	4.1	2.2
15	---	---	---	---	---	---	14	9.5	56	10	2.9	2.0
16	---	---	---	---	---	---	13	9.9	54	9.5	2.7	2.0
17	---	---	---	---	---	---	9.8	9.9	66	8.7	2.4	2.4
18	---	---	---	---	---	---	8.2	9.9	70	16	2.6	4.0
19	---	---	---	---	---	---	8.1	11	56	24	2.4	4.6
20	---	---	---	---	---	---	10	22	48	20	2.6	3.5
21	---	---	---	---	---	---	8.7	46	47	15	3.5	2.9
22	---	---	---	---	---	---	8.7	94	54	13	4.3	3.1
23	---	---	---	---	---	---	7.3	86	51	13	3.5	2.3
24	---	---	---	---	---	---	1.7	77	50	13	3.4	2.2
25	---	---	---	---	---	---	1.3	48	48	10	3.1	2.4
26	---	---	---	---	---	---	1.1	18	46	10	2.4	2.8
27	---	---	---	---	---	---	1.1	26	45	9.1	2.3	2.5
28	---	---	---	---	---	---	2.4	40	41	8.1	3.2	2.6
29	---	---	---	---	---	---	8.9	52	39	6.6	5.1	2.6
30	---	---	---	---	---	---	7.9	59	39	5.5	6.5	2.6
31	---	---	---	---	---	---	---	82	---	4.9	4.4	---
TOTAL	---	---	---	---	---	---	217.3	753.9	1866	504.4	120.8	81.6
MEAN	---	---	---	---	---	---	7.243	24.32	62.20	16.27	3.897	2.720
MAX	---	---	---	---	---	---	17	94	114	41	6.5	4.6
MIN	---	---	---	---	---	---	0.00	1.5	24	4.9	2.3	1.9
AC-FT	---	---	---	---	---	---	431	1500	3700	1000	240	162

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2002, BY WATER YEAR (WY)\*

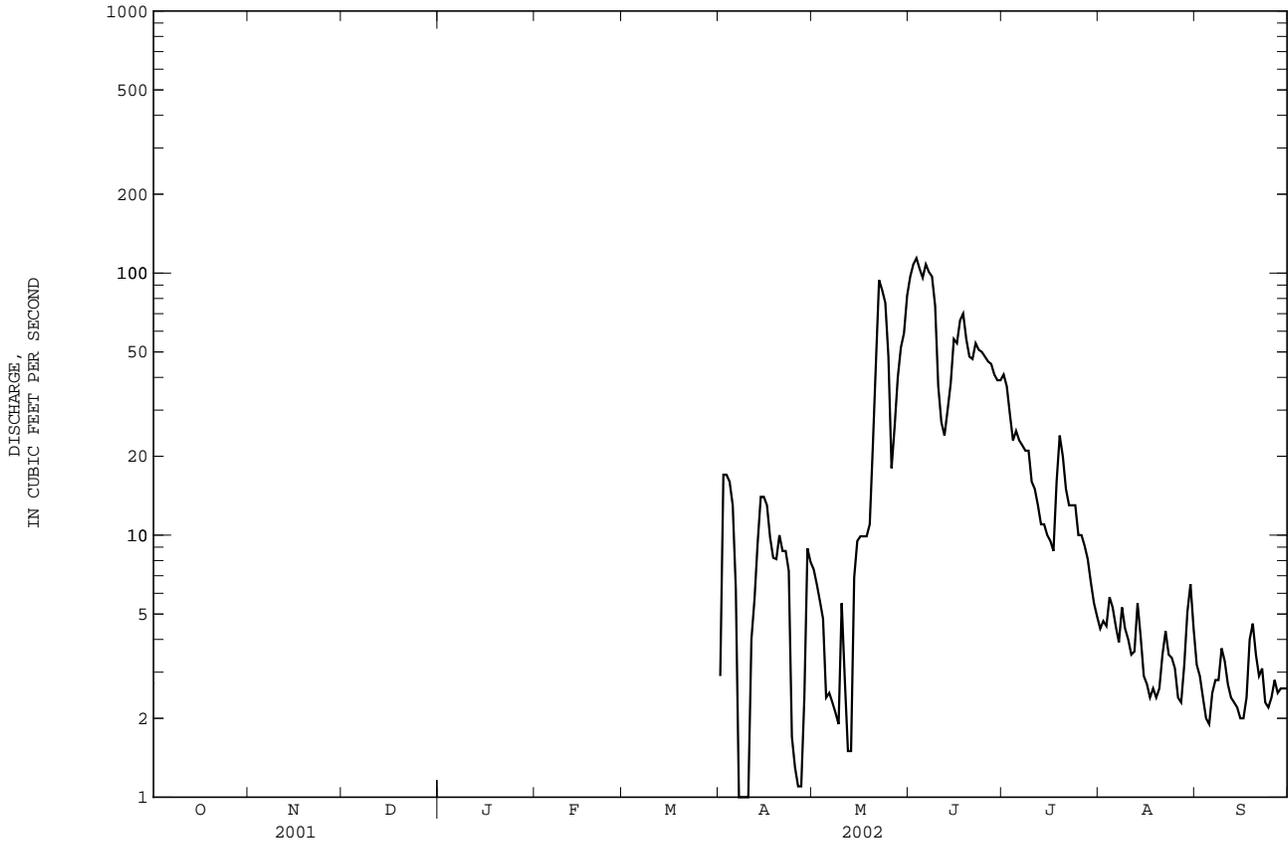
	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
MEAN	7.398	20.5	2.49	1965	2.712	8.90	0.013	1962	0.983	3.86	0.000	1961	0.399	2.39	0.000	1960	0.714	2.82	0.000	1960
MAX	20.5	8.90	0.013	1965	3.86	2.39	0.000	1962	2.39	2.82	0.000	1960	2.057	8.66	0.000	1961	8.578	30.2	0.000	1991
MIN	2.49	0.013	0.000	1965	0.000	0.000	0.000	1961	0.000	0.000	0.000	1960	8.578	30.2	0.000	1991	47.64	90.1	14.3	1981
(WY)	1983	1982	1982	1983	1981	1988	1960	1987	1974	1986	1982	1995	1992	1992	1995	2000	1992	1994	1986	1994

YELLOWSTONE RIVER BASIN

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

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1959 - 2002*
ANNUAL MEAN	--	22.15
HIGHEST ANNUAL MEAN	--	35.9 1986
LOWEST ANNUAL MEAN	--	11.3 1985
HIGHEST DAILY MEAN	114 Jun 3	357 Jun 18 1999
LOWEST DAILY MEAN	0.00 Apr 7-10	0.00 Several days, most years
MAXIMUM PEAK FLOW	123 Jun 2	373 <sup>a</sup> May 26 1967
MAXIMUM PEAK STAGE	3.05 Jun 2	4.22 Jun 17 1999
ANNUAL RUNOFF (AC-FT)	--	16050

\* 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<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 22...	1030	461	653	10.6	111	8.2	919	15.0	10.5	--	--	--	--
FEB 04...	1010	506	661	12.5	99	7.8	651	1.0	.0	--	--	--	--
MAY 13...	0900	901	661	9.4	100	8.3	876	12.5	11.5	--	--	--	--
AUG 05...	1030	849	657	7.2	96	8.1	866	25.0	22.0	270	68.9	23.2	3.83

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L AS CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 22...	--	--	--	--	--	--	--	--	--	<.04	--	<.05	<.008
FEB 04...	--	--	--	--	--	--	--	--	--	.10	--	.12	<.008
MAY 13...	--	--	--	--	--	--	--	--	--	<.04	--	<.05	<.008
AUG 05...	2	71.8	183	12.8	6.71	237	.73	1220	534	<.04	.24	E.04	E.005

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (80155)
OCT 22...	--	<.02	--	31	30	--	--	--
FEB 04...	--	E.01	--	480	760	--	--	--
MAY 13...	--	<.02	--	48	57	--	--	--
AUG 05...	E.03	.02	.07	50	76	<10	27	61.9

E -- Estimated value

## YELLOWSTONE RIVER BASIN

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

LOCATION.--Lat 43°45'46", long 108°40'34", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 estimated daily discharges, which are poor.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.13	0.00	e0.00	e0.00	e0.00	0.00	8.5	8.3	8.4	e0.00	0.11	0.77
2	0.09	0.00	e0.00	e0.00	e0.00	e0.00	6.0	4.6	6.6	e0.00	0.00	0.59
3	0.06	0.00	e0.00	e0.00	e0.00	e0.00	8.3	4.6	5.7	e0.00	0.00	0.42
4	0.06	0.00	e0.00	e0.00	e0.00	e0.00	5.9	4.8	5.2	e0.00	1.4	0.29
5	0.39	0.00	e0.00	e0.00	e0.00	e0.00	6.4	4.7	3.2	e0.00	1.1	0.05
6	0.13	0.00	e0.00	e0.00	e0.00	e0.00	9.5	4.0	2.7	e0.00	0.71	0.00
7	0.00	0.00	e0.00	e0.00	0.00	e0.00	9.7	3.6	2.5	e0.00	0.39	0.00
8	0.02	e0.00	e0.00	e0.00	0.00	e0.00	9.7	4.8	2.6	e0.00	0.77	0.00
9	0.10	e0.00	e0.00	e0.00	0.00	0.00	7.7	2.6	2.3	e0.00	0.94	e0.10
10	0.33	e0.00	e0.00	e0.00	e0.00	e0.00	9.0	2.8	2.9	e0.00	0.37	1.3
11	0.06	e0.00	e0.00	e0.00	e0.00	e0.00	7.6	2.4	2.0	e0.00	0.03	0.92
12	0.21	e0.00	e0.00	0.00	e0.00	e0.00	6.8	2.3	1.8	e0.00	0.00	0.77
13	0.12	e0.00	e0.00	e0.00	e0.00	e0.00	7.3	2.0	1.7	e0.00	0.08	0.61
14	0.38	e0.00	e0.00	e0.00	e0.00	e0.00	8.9	4.1	1.4	e0.00	0.35	e0.30
15	0.24	e0.00	e0.00	0.00	e0.00	e0.00	15	6.4	1.2	e0.00	0.00	0.00
16	0.02	e0.00	e0.00	e0.00	e0.00	e0.00	11	6.5	2.2	e0.00	0.00	0.00
17	0.04	e0.00	e0.00	e0.00	e0.00	e0.00	6.1	4.9	2.2	e0.00	e0.00	0.26
18	0.22	e0.00	e0.00	e0.00	e0.00	e0.01	6.5	6.2	1.5	e2.0	e0.00	9.8
19	0.15	e0.00	e0.00	e0.00	e0.00	0.03	5.1	7.9	1.4	23	e0.00	4.4
20	0.22	e0.00	e0.00	e0.00	0.00	0.04	4.6	13	1.1	34	e0.00	2.0
21	0.39	e0.00	e0.00	e0.00	e0.00	0.00	4.4	15	0.86	32	e0.00	1.6
22	0.36	e0.00	e0.00	e0.00	0.00	0.08	4.8	10	0.58	4.1	e0.10	1.6
23	0.50	e0.00	e0.00	e0.00	0.00	0.03	5.3	6.1	0.83	12	1.1	1.2
24	0.06	e0.00	e0.00	e0.00	0.00	0.39	6.5	5.2	e0.40	2.5	0.67	1.2
25	0.00	e0.00	e0.00	0.00	e0.00	0.00	5.7	4.4	e0.20	1.8	1.0	1.2
26	0.00	e0.00	e0.00	e0.00	0.00	0.00	6.5	4.2	e0.00	1.6	0.63	1.4
27	0.00	e0.00	e0.00	e0.00	e0.00	6.4	7.7	5.6	e0.00	1.4	0.45	1.2
28	0.00	e0.00	e0.00	0.00	0.00	8.1	5.7	6.4	e0.00	1.1	3.8	1.2
29	0.00	e0.00	e0.00	0.00	---	6.6	6.1	7.7	e0.00	1.0	2.8	1.2
30	0.00	e0.00	e0.00	e0.00	---	7.0	8.6	5.8	e0.00	0.67	1.5	1.2
31	0.00	---	e0.00	e0.00	---	7.8	---	8.4	---	0.34	1.1	---
TOTAL	4.28	0.00	0.00	0.00	0.00	36.48	220.9	179.3	61.47	117.51	19.40	35.58
MEAN	0.138	0.000	0.000	0.000	0.000	1.177	7.363	5.784	2.049	3.791	0.626	1.186
MAX	0.50	0.00	0.00	0.00	0.00	8.1	15	15	8.4	34	3.8	9.8
MIN	0.00	0.00	0.00	0.00	0.00	0.00	4.4	2.0	0.00	0.00	0.00	0.00
AC-FT	8.5	0.00	0.00	0.00	0.00	72	438	356	122	233	38	71

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002		
MEAN	4.626	2.597	1.134	0.915	1.372	7.065	11.81	35.13	46.58	13.61	4.406	3.675
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	0.000	0.000	0.000	0.000	1.18	3.87	4.03	2.05	1.01	0.004	0.000
(WY)	2002	2002	2001	2001	2001	2002	2001	2001	2002	2000	2001	2000

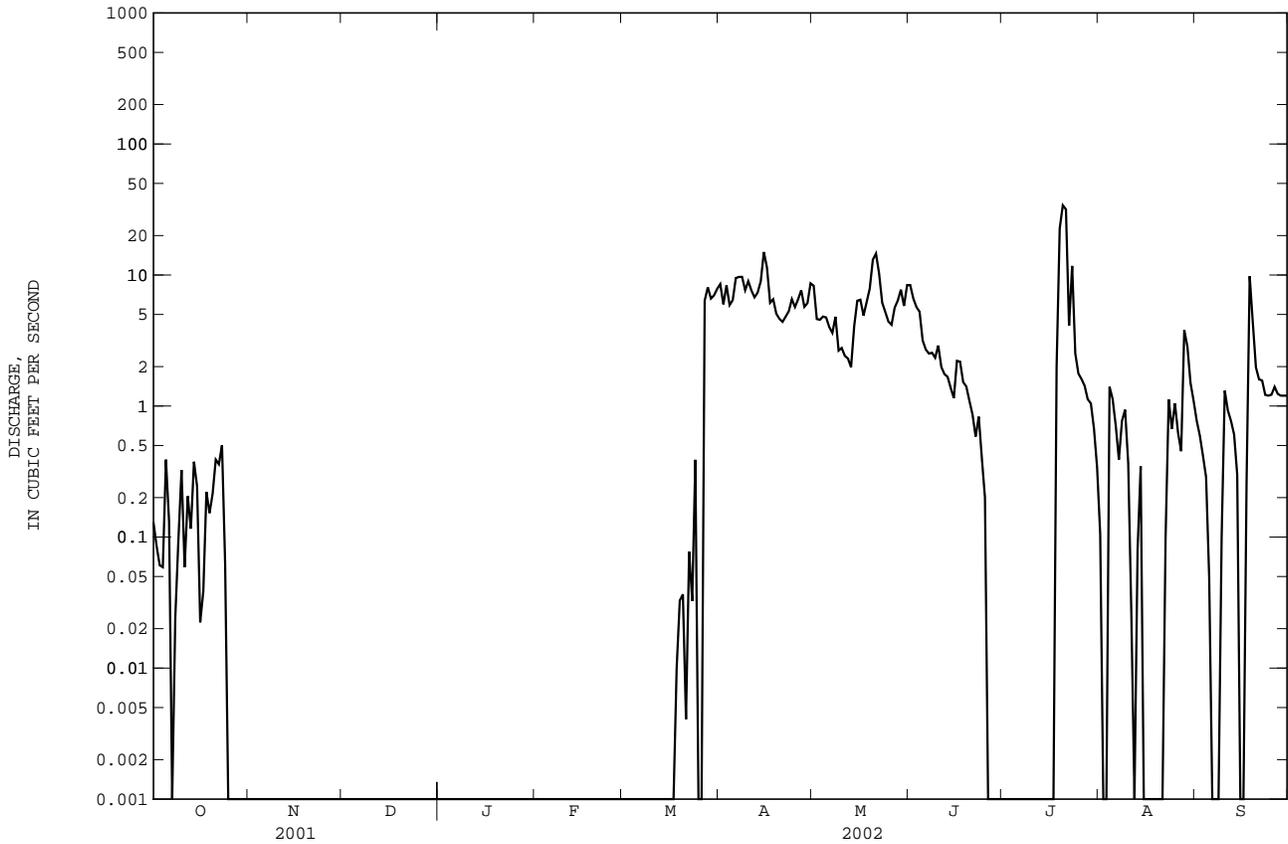
06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1993 - 2002	
ANNUAL TOTAL	817.33		674.92		--	
ANNUAL MEAN	2.239		1.849		9.223	
HIGHEST ANNUAL MEAN	--		--		21.0 1997	
LOWEST ANNUAL MEAN	--		--		1.85 2002	
HIGHEST DAILY MEAN	310 <sup>e</sup>	Jul 10	34	Jul 20	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 25	0.00	Most years
MAXIMUM PEAK FLOW	--	--	193	Jul 21	3410 <sup>a</sup>	Jul 10 2001
MAXIMUM PEAK STAGE	--	--	4.87	Jul 21	10.76 <sup>b</sup>	Jul 10 2001
ANNUAL RUNOFF (AC-FT)	1620		1340		6680	
10 PERCENT EXCEEDS	4.8		6.5		25	
50 PERCENT EXCEEDS	0.00		0.00		2.4	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a From rating curve extended above 1,060 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

b From floodmarks.

e Estimated.



## YELLOWSTONE RIVER BASIN

06274300 BIGHORN RIVER AT BASIN, WY

LOCATION.--Lat 44°23'00", long 108°02'08", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum 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 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	515	727	e740	e620	e720	e760	659	500	3530	526	311	597
2	557	725	e740	e580	e740	e680	645	658	3650	e520	295	590
3	569	734	e700	e500	e760	e600	643	571	3170	e520	320	559
4	526	726	e720	e620	e740	e720	634	505	2170	e500	353	500
5	547	724	e720	e700	e740	e780	640	508	1550	e480	380	442
6	688	722	e740	e640	e740	e860	631	488	1430	e700	347	391
7	671	718	e760	e680	e760	e760	626	492	1630	e600	307	383
8	665	725	e720	e720	e760	e680	625	494	1670	e520	307	420
9	656	724	e740	e760	e720	e580	628	516	1630	e460	325	486
10	658	717	e740	e720	e700	e640	633	512	1790	e430	321	491
11	656	722	e700	e700	e700	e740	630	488	1600	e420	344	509
12	662	722	e660	e680	e700	e840	630	496	1180	e400	369	515
13	677	716	e580	e680	e720	e920	635	497	1000	e380	341	515
14	688	714	e600	e680	e700	e940	637	483	943	e360	352	505
15	748	717	e540	e680	e700	e900	628	441	962	e360	341	485
16	721	714	e500	e660	e700	e900	590	432	1020	e370	333	492
17	715	712	e600	e680	e720	e880	594	413	1050	e380	348	494
18	702	734	e700	e680	e720	e820	571	419	1070	e400	349	538
19	702	798	e720	e700	e720	e780	529	413	1040	e440	369	802
20	704	742	e660	e720	e720	e840	533	469	988	e900	342	662
21	708	728	e580	e700	e740	e780	538	814	871	e750	331	629
22	712	730	e540	e720	e740	e700	500	1360	859	670	330	601
23	719	746	e500	e680	e740	e780	430	1280	1090	927	351	571
24	721	758	e560	e700	e740	e800	454	966	971	732	379	575
25	710	755	e580	e720	e780	e900	483	780	801	665	389	561
26	710	755	e580	e720	e680	806	493	680	734	501	380	545
27	719	e720	e600	e720	e540	846	513	678	668	480	344	531
28	731	e710	e620	e720	e680	874	564	707	635	482	413	589
29	725	e700	e640	e700	---	867	591	819	603	458	707	530
30	724	e720	e640	e680	---	807	519	1280	563	408	745	429
31	729	---	e640	e700	---	748	---	2230	---	364	668	---
TOTAL	20935	21855	20060	21160	20120	24528	17426	21389	40868	16103	11791	15937
MEAN	675.3	728.5	647.1	682.6	718.6	791.2	580.9	690.0	1362	519.5	380.4	531.2
MAX	748	798	760	760	780	940	659	2230	3650	927	745	802
MIN	515	700	500	500	540	580	430	413	563	360	295	383
AC-FT	41520	43350	39790	41970	39910	48650	34560	42430	81060	31940	23390	31610

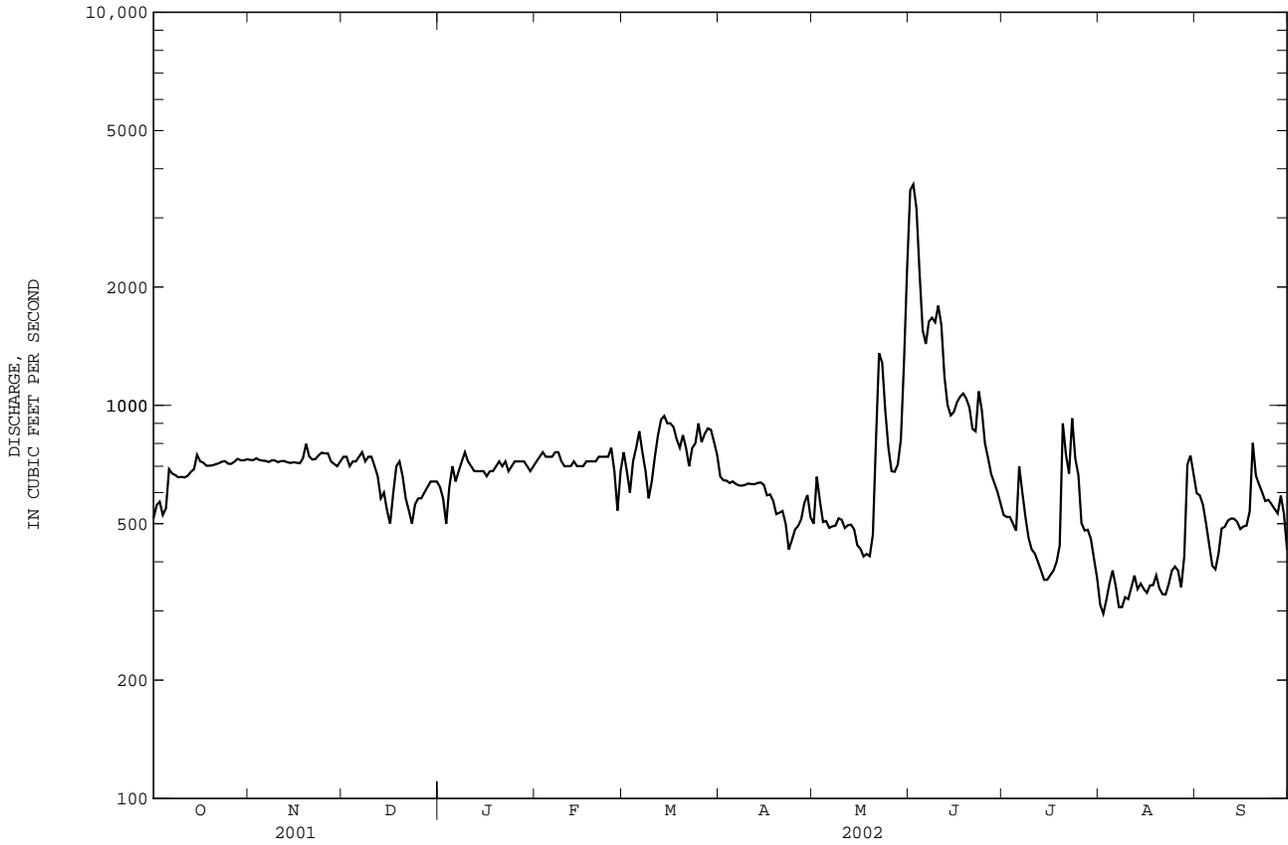
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1519	1407	1288	1197	1249	1500	1413	2423	3932	2318	1140	1289							
MAX	2346	2439	1933	1975	1772	2753	2929	6252	11210	8574	2627	2326							
(WY)	1984	1984	1985	1992	1997	1998	1998	1999	1991	1995	1997	1998							
MIN	675	659	642	566	504	634	581	690	1059	357	380	531							
(WY)	2002	1989	1989	1989	1989	1989	1989	2002	2002	2001	1988	2002							

06274300 BIGHORN RIVER AT BASIN, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	296383		252172		--	
ANNUAL MEAN	812.0		690.9		1723	
HIGHEST ANNUAL MEAN	--		--		2913	
LOWEST ANNUAL MEAN	--		--		691	
HIGHEST DAILY MEAN	2060	May 15	3650	Jun 2	16600	Jun 8 1991
LOWEST DAILY MEAN	395 <sup>e</sup>	Aug 8	295	Aug 2	276	Jul 27 1988
ANNUAL SEVEN-DAY MINIMUM	410	Aug 4	330	Aug 2	292	Jul 24 1988
MAXIMUM PEAK FLOW	--		4510		19500	
MAXIMUM PEAK STAGE	--		5.79		10.49	
ANNUAL RUNOFF (AC-FT)	587900		500200		1248000	
10 PERCENT EXCEEDS	1070		872		2900	
50 PERCENT EXCEEDS	740		680		1350	
90 PERCENT EXCEEDS	500		400		660	

e Estimated.



YELLOWSTONE RIVER BASIN

06274300 BIGHORN RIVER AT BASIN, WY--Continued

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
OCT 22...	1330	715	654	10.6	109	8.3	1070	13.5	9.5	<.04	.20	<.008	<.02
FEB 04...	1405	733	670	9.3	73	7.8	689	--	.0	.15	.46	E.004	<.02
MAY 13...	1150	485	670	12.7	141	8.5	1090	21.0	14.0	<.04	.56	.033	.03
AUG 05...	1320	397	667	11.7	156	8.3	1180	25.0	22.5	<.04	.94	.014	<.02

Date	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT 22...	90	94	147	284
FEB 04...	E20k	E22k	1540	3040
MAY 13...	40	49	94	123
AUG 05...	140	160	67	71.8

E -- Estimated value  
 k -- Counts outside acceptable range (Non-ideal colony count)

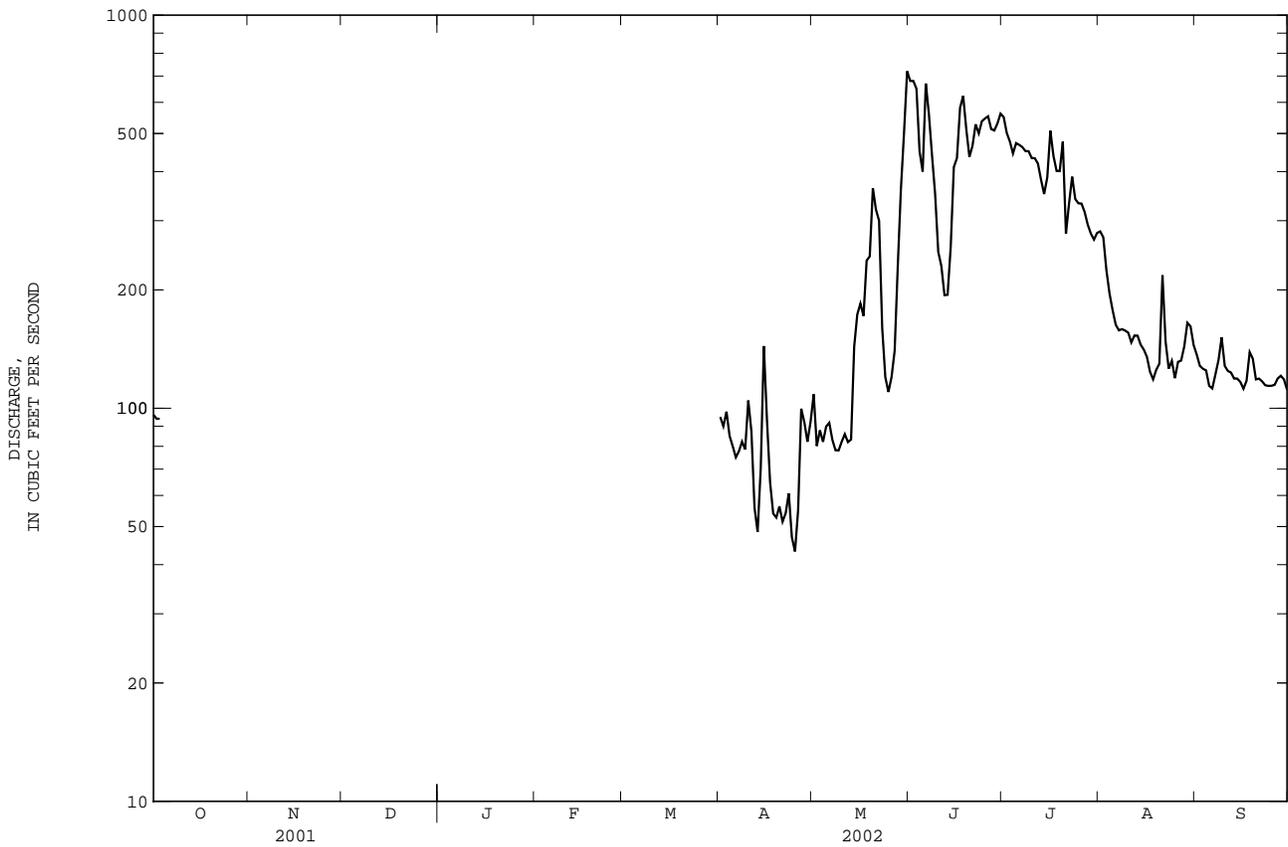


YELLOWSTONE RIVER BASIN

06276500 GREYBULL RIVER AT MEETEETSE, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1921 - 2002*	
ANNUAL MEAN	--	333.0	
HIGHEST ANNUAL MEAN	--	566	1957
LOWEST ANNUAL MEAN	--	130	1940
HIGHEST DAILY MEAN	720 <sup>e</sup> May 31	6770	Jun 6 1957
LOWEST DAILY MEAN	43 Apr 25	13	Apr 18 1989
MAXIMUM PEAK FLOW	1550 Jul 16	13600 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	3.21 Jul 16	9.20 <sup>b</sup>	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--	241200	

\* For period of operation.  
 a From rating curve extended above 4,600 ft<sup>3</sup>/s on basis of velocity-area study.  
 b From floodmarks.  
 e Estimated.



06276500 GREYBULL RIVER AT MEETEETSE, WY--Continued

WATER-QUALITY RECORDS

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
OCT 24...	1415	74	616	11.2	106	8.8	595	8.5	4.0	E2k	E3k	7.0	1.4
FEB 06...	1645	38	620	10.5	89	7.6	562	-3.0	.0	E6k	E2k	54	5.5
MAY 14...	1800	157	616	7.8	90	8.2	289	14.5	12.0	87	94	184	78.0
AUG 07...	1115	158	624	8.2	102	8.2	387	18.0	16.0	83	230	10	4.3

E -- Estimated value.

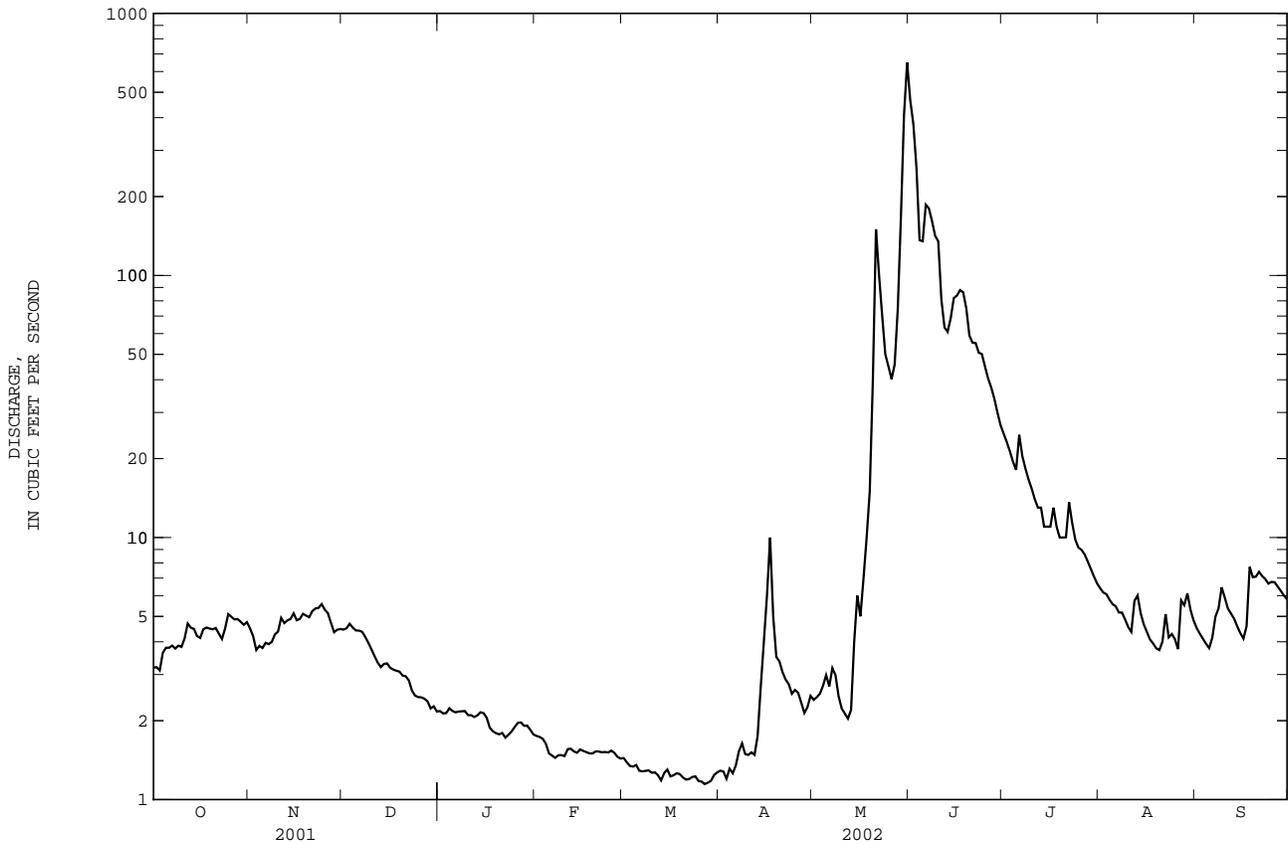
k -- Counts outside acceptable range (non-ideal colony count).



06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1957 - 2002	
ANNUAL TOTAL	6547.1		6610.2		--	
ANNUAL MEAN	17.94		18.11		33.83	
HIGHEST ANNUAL MEAN	--		--		50.2 1968	
LOWEST ANNUAL MEAN	--		--		17.9 2001	
HIGHEST DAILY MEAN	350	May 16	650	May 31	1010	Jun 15 1963
LOWEST DAILY MEAN	1.6	Jan 31	1.1	Mar 27	0.60	Mar 7 1967
ANNUAL SEVEN-DAY MINIMUM	1.7	Jan 25	1.2	Mar 21	0.90	Jan 27 1980
MAXIMUM PEAK FLOW	--		1060	May 31	1870 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	--		6.66	May 31	7.84 <sup>b</sup>	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	12990		13110		24510	
10 PERCENT EXCEEDS	50		40		95	
50 PERCENT EXCEEDS	4.0		4.1		5.6	
90 PERCENT EXCEEDS	1.9		1.4		1.9	

a From rating curve extended above 725 ft<sup>3</sup>/s on basis of velocity-area study.  
 b From floodmarks.  
 e Estimated.



## YELLOWSTONE RIVER BASIN

06278500 SHELL CREEK NEAR SHELL, WY

LOCATION.--Lat 44°33'54", long 107°42'44", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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. Datum of gage is 4,370.05 ft above NGVD of 1929.

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 measurements, in cubic feet per second, made during the periods when station was not in operation, are given below:

Oct. 10 . . . 39.7  
Mar. 27 . . . 25.3

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	26	30	887	96	81	70
2	---	---	---	---	---	---	23	26	651	93	82	69
3	---	---	---	---	---	---	23	30	532	89	82	68
4	---	---	---	---	---	---	26	29	344	86	83	66
5	---	---	---	---	---	---	27	31	298	82	82	72
6	---	---	---	---	---	---	28	30	323	85	81	76
7	---	---	---	---	---	---	29	31	349	86	80	78
8	---	---	---	---	---	---	28	33	318	81	80	78
9	---	---	---	---	---	---	28	27	285	76	78	85
10	---	---	---	---	---	---	28	30	307	75	78	78
11	---	---	---	---	---	---	29	29	241	72	77	64
12	---	---	---	---	---	---	29	29	202	69	80	61
13	---	---	---	---	---	---	29	29	182	67	80	60
14	---	---	---	---	---	---	35	57	173	82	77	59
15	---	---	---	---	---	---	44	74	184	81	76	58
16	---	---	---	---	---	---	41	70	188	82	75	58
17	---	---	---	---	---	---	32	74	190	86	74	55
18	---	---	---	---	---	---	33	76	192	82	74	61
19	---	---	---	---	---	---	28	109	184	78	74	60
20	---	---	---	---	---	---	27	152	162	83	75	57
21	---	---	---	---	---	---	29	233	151	78	75	56
22	---	---	---	---	---	---	28	208	147	90	77	54
23	---	---	---	---	---	---	28	133	145	94	75	54
24	---	---	---	---	---	---	27	118	142	86	75	52
25	---	---	---	---	---	---	26	107	135	83	74	52
26	---	---	---	---	---	---	28	122	127	85	71	54
27	---	---	---	---	---	---	28	134	120	82	77	51
28	---	---	---	---	---	---	27	167	98	81	78	51
29	---	---	---	---	---	---	27	263	104	78	80	49
30	---	---	---	---	---	---	32	541	101	77	75	49
31	---	---	---	---	---	---	---	920	---	80	72	---
TOTAL	---	---	---	---	---	---	873	3942	7462	2545	2398	1855
MEAN	---	---	---	---	---	---	29.10	127.2	248.7	82.10	77.35	61.83
MAX	---	---	---	---	---	---	44	920	887	96	83	85
MIN	---	---	---	---	---	---	23	26	98	67	71	49
AC-FT	---	---	---	---	---	---	1730	7820	14800	5050	4760	3680

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)\*

	MEAN	56.99	47.20	41.48	36.89	35.20	35.13	50.28	271.8	497.5	168.4	99.13	77.57
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

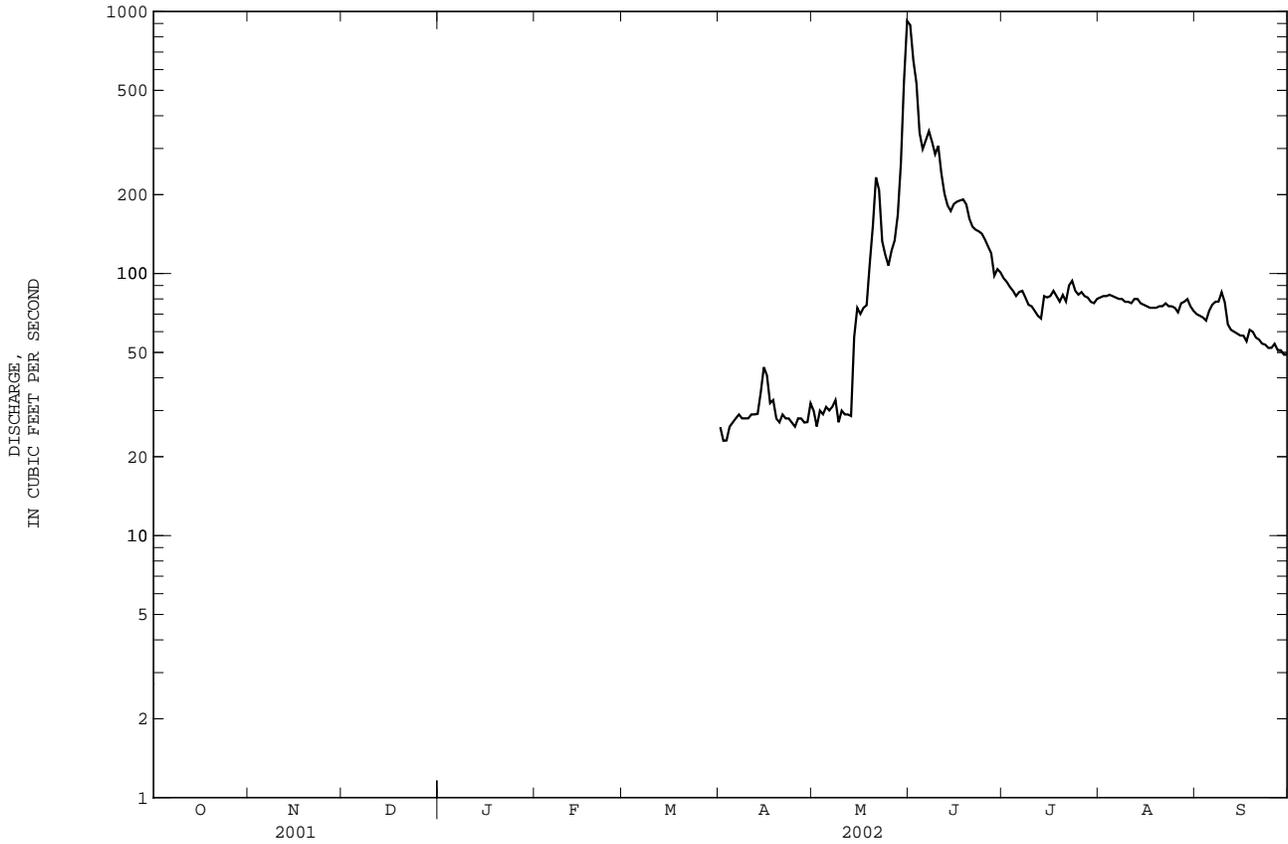
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1941 - 2002\*

ANNUAL MEAN	--		118.6	
HIGHEST ANNUAL MEAN	--		160	1968
LOWEST ANNUAL MEAN	--		77.3	1966
HIGHEST DAILY MEAN	920	May 30	1980	Jun 4 1968
LOWEST DAILY MEAN	23	Apr 2,3	13	Apr 10 1989
MAXIMUM PEAK FLOW	1330	Jun 1	3020 <sup>a</sup>	Jun 24 1945
MAXIMUM PEAK STAGE	5.45	Jun 1	7.49	Jun 24 1945
ANNUAL RUNOFF (AC-FT)	--		85900	

\* For period of operation.  
 a From rating curve extended above 1,600 ft<sup>3</sup>/s.



## YELLOWSTONE RIVER BASIN

06279500 BIGHORN RIVER AT KANE, WY

LOCATION.--Lat 44°45'31", long 108°10'51", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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.--15,765 mi<sup>2</sup>. Area at sites used prior to May 17, 1956, 15,846 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1309: 1929(M). WSP 1509: 1929. WSP 1709: 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 good 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	582	784	e760	e600	e720	e800	848	569	4320	574	409	743
2	624	780	e760	e560	e740	e700	816	557	5640	546	368	716
3	679	785	e780	e500	e740	e620	791	742	4210	549	371	700
4	624	791	e800	e600	e740	e740	767	586	3310	564	417	661
5	643	777	e760	e660	e750	e800	761	541	2270	551	448	579
6	699	773	e700	e620	e740	e900	754	530	1900	515	458	508
7	758	784	e720	e660	e760	e800	746	496	2000	840	413	474
8	734	787	e720	e700	e800	e700	740	517	2170	750	383	492
9	721	792	e720	e760	e760	e600	736	519	2100	674	390	583
10	716	794	e740	e700	e740	675	733	539	2120	556	408	643
11	716	800	e720	e680	e740	780	731	515	2220	520	398	622
12	727	815	e700	e660	e740	884	714	500	1640	471	408	638
13	734	813	e680	e660	e760	955	704	504	1310	429	435	646
14	756	812	e560	e660	e740	981	700	511	1150	395	408	654
15	797	815	e500	e660	e740	933	700	493	1120	384	417	659
16	801	820	e450	e660	e740	941	663	454	1190	403	398	646
17	783	820	e560	e660	e760	917	650	445	1230	399	389	677
18	771	835	661	e660	e760	875	677	425	1270	436	417	706
19	764	881	716	e700	e760	828	628	452	1270	457	417	889
20	762	898	646	e700	e760	910	645	476	1220	472	427	914
21	766	865	e560	e700	e780	859	652	581	1080	1100	407	801
22	769	869	e520	e700	e780	814	635	1370	984	795	393	778
23	775	873	e500	e660	e780	866	561	1730	1060	930	403	751
24	788	893	e540	e700	e780	896	511	1260	1340	923	429	722
25	785	905	e560	e720	e820	968	583	967	986	824	479	721
26	775	912	e560	e720	e700	955	563	807	885	681	486	725
27	778	893	e560	e720	e600	1040	588	746	782	596	467	689
28	790	e820	e580	e720	e700	1080	623	765	707	595	463	696
29	789	e700	e600	e700	---	1020	676	796	680	580	626	760
30	775	e740	e600	e680	---	959	634	1140	615	531	903	629
31	778	---	e600	e700	---	882	---	2520	---	468	823	---
TOTAL	22959	24626	19833	20780	20930	26678	20530	23053	52779	18508	14058	20422
MEAN	740.6	820.9	639.8	670.3	747.5	860.6	684.3	743.6	1759	597.0	453.5	680.7
MAX	801	912	800	760	820	1080	848	2520	5640	1100	903	914
MIN	582	700	450	500	600	600	511	425	615	384	368	474
AC-FT	45540	48850	39340	41220	41510	52920	40720	45730	104700	36710	27880	40510

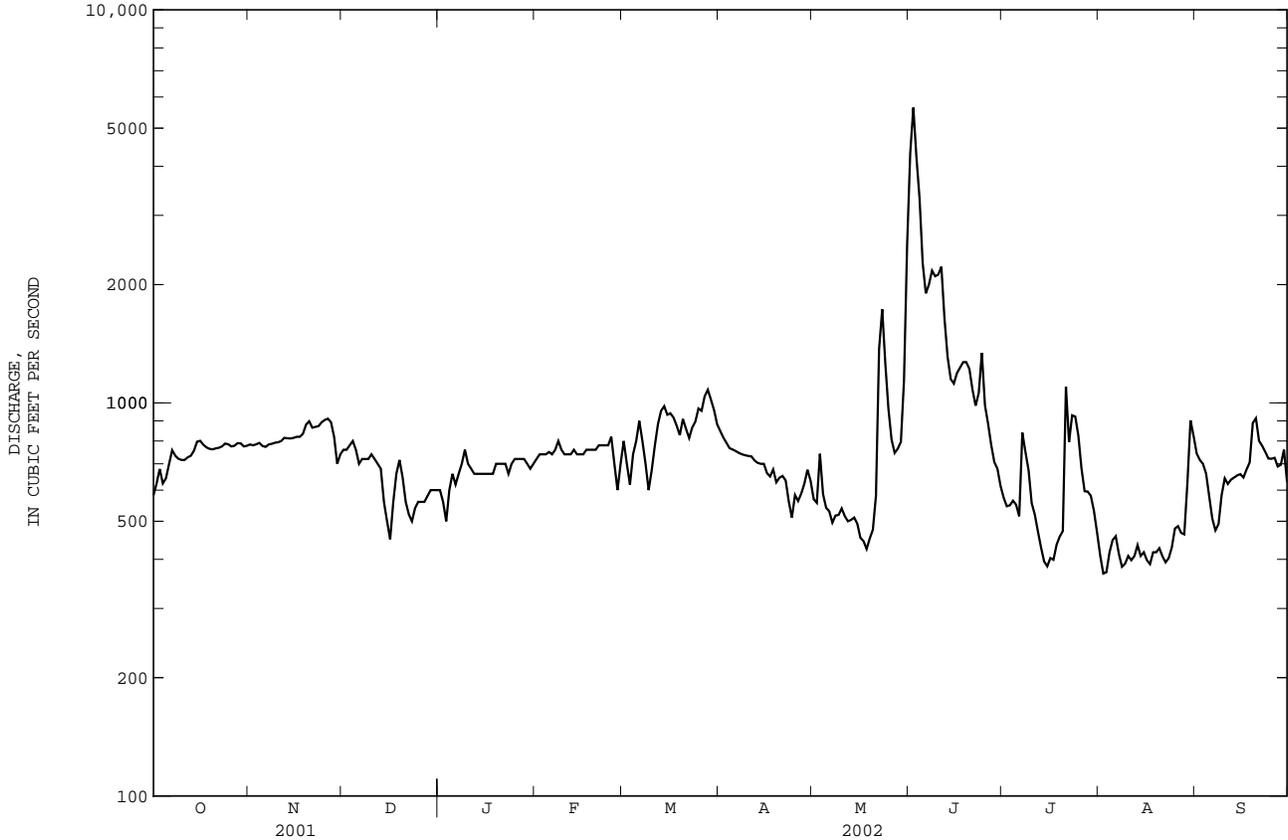
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2002, BY WATER YEAR (WY)

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1803	1673	1458	1368	1537	1823	1808	3171	5802	3145	1444	1525	3994	2871	2506	2871	3164	3171	3454	7505	14680	11650	6388	3673	1983	1984	1983	1972	1983	1972	1943	1947	1944	1967	1930	1973	524	737	627	580	550	740	684	744	1032	501	305	386	1936	1961	1961	1937	1933	1989	2002	2002	2002	1934	1961	1940	1935												

06279500 BIGHORN RIVER AT KANE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1930 - 2002*	
ANNUAL TOTAL	342727		285156		--	
ANNUAL MEAN	939.0		781.2		2213	
HIGHEST ANNUAL MEAN	--		--		3524 1947	
LOWEST ANNUAL MEAN	--		--		781 2002	
HIGHEST DAILY MEAN	2600	May 15	5640	Jun 2	24800	Jun 15 1935
LOWEST DAILY MEAN	431	Aug 8	368	Aug 2	179	Jul 22 1934
ANNUAL SEVEN-DAY MINIMUM	484	Aug 6	404	Aug 8	184	Jul 18 1934
MAXIMUM PEAK FLOW	--		7910 Jun 2		25200 <sup>a</sup> Jun 16 1935	
MAXIMUM PEAK STAGE	--		5.23 Jun 2		11.10 <sup>a</sup> Jun 16 1935	
ANNUAL RUNOFF (AC-FT)	679800		565600		1603000	
10 PERCENT EXCEEDS	1280		967		3980	
50 PERCENT EXCEEDS	873		720		1640	
90 PERCENT EXCEEDS	560		461		775	

\* August 1928 to September 1929 not included in computations, monthly only for selected months.  
 a Site and datum then in use.  
 e Estimated.



YELLOWSTONE RIVER BASIN

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	HARDNESS TOTAL AS (MG/L CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT 22...	1615	765	661	10.8	112	8.3	1130	11.5	10.5	--	--	--	--	
FEB 05...	1000	734	676	10.7	83	7.7	1120	-5.0	.0	--	--	--	--	
MAY 13...	1510	531	673	10.8	126	8.5	1140	28.5	16.5	--	--	--	--	
AUG 05...	1940	469	667	10.0	134	8.3	1180	27.0	23.0	340	77.6	34.4	4.74	
Date		SODIUM AD-SORPTION RATIO (00931)	ALKALINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	<.04	--	
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	.14	--	
MAY 13...	--	--	--	--	--	--	--	--	--	--	--	<.04	--	
AUG 05...	3	124	165	20.0	.57	4.49	410	1.09	1020	802	777	<.04	.34	
Date		NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS, DIS-SOLVED (MG/L AS P) (00666)	ORTHOPHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLIFORM, FE CAL, 0.7 UM-MF (COLS./100 ML) (31625)	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
OCT 22...	--	.19	E.004	--	<.02	--	35	37	--	--	--	--	--	--
FEB 05...	--	.55	E.005	--	<.02	--	62	75	--	--	--	--	--	--
MAY 13...	--	.48	.016	--	<.02	--	--	E17k	--	--	--	--	--	--
AUG 05...	.75	.51	E.006	.008	<.02	.067	E19k	32	<20	<.04	2.8	<10	<.08	
Date		MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	2,6-DIETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETOCHLOR, WATER FLTRD REC (UG/L) (49260)	ALACHLOR, WATER, DISS, REC, SOLVED (UG/L) (46342)	ALPHA BHC, DIS-SOLVED (UG/L) (34253)	ATRAZINE, WATER, DISS, REC (UG/L) (39632)	BENFLURALIN, WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYLATE, WATER, FLTRD 0.7 U GF, REC (UG/L) (04028)	CARBARYL, WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBON FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLORPYRIFOS, DIS-SOLVED (UG/L) (38933)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	3.4	<1	1	<.006	<.006	E.004	<.005	.011	<.010	<.002	<.041	E.013	<.005	

06279500 BIGHORN RIVER AT KANE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WATER FLTRD 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	<.018	<.003	E.008	<.005	<.005	<.02	<.004	<.009	<.005	<.003	<.004	<.035	E.007
Date	METHYL-AZIN-PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL-PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P'-DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	<.050	<.006	E.005	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01
Date	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI-MENT, SUS-PENDE (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDE (T/DAY) (80155)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	164	339
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	41	81.3
MAY 13...	--	--	--	--	--	--	--	--	--	--	--	134	192
AUG 05...	<.007	<.010	<.011	<.02	<.005	E.01	<.034	<.02	<.005	<.002	<.009	42	53.2

E -- Estimated value  
 k -- Counts outside acceptable range (Non-ideal colony count)

## YELLOWSTONE RIVER BASIN

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<sup>2</sup>.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	---	---	---	---	---	---	e5.0	16	230	122	17	10	
2	---	---	---	---	---	---	e4.5	17	217	115	17	10	
3	---	---	---	---	---	---	e4.5	20	203	107	17	10	
4	---	---	---	---	---	---	e5.5	23	163	101	17	10	
5	---	---	---	---	---	---	e6.5	26	142	95	16	10	
6	---	---	---	---	---	---	8.2	24	180	87	15	10	
7	---	---	---	---	---	---	8.5	24	179	81	15	18	
8	---	---	---	---	---	---	8.4	21	154	77	14	14	
9	---	---	---	---	---	---	8.6	18	104	68	14	11	
10	---	---	---	---	---	---	8.8	17	63	62	14	11	
11	---	---	---	---	---	---	8.9	17	64	57	14	10	
12	---	---	---	---	---	---	8.8	18	64	51	14	9.9	
13	---	---	---	---	---	---	9.7	26	79	46	13	10	
14	---	---	---	---	---	---	16	40	97	43	13	10	
15	---	---	---	---	---	---	18	44	111	37	13	10	
16	---	---	---	---	---	---	15	45	121	35	13	9.9	
17	---	---	---	---	---	---	14	48	157	36	12	9.9	
18	---	---	---	---	---	---	14	59	232	33	12	10	
19	---	---	---	---	---	---	13	86	253	32	12	9.7	
20	---	---	---	---	---	---	12	93	207	31	12	9.6	
21	---	---	---	---	---	---	12	84	169	29	12	9.2	
22	---	---	---	---	---	---	12	62	166	30	12	9.2	
23	---	---	---	---	---	---	11	57	174	29	11	9.2	
24	---	---	---	---	---	---	11	51	185	26	11	9.2	
25	---	---	---	---	---	---	11	48	183	25	11	9.1	
26	---	---	---	---	---	---	12	48	174	25	11	9.2	
27	---	---	---	---	---	---	14	53	158	25	11	9.1	
28	---	---	---	---	---	---	e5.0	13	60	143	23	11	9.2
29	---	---	---	---	---	---	e5.0	13	87	134	21	11	9.3
30	---	---	---	---	---	---	e5.0	15	156	131	19	11	9.2
31	---	---	---	---	---	---	e5.5	---	225	---	18	10	---
TOTAL	---	---	---	---	---	---	321.9	1613	4637	1586	406	304.9	
MEAN	---	---	---	---	---	---	10.73	52.03	154.6	51.16	13.10	10.16	
MAX	---	---	---	---	---	---	18	225	253	122	17	18	
MIN	---	---	---	---	---	---	4.5	16	63	18	10	9.1	
AC-FT	---	---	---	---	---	---	638	3200	9200	3150	805	605	

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)\*

MEAN	---	---	---	---	---	---	12.67	62.24	116.7	51.97	17.55	11.41
MAX	---	---	---	---	---	---	18.5	107	155	80.9	30.7	16.3
(WY)	---	---	---	---	---	---	1990	2001	1991	1993	1993	1993
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 2002 WATER YEAR\*

WATER YEARS 1989 - 2002\*

HIGHEST DAILY MEAN  
 LOWEST DAILY MEAN

253 Jun 19  
 4.5<sup>e</sup> Apr 2,3

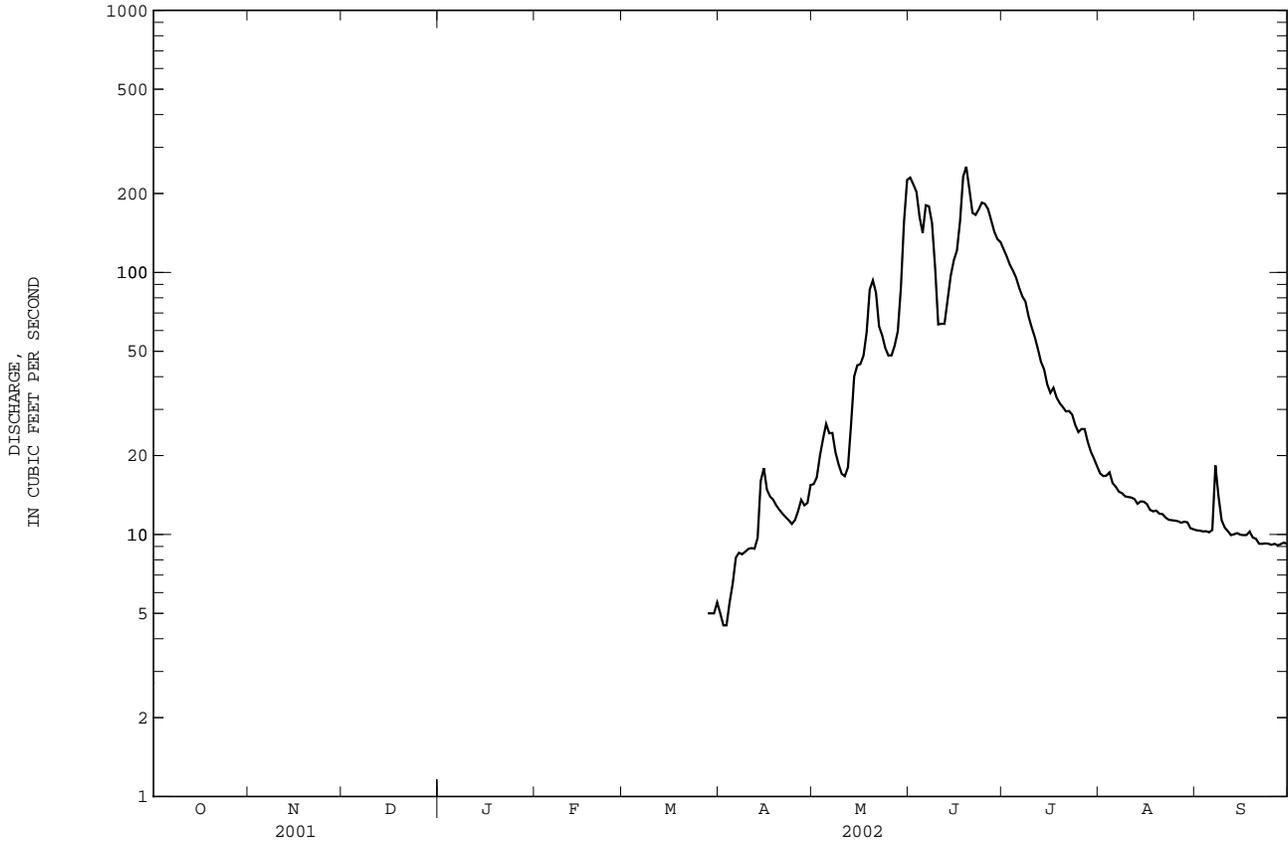
259 Jun 12 1991  
 3.7 Mar 20-22 1993

MAXIMUM PEAK FLOW  
 MAXIMUM PEAK STAGE

297 May 31  
 2.34 May 31

324 Jun 12 1991  
 2.74 Jun 12 1991

\* For period of operation.  
 e Estimated.



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.--Water-temperature records represent water temperature at sensor within 0.2°C.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 112 microsiemens, May 5, 1990; minimum daily mean, 22 microsiemens, September 19, 2002.  
 PH: Maximum, 9.2, July 17, 1991; minimum, 6.5, July 22, 1992.  
 WATER TEMPERATURE: Maximum, 14.9°C, August 8, 1990; minimum, 0.0°C, on many days during March and April most years.  
 DISSOLVED OXYGEN: Maximum daily mean 11.9 mg/L, June 13, 2001; minimum daily mean, 6.5 mg/L, July 24, 2002.  
 SEDIMENT CONCENTRATIONS: Maximum daily mean, 275 mg/L, May 31, 2002; minimum daily mean, 0.0 mg/L, September 27-30, 1989.  
 SEDIMENT LOADS: Maximum daily, 170 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 daily mean during period of operation, 90 microsiemens, May 28,29; minimum daily mean during period of operation, 22 microsiemens, September 19.  
 PH: Maximum during period of operation, 8.2, September 27-29; minimum during period of operation, 7.3, May 19, 20, 31.  
 WATER TEMPERATURE: Maximum during period of operation, 13.7°C, July 15, minimum during period of operation, 0.1°C, April 2-4,17, 20, 21, 24, 25, and May 9.  
 DISSOLVED OXYGEN: Maximum daily mean during period of operation, 11.8 mg/L, April 2-4; minimum during period of operation, 6.5 mg/L, July 24.  
 SEDIMENT CONCENTRATIONS: Maximum daily mean during period of operation, 270 mg/L, May 31; minimum daily mean during period of operation, 1 mg/L, many days.  
 SEDIMENT LOADS: Maximum daily during period of operation, 169 tons, May 31; minimum daily during period of operation, 0.02 tons,Sept. 21, 27.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (000061)	BARO-METRIC PRES-SURE (MM OF HG) (000025)	OXYGEN, DIS-SOLVED (MG/L) (003000)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL AS (MG/L) (00900)	CALCIUM DIS-SOLVED AS CA (MG/L) (00915)	MAGNE-SIUM, DIS-SOLVED AS MG (MG/L) (00925)	POTAS-SIUM, DIS-SOLVED AS K (MG/L) (00935)
MAR													
28...	1200	4.8	590	11.4	105	7.9	91	1.0	1.2	27	7.30	2.15	.72
APR													
16...	1300	15	589	11.9	112	7.9	72	1.5	2.0	24	6.52	1.82	.72
30...	1300	16	591	9.2	89	7.8	75	5.0	3.5	23	6.33	1.86	.65
MAY													
08...	1300	21	597	11.0	100	7.8	73	.0	1.3	24	6.51	1.90	.68
14...	1400	32	595	9.8	98	7.8	63	13.5	5.0	21	5.80	1.69	.65
28...	1400	59	599	9.6	100	7.5	59	17.0	6.5	19	5.20	1.52	.62
JUN													
13...	1400	90	600	9.3	97	7.7	46	20.0	7.0	18	4.86	1.41	.57
24...	1400	187	600	8.5	93	7.6	40	24.0	8.6	15	3.99	1.10	.40
JUL													
15...	1400	38	597	7.1	85	8.0	59	33.0	12.0	--	--	--	--
31...	1300	33	595	8.2	97	7.9	68	27.0	11.5	22	5.96	1.75	.66
AUG													
23...	1400	12	598	9.7	105	7.7	75	23.0	8.0	23	6.16	1.79	.72
SEP													
07...	1000	29	595	9.6	103	7.4	57	12.0	7.5	17	4.49	1.38	.68
Date		SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT.DIS FET LAB (MG/L) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L) (00950)	SILICA, DIS-SOLVED (MG/L) (00955)	SULFATE DIS-SOLVED (MG/L) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L) (00623)
MAR													
28...	.8	9.88	49	.38	.2	27.2	3.8	.10	.95	74	81	<.04	<.10
APR													
16...	.7	7.49	38	.44	.1	23.0	3.2	.09	2.68	67	67	<.04	E.06
30...	.6	7.14	36	1.26	E.07	22.9	3.3	.09	2.93	70	66	<.04	E.08
MAY													
08...	.6	6.51	36	E.32	E.09	22.5	3.6	--	--	65	--	<.04	E.05
14...	.5	5.46	31	.62	.58	21.1	2.9	.09	5.85	67	59	<.04	E.05
28...	.5	4.66	28	.50	E.06	21.8	2.4	.08	8.78	55	54	<.04	E.07
JUN													
13...	.5	4.64	27	E.27	<.10	21.6	1.7	--	--	49	--	<.04	E.08
24...	.4	3.79	23	E.30	<.10	17.5	1.5	--	--	39	--	<.04	<.10
JUL													
15...	--	--	--	--	<.10	--	--	--	--	--	--	<.04	E.07
31...	.6	6.42	36	E.26	E.07	24.0	2.5	--	--	59	--	--	--
AUG													
23...	.7	7.20	39	.52	E.11	24.7	2.9	.09	--	65	68	<.04	<.10
SEP													
07...	.5	4.90	26	.45	<.10	18.7	2.1	.06	3.47	45	49	<.04	.12

06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADIUM DIS- SOLVED (UG/L AS CD) (01025)
MAR 28...	<.10	.05	<.008	.062	.06	.066	4	.06	.8	4	<.06	24	<.04
APR 16...	.13	.15	<.008	.056	.05	.068	6	E.04	.7	3	<.06	14	<.04
APR 30...	.11	.11	<.008	.044	.04	.051	--	--	--	--	--	--	--
MAY 08...	.13	.17	<.008	.040	.04	.049	--	--	--	--	--	--	--
MAY 14...	.17	.22	<.008	.038	.03	.074	7	.07	.5	4	<.06	9	<.04
MAY 28...	.13	.15	<.008	.038	.04	.067	--	--	--	--	--	--	--
JUN 13...	E.09	.05	<.008	.041	.04	.052	7	<.05	.5	4	<.06	8	<.04
JUN 24...	E.07	E.04	<.008	.030	.03	.048	--	--	--	--	--	--	--
JUL 15...	E.08	<.05	<.008	.035	.03	.045	--	--	--	--	--	--	--
JUL 31...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	E.09	<.05	<.008	.048	.06	.050	2	<.05	.6	4	<.06	13	<.04
SEP 07...	.55	.14	<.008	.053	.05	.21	10	E.03	.6	4	<.06	8	<.04

Date	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)
MAR 28...	E.8	.02	.5	<10	.10	.7	.2	1.3	<.06	<.3	<1	44.6	<.04
APR 16...	E.4	.03	.8	E10	<.08	.5	.4	.5	.10	<.3	<1	39.7	<.04
APR 30...	--	--	--	E7	--	--	<2.0	--	--	--	--	--	--
MAY 08...	--	--	--	E9	--	--	E1.1	--	--	--	--	--	--
MAY 14...	<.8	.03	.7	E7	<.08	.4	1.5	.3	.30	E.2	<1	39.8	<.04
MAY 28...	--	--	--	E8	--	--	<2.0	--	--	--	--	--	--
JUN 13...	<.8	.03	.8	<10	<.08	.5	.6	.3	.22	<.3	<1	35.9	<.04
JUN 24...	--	--	--	E8	--	--	E.8	--	--	--	--	--	--
JUN 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 31...	--	--	--	<10	--	--	<2.0	--	--	--	--	--	--
AUG 23...	E.4	.02	.3	<10	<.08	.5	.4	.7	.15	<.3	<1	42.8	<.04
SEP 07...	<.8	.03	.7	14	<.08	.4	1.4	.4	.25	<.3	<1	32.5	<.04

Date	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
MAR 28...	5.2	1	.05
APR 16...	4.8	<1	.04
APR 30...	--	--	--
MAY 08...	--	--	--
MAY 14...	3.6	<1	.03
MAY 28...	--	--	--
JUN 13...	3.4	1	.03
JUN 24...	--	--	--
JUL 15...	--	--	--
JUL 31...	--	--	--
AUG 23...	4.5	1	.03
SEP 07...	3.7	<1	.02

E -- Estimated value

## YELLOWSTONE RIVER BASIN

06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

SPECIFIC CONDUCTANCE (US/CM @ 25 DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	86	83	85	---	---	---
2	---	---	---	---	---	---	88	84	86	---	---	---
3	---	---	---	---	---	---	88	83	86	---	---	---
4	---	---	---	---	---	---	89	85	87	---	---	---
5	---	---	---	---	---	---	86	78	83	---	---	---
6	---	---	---	---	---	---	83	77	81	---	---	---
7	---	---	---	---	---	---	80	78	79	---	---	---
8	---	---	---	---	---	---	82	78	80	---	---	---
9	---	---	---	---	---	---	81	79	80	72	66	69
10	---	---	---	---	---	---	80	76	78	72	69	71
11	---	---	---	---	---	---	79	76	78	72	70	71
12	---	---	---	---	---	---	79	76	78	72	66	69
13	---	---	---	---	---	---	78	72	75	67	53	64
14	---	---	---	---	---	---	74	61	69	63	45	57
15	---	---	---	---	---	---	72	65	70	69	50	64
16	---	---	---	---	---	---	73	70	72	71	67	70
17	---	---	---	---	---	---	75	73	74	70	59	67
18	---	---	---	---	---	---	75	74	75	65	51	61
19	---	---	---	---	---	---	77	75	76	63	45	56
20	---	---	---	---	---	---	81	74	77	56	44	51
21	---	---	---	---	---	---	79	76	77	53	47	51
22	---	---	---	---	---	---	78	77	77	55	51	53
23	---	---	---	---	---	---	79	77	78	58	55	57
24	---	---	---	---	---	---	82	78	79	61	58	60
25	---	---	---	---	---	---	81	77	79	63	61	62
26	---	---	---	---	---	---	79	76	78	64	61	62
27	---	---	---	---	---	---	77	75	75	63	55	61
28	---	---	---	90	89	89	77	75	76	61	51	56
29	---	---	---	90	88	89	78	74	77	55	44	51
30	---	---	---	89	87	88	---	---	---	50	39	46
31	---	---	---	88	84	87	---	---	---	45	37	42
MONTH	---	---	---	90	84	88	89	61	78	72	37	60
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	43	39	41	42	40	41	64	62	63	57	38	49
2	42	40	41	44	42	43	64	62	63	44	42	43
3	44	42	43	46	44	44	63	60	62	56	42	49
4	47	43	45	46	46	46	64	61	63	64	55	58
5	46	41	44	47	46	47	65	62	63	69	62	67
6	44	38	42	49	47	48	65	63	64	74	68	71
7	42	39	41	50	49	49	68	64	66	74	56	68
8	43	41	42	51	50	50	69	66	68	77	71	74
9	46	43	44	53	51	51	70	67	68	80	70	77
10	48	46	47	54	52	53	71	68	69	82	69	77
11	49	48	49	55	54	54	72	70	71	83	74	80
12	50	48	49	56	55	55	73	71	72	83	71	78
13	50	44	48	57	55	56	73	71	72	83	69	77
14	52	48	51	58	56	57	73	66	71	77	59	68
15	50	45	49	58	52	56	75	66	70	75	39	54
16	47	41	45	56	54	55	75	73	74	52	39	45
17	43	38	41	57	55	56	74	68	71	46	29	34
18	40	35	38	59	56	58	76	73	75	31	25	29
19	39	37	38	60	58	59	77	69	74	29	22	26
20	41	39	40	60	58	59	76	70	74	27	23	25
21	42	40	41	61	59	60	75	71	74	31	25	28
22	42	39	41	---	---	---	76	74	75	30	28	28
23	40	38	39	---	---	---	77	75	76	32	30	31
24	39	36	38	---	---	---	77	74	75	35	32	33
25	39	37	38	---	---	---	79	77	77	39	35	36
26	39	38	39	---	---	---	79	77	78	41	39	40
27	40	39	39	62	59	61	77	64	70	44	41	42
28	41	40	40	63	60	62	65	56	60	51	44	47
29	41	40	41	---	---	---	59	54	57	58	51	55
30	41	40	40	---	---	---	60	52	55	64	58	61
31	---	---	---	---	---	---	57	52	54	---	---	---
MONTH	52	35	42	63	40	53	79	52	69	83	22	52

YELLOWSTONE RIVER BASIN

06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

PH, FIELD (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.8	---	---	7.6	7.4	7.7	7.5	7.9	7.7	7.9	7.7
2	7.9	7.8	---	---	7.5	7.4	7.8	7.5	7.9	7.7	7.9	7.7
3	7.9	7.8	---	---	7.6	7.4	7.7	7.6	7.9	7.7	8.0	7.7
4	7.9	7.8	---	---	7.7	7.5	7.8	7.6	7.9	7.7	8.1	7.8
5	7.9	7.8	---	---	7.7	7.5	7.8	7.6	7.9	7.7	8.1	7.8
6	7.9	7.8	---	---	7.6	7.4	7.8	7.6	7.9	7.7	8.0	7.9
7	7.9	7.8	---	---	7.6	7.4	7.8	7.6	7.9	7.7	7.9	7.7
8	7.9	7.8	---	---	7.6	7.5	7.9	7.6	7.9	7.7	8.0	7.8
9	7.9	7.8	7.9	7.8	7.6	7.5	7.9	7.6	7.9	7.8	8.0	7.8
10	7.9	7.7	8.0	7.8	7.6	7.5	7.8	7.6	7.9	7.8	8.0	7.8
11	7.9	7.7	8.0	7.8	7.7	7.6	7.8	7.6	8.0	7.7	8.0	7.8
12	7.9	7.8	8.0	7.8	7.7	7.6	7.8	7.6	7.8	7.7	8.0	7.8
13	7.9	7.8	8.0	7.6	7.7	7.5	7.8	7.6	7.8	7.7	8.0	7.8
14	7.9	7.7	7.8	7.4	7.7	7.5	7.8	7.6	7.9	7.7	8.0	7.9
15	7.8	7.7	7.7	7.4	7.7	7.5	7.8	7.5	7.9	7.7	8.0	7.9
16	7.9	7.8	7.7	7.5	7.7	7.4	7.7	7.5	7.9	7.7	8.1	7.9
17	7.9	7.8	7.7	7.4	7.6	7.4	7.8	7.5	7.9	7.7	8.1	7.9
18	7.9	7.8	7.7	7.4	7.5	7.4	7.7	7.5	7.9	7.7	8.1	7.9
19	7.9	7.8	7.6	7.3	7.6	7.4	7.7	7.5	7.9	7.7	8.0	7.9
20	7.9	7.8	7.6	7.3	7.6	7.4	7.7	7.5	7.9	7.7	8.1	7.9
21	7.9	7.8	7.7	7.4	7.6	7.4	7.7	7.5	7.9	7.7	8.0	7.9
22	7.9	7.8	7.7	7.6	7.6	7.4	7.8	7.5	7.9	7.7	8.0	7.9
23	8.0	7.9	7.7	7.6	7.6	7.4	7.8	7.5	7.9	7.6	8.0	7.9
24	7.9	7.8	7.8	7.6	7.7	7.4	7.8	7.5	7.8	7.6	8.1	7.9
25	8.0	7.8	7.9	7.7	7.7	7.5	7.8	7.5	7.8	7.6	8.1	7.9
26	8.0	7.9	7.9	7.7	7.8	7.5	7.8	7.7	7.8	7.6	8.1	7.9
27	7.9	7.9	7.9	7.6	7.7	7.5	7.9	7.6	7.9	7.6	8.2	8.0
28	8.0	7.8	7.8	7.6	7.8	7.5	7.8	7.6	7.9	7.7	8.2	8.0
29	8.0	7.9	7.8	7.5	7.8	7.5	7.8	7.5	7.9	7.7	8.2	8.0
30	---	---	7.7	7.4	7.7	7.5	7.8	7.5	7.9	7.7	8.1	8.0
31	---	---	7.6	7.3	---	---	7.9	7.6	7.9	7.7	---	---
MONTH	8.0	7.7	8.0	7.3	7.8	7.4	7.9	7.5	8.0	7.6	8.2	7.7

WATER TEMPERATURE (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	1.8	1.2	1.5	4.6	1.4	2.9
2	---	---	---	---	---	---	1.2	0.1	0.4	5.7	0.5	3.2
3	---	---	---	---	---	---	0.7	0.1	0.2	5.2	2.5	3.7
4	---	---	---	---	---	---	1.5	0.1	0.8	6.1	0.7	3.2
5	---	---	---	---	---	---	1.8	0.8	1.4	3.8	1.9	2.8
6	---	---	---	---	---	---	1.9	1.2	1.6	4.3	2.2	3.2
7	---	---	---	---	---	---	2.1	1.4	1.8	3.9	1.5	3.0
8	---	---	---	---	---	---	2.4	1.7	2.1	1.6	0.3	1.0
9	---	---	---	---	---	---	2.5	1.3	2.0	4.0	0.1	1.7
10	---	---	---	---	---	---	2.7	1.5	2.3	4.5	1.7	2.9
11	---	---	---	---	---	---	2.8	1.3	2.0	6.3	1.8	3.8
12	---	---	---	---	---	---	2.9	2.1	2.5	5.8	1.2	3.7
13	---	---	---	---	---	---	4.2	2.0	3.1	8.2	1.5	4.2
14	---	---	---	---	---	---	3.5	1.6	2.8	7.4	1.7	3.6
15	---	---	---	---	---	---	2.1	0.9	1.6	6.0	1.8	3.5
16	---	---	---	---	---	---	2.6	0.9	1.7	5.6	1.7	3.4
17	---	---	---	---	---	---	2.4	0.1	1.2	7.2	2.5	4.2
18	---	---	---	---	---	---	3.4	0.6	2.0	6.9	2.1	3.9
19	---	---	---	---	---	---	2.0	0.2	1.1	8.4	2.3	4.1
20	---	---	---	---	---	---	1.2	0.1	0.4	7.4	2.6	4.1
21	---	---	---	---	---	---	2.7	0.1	1.2	5.4	2.5	3.6
22	---	---	---	---	---	---	4.0	1.5	2.7	2.7	1.1	2.0
23	---	---	---	---	---	---	4.9	1.9	3.1	4.6	1.9	2.9
24	---	---	---	---	---	---	2.8	0.1	1.4	6.7	1.9	3.8
25	---	---	---	---	---	---	4.2	0.1	2.0	8.0	2.2	4.6
26	---	---	---	---	---	---	4.4	0.7	2.6	6.9	2.9	4.6
27	---	---	---	---	---	---	3.7	1.8	2.7	7.7	3.3	5.0
28	---	---	---	1.4	1.0	1.2	4.1	1.7	2.8	7.5	2.8	4.9
29	---	---	---	1.3	0.6	0.9	5.7	1.3	3.3	8.8	3.5	5.2
30	---	---	---	1.6	1.3	1.5	4.0	2.1	3.0	8.7	3.4	5.1
31	---	---	---	1.7	1.4	1.6	---	---	---	8.6	3.4	5.1
MONTH	---	---	---	1.7	0.6	1.3	5.7	0.1	1.9	8.8	0.1	3.6

## YELLOWSTONE RIVER BASIN

06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

WATER TEMPERATURE (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.0	3.2	4.7	10.8	5.2	7.4	12.6	6.0	9.4	9.9	6.0	8.1
2	4.7	3.5	4.0	10.9	4.5	7.2	10.1	6.7	8.6	10.7	6.3	8.6
3	7.0	3.0	4.3	8.3	4.9	6.6	10.8	6.5	8.8	10.9	6.3	8.7
4	7.3	2.5	4.3	10.5	5.1	7.7	12.8	7.5	9.9	10.8	6.5	8.8
5	8.3	3.2	5.1	11.9	5.2	8.1	12.0	7.2	9.8	10.5	6.3	8.5
6	8.7	3.5	5.3	10.8	5.9	8.0	12.5	6.8	9.7	8.9	6.8	7.9
7	7.3	3.0	4.8	10.9	6.0	8.4	10.6	7.5	9.1	9.5	7.4	8.4
8	6.3	3.2	4.4	12.8	6.1	9.0	10.0	7.1	8.3	8.9	7.0	8.0
9	3.3	2.1	2.7	12.4	5.6	8.7	10.4	4.9	7.6	8.8	5.4	7.2
10	4.0	2.2	2.8	12.3	5.4	8.7	11.6	5.3	8.5	8.8	4.4	6.7
11	5.4	2.5	3.7	13.0	5.9	9.2	11.2	6.0	8.8	9.6	5.4	7.6
12	6.7	3.0	4.7	13.4	6.2	9.6	10.0	7.8	8.9	8.9	5.9	7.5
13	8.9	2.8	5.5	12.6	6.7	9.4	11.4	5.3	8.4	8.8	4.8	6.9
14	10.0	3.1	6.0	13.6	6.8	9.9	11.9	6.6	9.4	8.6	4.6	6.8
15	8.4	3.7	5.8	13.7	7.6	10.4	11.9	7.3	9.7	9.2	5.3	7.3
16	9.6	3.6	6.0	10.9	8.2	9.7	11.8	6.5	9.3	9.4	5.6	7.6
17	8.8	3.8	5.8	13.5	8.0	10.4	10.9	5.3	8.4	8.4	6.5	7.3
18	6.2	4.5	5.1	11.7	8.1	10	10.8	6.2	8.6	7.8	6.0	6.9
19	7.7	3.3	5.0	12.0	7.9	9.8	11.1	5.3	8.3	7.6	4.6	6.1
20	7.7	2.8	4.9	11.8	7.2	9.4	10.3	6.2	8.4	7.8	4.4	6.2
21	8.3	3.5	5.6	12.2	7.2	9.5	9.2	7.2	8.3	7.0	4.1	5.1
22	6.8	4.3	5.3	12.9	7.4	10.0	10.4	5.5	8.0	5.9	2.1	4.0
23	9.0	4.6	6.1	12.5	7.0	9.7	9.3	5.7	7.7	6.6	2.9	4.7
24	9.2	4.0	6.1	13.6	7.0	10.2	9.7	5.5	7.7	6.8	3.4	5.2
25	9.4	4.3	6.5	12.4	8.0	10.0	10.4	5.6	8.1	6.3	4.3	5.4
26	9.4	4.5	6.5	10.5	7.2	8.8	10.5	5.6	8.2	5.8	2.3	4.2
27	8.6	4.6	6.2	11.3	6.2	8.6	8.9	6.7	7.8	5.9	3.2	4.6
28	10.1	4.5	6.9	11.8	5.6	8.6	9.4	6.5	7.9	6.7	4.5	5.5
29	10.4	4.9	7.2	13.0	6.3	9.6	8.7	5.4	7.3	6.4	4.5	5.5
30	11.0	5.1	7.5	13.0	7.3	10.2	9.9	5.8	7.9	5.8	3.1	4.6
31	---	---	---	12.6	7.5	10.1	10.2	6.2	8.3	---	---	---
MONTH	11.0	2.1	5.3	13.7	4.5	9.1	12.8	4.9	8.6	10.9	2.1	6.7

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	11.4	11.1	11.2	10.5	9.6	10.1
2	---	---	---	---	---	---	11.8	11.4	11.7	10.8	9.5	10.1
3	---	---	---	---	---	---	11.8	11.5	11.7	10.5	9.8	10.1
4	---	---	---	---	---	---	11.8	11.2	11.5	11.1	9.7	10.4
5	---	---	---	---	---	---	11.5	11.0	11.2	10.7	10.2	10.5
6	---	---	---	---	---	---	11.1	10.8	11.0	10.6	10.1	10.4
7	---	---	---	---	---	---	11.1	10.7	10.9	10.6	10.2	10.5
8	---	---	---	---	---	---	10.9	10.6	10.8	11.2	10.7	11.0
9	---	---	---	---	---	---	11.1	10.5	10.8	11.3	10.1	10.7
10	---	---	---	---	---	---	11.2	10.4	10.7	10.7	9.9	10.3
11	---	---	---	---	---	---	11.1	10.3	10.7	10.8	9.4	10.1
12	---	---	---	---	---	---	10.6	10.2	10.4	11.0	9.6	10.2
13	---	---	---	---	---	---	10.7	9.6	10.1	10.8	9.0	10.0
14	---	---	---	---	---	---	10.3	9.6	10	10.5	9.2	10.0
15	---	---	---	---	---	---	10.4	10.0	10.2	10.4	9.3	9.9
16	---	---	---	---	---	---	10.7	10.1	10.3	10.3	9.3	9.9
17	---	---	---	---	---	---	10.8	10.1	10.5	10.2	9.1	9.8
18	---	---	---	---	---	---	10.7	9.9	10.3	10.3	9.1	9.8
19	---	---	---	---	---	---	10.9	10.3	10.6	10.2	8.8	9.8
20	---	---	---	---	---	---	10.8	10.4	10.7	10.1	8.9	9.7
21	---	---	---	---	---	---	10.8	10.0	10.4	10.0	9.4	9.7
22	---	---	---	---	---	---	10.3	9.7	10.0	10.4	10.0	10.1
23	---	---	---	---	---	---	10.3	9.5	9.9	10.3	9.5	10
24	---	---	---	---	---	---	10.9	10.1	10.5	10.2	9.0	9.7
25	---	---	---	---	---	---	10.8	9.7	10.3	10.1	8.8	9.5
26	---	---	---	---	---	---	10.6	9.5	10.0	10.1	8.9	9.6
27	---	---	---	---	---	---	10.2	9.7	10	10.0	8.8	9.5
28	---	---	---	11.4	11.2	11.2	10.4	9.8	10.1	10.0	9.0	9.5
29	---	---	---	11.6	11.3	11.5	10.6	9.4	10.0	9.9	8.7	9.5
30	---	---	---	11.4	11.3	11.3	10.3	9.7	10.0	10.1	8.8	9.7
31	---	---	---	11.4	11.2	11.3	---	---	---	10.1	8.9	9.7
MONTH	---	---	---	11.6	11.2	11.3	11.8	9.4	10.6	11.3	8.7	10.0



## YELLOWSTONE RIVER BASIN

06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN CONCENTRATION (MG/L)		LOAD (TONS/DAY)		MEAN CONCENTRATION (MG/L)		LOAD (TONS/DAY)		MEAN CONCENTRATION (MG/L)		LOAD (TONS/DAY)		MEAN CONCENTRATION (MG/L)		LOAD (TONS/DAY)									
	CONCENTRATION	LOAD	CONCENTRATION	LOAD	CONCENTRATION	LOAD	CONCENTRATION	LOAD	CONCENTRATION	LOAD	CONCENTRATION	LOAD	CONCENTRATION	LOAD	CONCENTRATION	LOAD								
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
1	e3.0	e0.05	3.0	0.13			162	101	e34	e11.0	1.0	0.05			1.0	0.04								
2	e3.0	e0.06	4.0	0.16			93	55.0	e29	e9.1	1.0	0.05			1.0	0.04								
3	e6.0	e0.17	6.0	0.31			54	30.0	e23	e6.7	1.0	0.05			1.0	0.03								
4	e4.0	e0.07	8.0	0.50			44	19.0	e22	e6.0	1.0	0.05			1.0	0.03								
5	e4.0	e0.08	11	0.75			43	17.0	e20	e5.2	1.0	0.05			1.0	0.03								
6	e4.0	e0.09	6.0	0.41			50	25.0	e19	e4.4	2.0	0.07			2.0	0.06								
7	e4.0	e0.10	6.0	0.36			45	22.0	e17	e3.8	1.0	0.05	32		2.1									
8	e4.0	e0.09	5.0	0.27			32	14.0	e16	e3.3	1.0	0.04	9.0		0.36									
9	e5.0	e0.11	e3.0	e0.17			23	6.6	e15	e2.7	1.0	0.04	3.0		0.10									
10	e5.0	e0.12	2.0	0.10			19	3.2	13	2.2	1.0	0.04	3.0		0.08									
11	e5.0	e0.12	2.0	0.10			18	3.1	10	1.5	1.0	0.04	2.0		0.07									
12	e4.0	e0.10	3.0	0.15			15	2.6	10	1.4	1.0	0.04	2.0		0.06									
13	e5.0	e0.12	7.0	0.55			15	3.2	7.0	0.85	1.0	0.04	2.0		0.05									
14	e7.0	e0.34	17	2.0			16	4.3	6.0	0.71	1.0	0.04	1.0		0.04									
15	e7.0	e0.34	30	3.6			12	3.6	4.0	0.37	1.0	0.04	1.0		0.03									
16	6.0	0.26	20	2.5			20	6.9	e3.0	e0.30	1.0	0.04	1.0		0.04									
17	9.0	0.33	16	2.1			25	11.0	e4.0	e0.39	1.0	0.03	2.0		0.05									
18	6.0	0.23	30	5.0			65	42.0	e3.0	e0.27	1.0	0.03	2.0		0.05									
19	8.0	0.27	94	25.0			e64	e44.0	e3.0	e0.25	1.0	0.03	1.0		0.03									
20	12	0.46	94	26.0			49	28.0	e3.0	e0.21	1.0	0.03	1.0		0.03									
21	6.0	0.18	54	12.0			97	44.0	e2.0	e0.19	1.0	0.04	1.0		0.02									
22	4.0	0.11	34	5.8			34	15.0	e2.0	e0.19	1.0	0.03	1.0		0.03									
23	3.0	0.09	26	4.1			19	9.0	e2.0	e0.17	1.0	0.03	2.0		0.04									
24	4.0	0.11	18	2.5			21	11.0	e2.0	e0.14	1.0	0.03	2.0		0.05									
25	3.0	0.10	14	1.8			11	5.4	e2.0	e0.13	1.0	0.03	2.0		0.05									
26	2.0	0.08	11	1.4			12	5.8	e2.0	e0.14	1.0	0.03	2.0		0.04									
27	3.0	0.10	10	1.4			12	5.1	e2.0	e0.14	1.0	0.03	1.0		0.02									
28	3.0	0.10	17	2.7			e50	e19.0	e2.0	e0.12	2.0	0.05	1.0		0.04									
29	5.0	0.18	53	15.0			e56	e20.0	e2.0	e0.11	2.0	0.07	2.0		0.05									
30	4.0	0.18	157	82.0			e46	e16.0	e2.0	e0.10	1.0	0.04	2.0		0.05									
31	---	---	270	169			---	---	2.0	0.08	1.0	0.03	---		---									
TOTAL	---	4.74	---	367.86			---	591.8	---	62.16	---	1.26	---		---	3.71								

e Estimated

06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY

LOCATION.--Lat 44°28'10", long 109°25'49", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 fair 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<sup>3</sup>/s.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	242	e140	e135	e110	114	192	587	6320	3130	502	250
2	159	219	e150	e130	e110	110	170	580	5870	2730	483	237
3	160	210	e155	114	e110	e110	154	696	4540	2340	472	226
4	163	216	e150	e120	e110	e110	185	758	3800	2100	547	225
5	165	208	e150	e120	e110	108	286	885	3680	2050	481	218
6	158	216	151	120	113	107	461	701	4310	1890	439	229
7	159	373	150	123	110	105	484	681	4520	1720	423	573
8	161	284	145	126	112	e105	361	659	3940	1690	421	641
9	164	216	134	127	112	e105	391	540	3340	1600	391	419
10	166	203	122	128	113	100	349	526	2590	1380	371	327
11	165	203	109	113	104	104	377	516	2100	1270	357	293
12	170	211	132	123	113	107	311	555	1810	1200	360	274
13	170	201	e155	125	113	104	357	846	1700	1140	350	262
14	180	194	e155	130	107	103	726	1410	2000	1090	323	247
15	184	190	e145	117	115	102	e1000	1600	2450	1060	322	237
16	182	190	e145	e115	107	105	701	1350	2980	1080	320	233
17	214	191	146	e120	112	101	516	1420	3670	e1300	323	234
18	200	189	147	e125	116	105	430	2000	4750	1170	322	254
19	182	172	140	e120	117	e105	364	3070	4400	1080	310	237
20	183	154	138	e115	113	e105	312	3540	3780	934	317	222
21	189	174	136	e115	113	105	303	3600	3560	872	303	217
22	197	179	137	e120	112	121	285	2550	3550	808	321	213
23	219	177	e130	e115	119	128	276	1670	3470	840	284	211
24	207	172	109	e120	124	135	284	1310	3630	735	280	202
25	176	166	116	e115	79	131	311	1140	3780	691	269	195
26	175	166	e120	e115	106	143	437	1170	3680	679	258	195
27	205	143	e125	e115	e115	133	449	1350	3420	683	287	193
28	224	82	e125	117	115	124	395	1940	3190	651	316	193
29	210	113	127	e120	---	121	377	3000	3250	569	293	188
30	214	e150	134	e115	---	128	608	4390	3280	545	275	198
31	224	---	134	e115	---	150	---	5990	---	520	258	---
TOTAL	5684	5804	4252	3728	3110	3534	11852	51030	107360	39547	10978	7843
MEAN	183.4	193.5	137.2	120.3	111.1	114.0	395.1	1646	3579	1276	354.1	261.4
MAX	224	373	155	135	124	150	1000	5990	6320	3130	547	641
MIN	158	82	109	113	79	100	154	516	1700	520	258	188
AC-FT	11270	11510	8430	7390	6170	7010	23510	101200	212900	78440	21770	15560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)

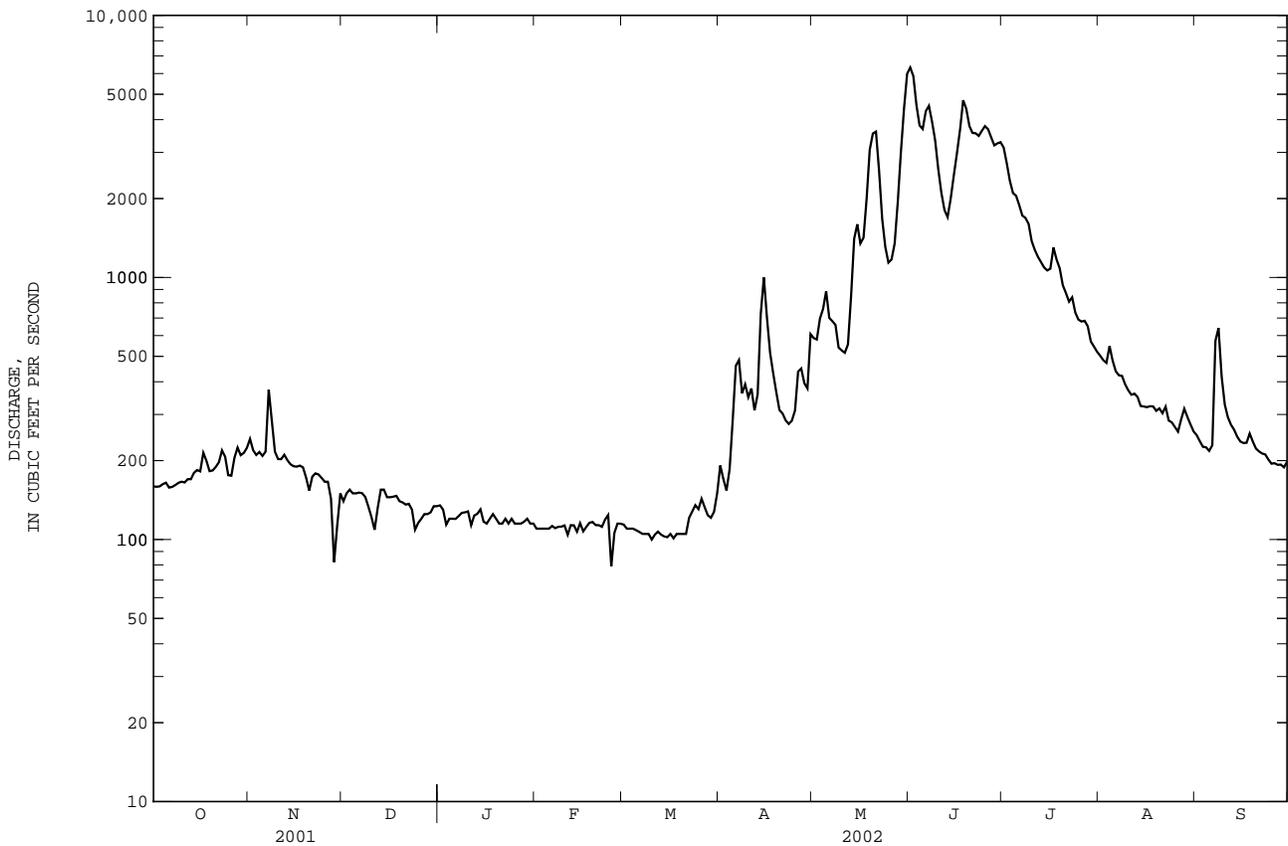
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	257.3	208.7	158.3	143.3	142.9	199.4	515.2	2042	3554	1861	572.2	322.2	
MAX	330	304	283	199	184	294	792	3459	6251	3130	1015	480	
(WY)	1998	1997	1996	1997	1997	1997	1990	1997	1997	1996	1997	1997	
MIN	183	155	129	107	98.6	114	282	1221	1506	595	249	170	
(WY)	2002	2001	2001	2001	2001	2002	1993	1990	2001	1994	1994	1994	

YELLOWSTONE RIVER BASIN

06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1990 - 2002	
ANNUAL TOTAL	182267		254722		--	
ANNUAL MEAN	499.4		697.9		833.0	
HIGHEST ANNUAL MEAN	--		--		1324 1997	
LOWEST ANNUAL MEAN	--		--		502 2001	
HIGHEST DAILY MEAN	3740	May 15	6320	Jun 1	8940	Jun 10 1997
LOWEST DAILY MEAN	82	Nov 28	79	Feb 25	74	Dec 23 1996
ANNUAL SEVEN-DAY MINIMUM	95	Feb 8	104	Mar 9	81	Dec 19 1996
MAXIMUM PEAK FLOW	--		9100	May 31	11000 <sup>a</sup>	Jun 9 1996
MAXIMUM PEAK STAGE	--		8.10	May 31	9.54 <sup>b</sup>	Jun 13 1991
ANNUAL RUNOFF (AC-FT)	361500		505200		603500	
10 PERCENT EXCEEDS	1450		2200		2590	
50 PERCENT EXCEEDS	191		213		263	
90 PERCENT EXCEEDS	100		112		130	

a Gage height, 8.63 ft, from floodmarks.  
 b Discharge, 9,460 ft<sup>3</sup>/s.  
 e Estimated.



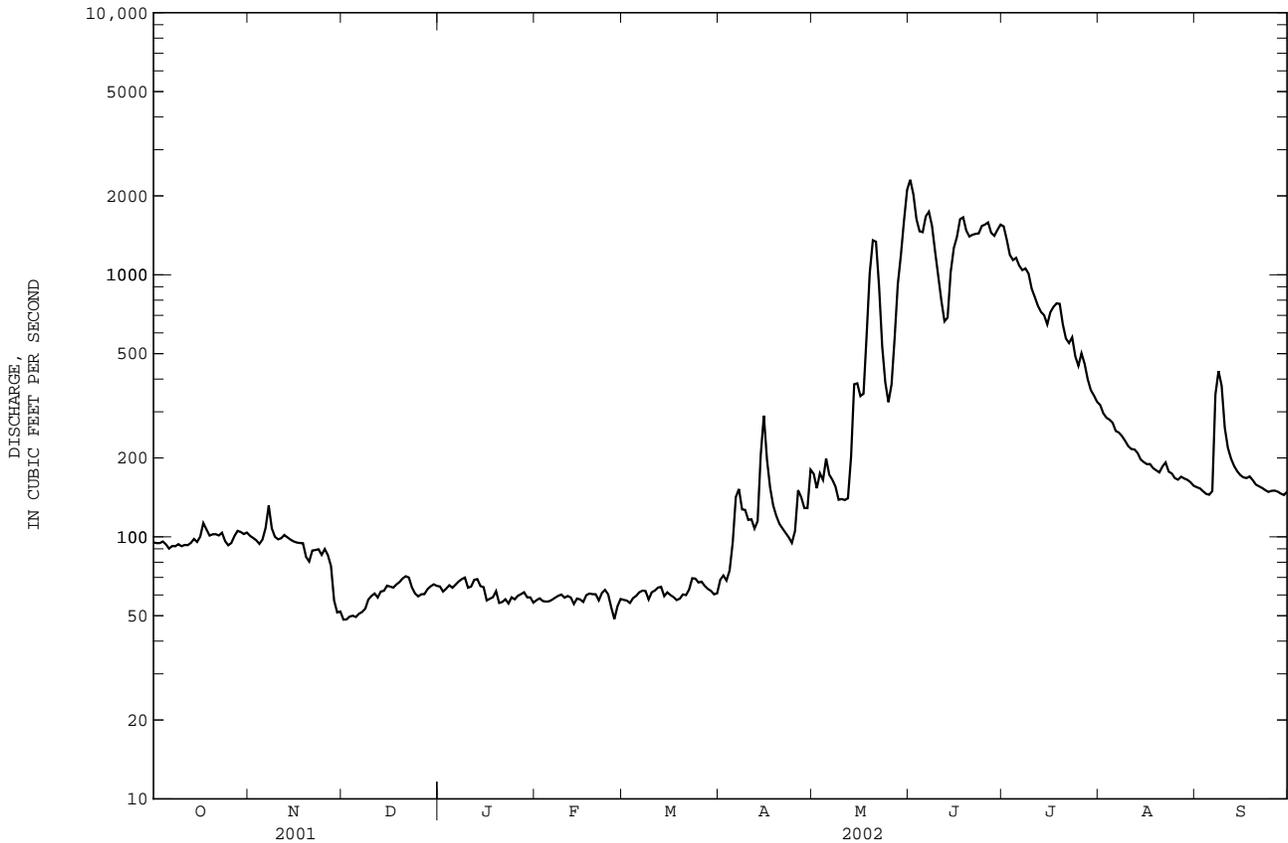


YELLOWSTONE RIVER BASIN

06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1957 - 2002	
ANNUAL TOTAL	88262		112506		--	
ANNUAL MEAN	241.8		308.2		409.7	
HIGHEST ANNUAL MEAN	--		--		609 1997	
LOWEST ANNUAL MEAN	--		--		221 1977	
HIGHEST DAILY MEAN	1590	May 16	2300	Jun 1	6100	Jun 9 1981
LOWEST DAILY MEAN	45	Feb 8	48	Dec 1,2	31	Dec 21 1998
ANNUAL SEVEN-DAY MINIMUM	50	Nov 29	50	Nov 29	40	Dec 18 1990
MAXIMUM PEAK FLOW	--		3170	May 31	10000	Jun 9 1981
MAXIMUM PEAK STAGE	--		7.50	May 31	9.24 <sup>a</sup>	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	175100		223200		296800	
10 PERCENT EXCEEDS	730		1070		1240	
50 PERCENT EXCEEDS	99		104		138	
90 PERCENT EXCEEDS	63		58		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, SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 5,440 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 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.45	131	e64	e84	e74	e76	87	97	2480	1440	2.8	0.86
2	0.44	137	e60	e76	e76	e76	86	44	2270	1250	2.2	0.84
3	0.45	135	e60	e78	e76	e74	82	39	1620	1030	1.8	0.83
4	0.48	131	e64	e80	e78	e76	84	40	1320	806	1.7	0.82
5	0.48	135	e62	e78	e80	e78	100	67	1290	826	1.3	0.82
6	0.44	139	e64	e80	e82	e78	138	35	1530	788	0.88	0.85
7	0.42	165	e64	e82	e80	e80	165	11	1720	690	0.88	47
8	0.43	154	e66	e84	e80	e80	142	7.3	1500	636	0.91	122
9	0.43	141	e74	e88	e80	e76	142	1.7	1000	671	0.86	112
10	0.43	137	e74	e82	e78	e78	135	1.6	690	450	0.83	78
11	0.44	136	e76	e84	e78	e79	132	2.0	441	371	0.77	22
12	0.46	137	e72	e86	e80	e83	123	1.7	335	304	0.85	3.6
13	0.49	138	e76	e86	e76	e83	120	1.8	264	259	0.80	2.1
14	1.5	137	e76	e82	e78	e77	176	84	491	252	0.91	1.5
15	6.5	136	e78	e80	e78	e79	285	138	966	214	0.87	1.2
16	11	134	e78	e74	e74	e77	183	100	1100	342	0.85	1.2
17	31	135	e76	e76	e76	e77	149	34	1580	329	0.84	1.3
18	36	136	e80	e82	e78	e73	127	149	1760	362	0.83	1.5
19	32	127	e84	e84	e78	e77	106	454	1390	549	0.82	1.4
20	30	117	e84	e74	e80	e80	92	968	1210	310	0.83	1.2
21	39	122	e86	e74	e78	e80	89	1130	1230	214	11	1.2
22	92	126	e84	e76	e80	e84	71	570	1280	154	2.8	1.1
23	99	128	e78	e74	e86	e86	32	203	1270	170	1.8	1.1
24	93	122	e74	e74	e82	e86	11	125	1470	121	1.6	1.2
25	113	126	e72	e72	e74	e82	5.8	85	1460	103	1.5	1.1
26	114	126	e74	e74	e68	e82	43	85	1510	141	1.4	1.1
27	118	121	e74	e76	e74	e82	52	122	1360	133	2.2	1.1
28	124	105	e80	e80	e78	87	39	369	1330	90	1.6	1.1
29	127	92	e86	e78	---	83	21	600	1400	36	1.1	1.1
30	109	e80	e86	e76	---	82	64	1290	1450	4.2	1.1	1.0
31	104	---	e84	e74	---	82	---	2250	---	4.0	0.89	---
TOTAL	1285.84	3886	2310	2448	2180	2473	3081.8	9105.1	38717	13049.2	49.52	412.12
MEAN	41.48	129.5	74.52	78.97	77.86	79.77	102.7	293.7	1291	420.9	1.597	13.74
MAX	127	165	86	88	86	87	285	2250	2480	1440	11	122
MIN	0.42	80	60	72	68	73	5.8	1.6	264	4.0	0.77	0.82
AC-FT	2550	7710	4580	4860	4320	4910	6110	18060	76800	25880	98	817

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2002, BY WATER YEAR (WY)

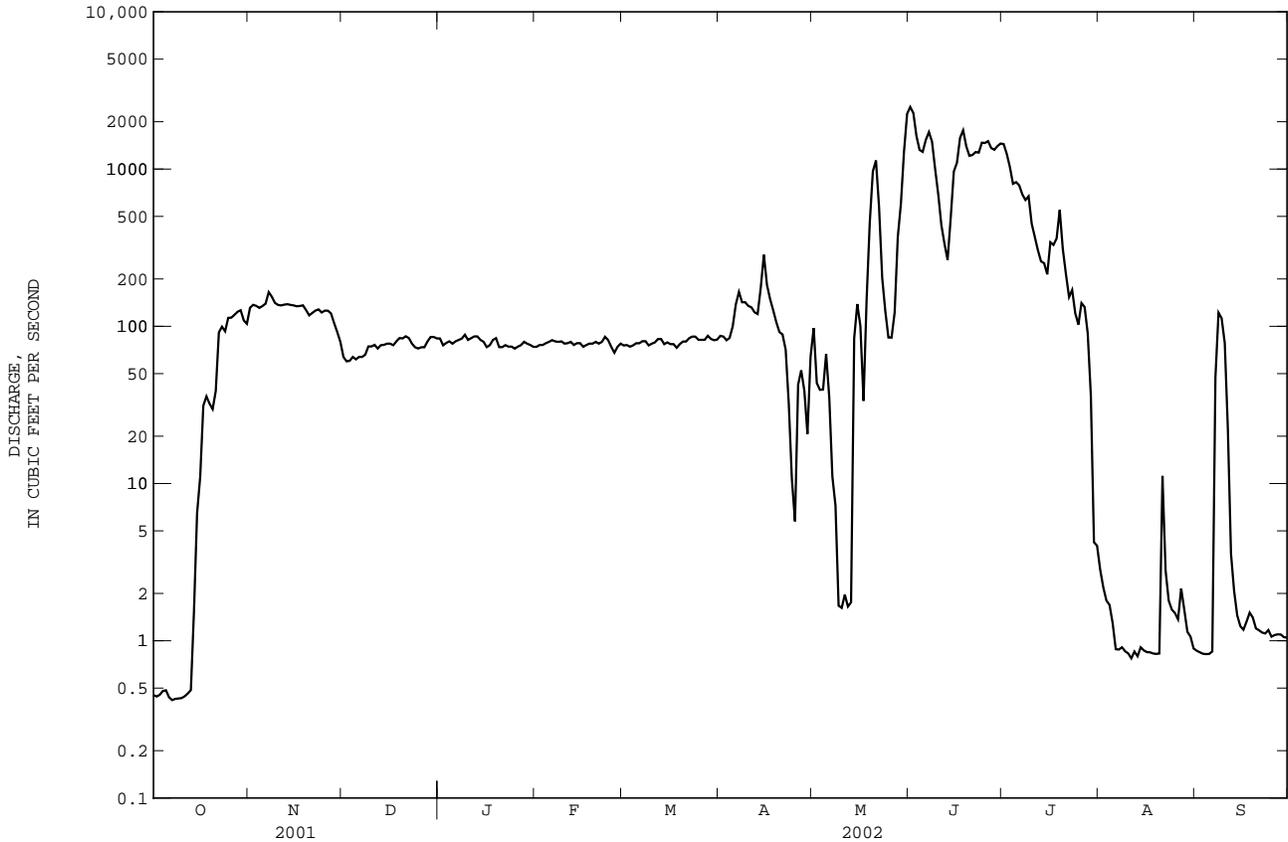
MEAN	107.1	153.6	116.2	102.8	100.4	112.2	186.9	679.3	1718	1037	183.0	82.64
MAX	407	268	167	158	145	174	387	1281	3813	3033	1083	381
(WY)	1924	1924	1998	1997	1998	1986	1925	1991	1997	1907	1907	1907
MIN	18.0	71.2	54.5	51.9	72.9	76.8	52.9	168	495	18.9	0.74	0.039
(WY)	1979	1980	1925	1995	1985	1924	2001	1977	1994	1994	2001	1992

YELLOWSTONE RIVER BASIN

06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1903 - 2002
ANNUAL TOTAL	52415.36	78997.58	--
ANNUAL MEAN	143.6	216.4	373.4
HIGHEST ANNUAL MEAN	--	--	705
LOWEST ANNUAL MEAN	--	--	148
HIGHEST DAILY MEAN	1280	2480	7370
LOWEST DAILY MEAN	0.32	0.42	0.00
	May 15,16	Jun 1	Jun 9 1981
	Sep 28	Oct 7	Several days, 1992-1993
ANNUAL SEVEN-DAY MINIMUM	0.37	0.44	0.00
	Sep 24	Oct 6	Sep 15 1992
MAXIMUM PEAK FLOW	--	3460	9960
MAXIMUM PEAK STAGE	--	7.67	9.41 <sup>a</sup>
		Jun 1	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	104000	156700	270500
10 PERCENT EXCEEDS	434	690	1140
50 PERCENT EXCEEDS	88	80	120
90 PERCENT EXCEEDS	0.71	1.1	20

a Site and datum then in use.  
e Estimated.



06281700 SHOSHONE RIVER ABOVE DEMARIS SPRINGS, NEAR CODY, WY

LOCATION.--Lat 44°30'39", long 109°08'47", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.5, T.52 N., R.102 W, Park County, Hydrologic Unit 10080014, at bridge on State Highway 16, 1.9 mi downstream from Buffalo Bill Reservoir, and 3.8 mi west of Cody city limits.

PERIOD OF RECORD.--October 1987 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBIDITY LAB HACH 2100AN (NTU) (99872)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT													
23...	1745	117	7.2	623	10.6	111	7.8	236	4.5	8.5	81	23.4	5.58
DEC													
18...	1750	128	3.5	635	11.1	121	6.7	288	1.5	11.0	100	29.3	6.97
FEB													
05...	1800	98	2.8	635	10.9	97	6.8	423	5.0	3.0	170	48.9	11.2
MAR													
27...	1830	125	1.1	630	12.6	115	6.6	411	6.0	3.5	160	45.1	10.4
MAY													
14...	1530	1240	3.9	631	11.1	112	7.8	236	--	7.5	78	21.9	5.58
JUL													
01...	1840	1080	9.5	636	10.6	114	7.3	140	28.0	10.5	46	12.8	3.38
AUG													
06...	1815	950	26	635	9.0	100	7.7	133	26.0	12.0	33	9.18	2.39
SEP													
11...	1645	848	7.1	639	9.6	114	6.9	161	21.0	15.0	55	15.6	3.85

Date	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT													
23...	1.21	.7	15.1	89	1.84	.1	13.1	31.4	.20	45.9	145	<.04	.13
DEC													
18...	1.78	.8	17.5	107	2.74	.3	13.1	41.9	.24	61.5	178	E.02	.12
FEB													
05...	3.23	.7	21.7	158	4.48	.3	14.8	66.5	.36	70.3	266	E.02	.18
MAR													
27...	2.99	.7	20.6	151	3.21	.3	13.2	63.7	.34	84.4	250	<.04	.10
MAY													
14...	1.17	.9	17.3	88	.89	.2	12.6	33.6	.20	488	146	<.04	E.10
JUL													
01...	.88	.7	10.8	54	.98	E.1	14.1	15.6	.12	267	91	<.04	E.09
AUG													
06...	.61	.5	7.11	52	.56	.1	13.8	14.0	.11	204	80	<.04	E.10
SEP													
11...	1.09	.6	10.4	61	.77	.1	13.3	18.4	.14	230	100	<.04	.17

Date	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
OCT					
23...	<.05	<.008	<.06	E.01	E.03
DEC					
18...	<.05	<.008	<.06	E.01	<.06
FEB					
05...	<.05	<.008	<.06	E.01	E.04
MAR					
27...	<.05	<.008	<.06	<.02	<.06
MAY					
14...	<.05	<.008	<.06	E.01	E.04
JUL					
01...	.07	<.008	<.06	.03	E.06
AUG					
06...	.10	<.008	E.03	.04	.08
SEP					
11...	.05	<.008	E.04	.03	E.05

E -- Estimated value

## YELLOWSTONE RIVER BASIN

06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44°31'00", long 109°05'50", in lot 71, NE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>. Area at site prior to October 1, 1949, 1,502 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1921 to current year. 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<sup>3</sup>/s, June 15, 1918, by computation of flow over Corbett Dam, 10 mi downstream.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	719	174	180	165	166	165	186	1050	1140	1110	1090	939
2	716	171	182	165	166	165	185	1040	1190	1120	1120	933
3	715	170	186	165	166	165	184	1040	1160	1130	1110	889
4	715	168	188	164	166	165	182	1120	1140	1150	1080	929
5	385	168	186	165	167	169	183	1120	1140	1120	1040	948
6	227	168	184	166	168	172	184	1120	1120	1170	1010	938
7	203	168	185	166	169	173	184	1120	1120	1220	992	965
8	192	166	185	166	170	170	192	1110	1120	1220	992	967
9	191	166	185	166	168	167	187	1110	1120	1170	996	953
10	180	168	189	170	168	167	178	1130	1110	1170	993	930
11	181	166	183	176	168	168	183	1150	1100	1160	993	908
12	181	167	185	177	169	169	183	1210	1090	1170	991	898
13	185	167	186	178	170	168	184	1280	1060	1220	992	882
14	188	168	186	182	170	173	186	1320	1050	1190	1010	878
15	187	169	188	186	170	181	186	1280	1060	1190	1010	899
16	182	167	187	185	169	185	186	1270	1060	1180	1040	856
17	184	164	187	185	170	184	186	1250	1050	1170	1030	837
18	183	165	188	179	171	183	187	1250	1050	1180	1020	871
19	183	167	190	171	172	184	188	1270	1050	1180	1040	806
20	183	169	191	173	171	184	188	1270	1050	1180	1040	784
21	182	169	174	172	173	184	188	1220	1050	1180	1030	775
22	184	168	172	173	178	185	452	1250	1040	1140	1050	772
23	179	168	172	179	179	186	500	1210	1060	1100	1030	774
24	174	168	171	178	179	185	637	1170	1050	1020	1040	773
25	176	170	170	179	178	185	703	1170	1060	1040	1030	768
26	175	170	168	180	176	185	807	1170	1080	1020	1030	757
27	174	168	167	179	175	185	737	1180	1110	1020	1010	761
28	172	168	167	178	168	185	687	1180	1090	1060	1020	763
29	172	170	166	178	---	185	760	1150	1120	1040	1040	742
30	173	170	165	177	---	186	881	1140	1120	1090	954	715
31	174	---	165	176	---	186	---	1130	---	1100	936	---
TOTAL	8015	5045	5578	5399	4780	5494	10054	36480	32760	35210	31759	25610
MEAN	258.5	168.2	179.9	174.2	170.7	177.2	335.1	1177	1092	1136	1024	853.7
MAX	719	174	191	186	179	186	881	1320	1190	1220	1120	967
MIN	172	164	165	164	166	165	178	1040	1040	1020	936	715
AC-FT	15900	10010	11060	10710	9480	10900	19940	72360	64980	69840	62990	50800

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2002, BY WATER YEAR (WY)\*

	MEAN	672.9	520.5	519.4	488.7	486.7	517.2	839.6	1447	2429	2546	1302	938.2
MAX	1198	966	944	894	904	1638	3013	3162	6440	6556	3397	2113	
(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	1017	685	582	
(WY)	1989	1989	1989	1989	1959	1959	1959	1995	1992	1993	1977	1988	

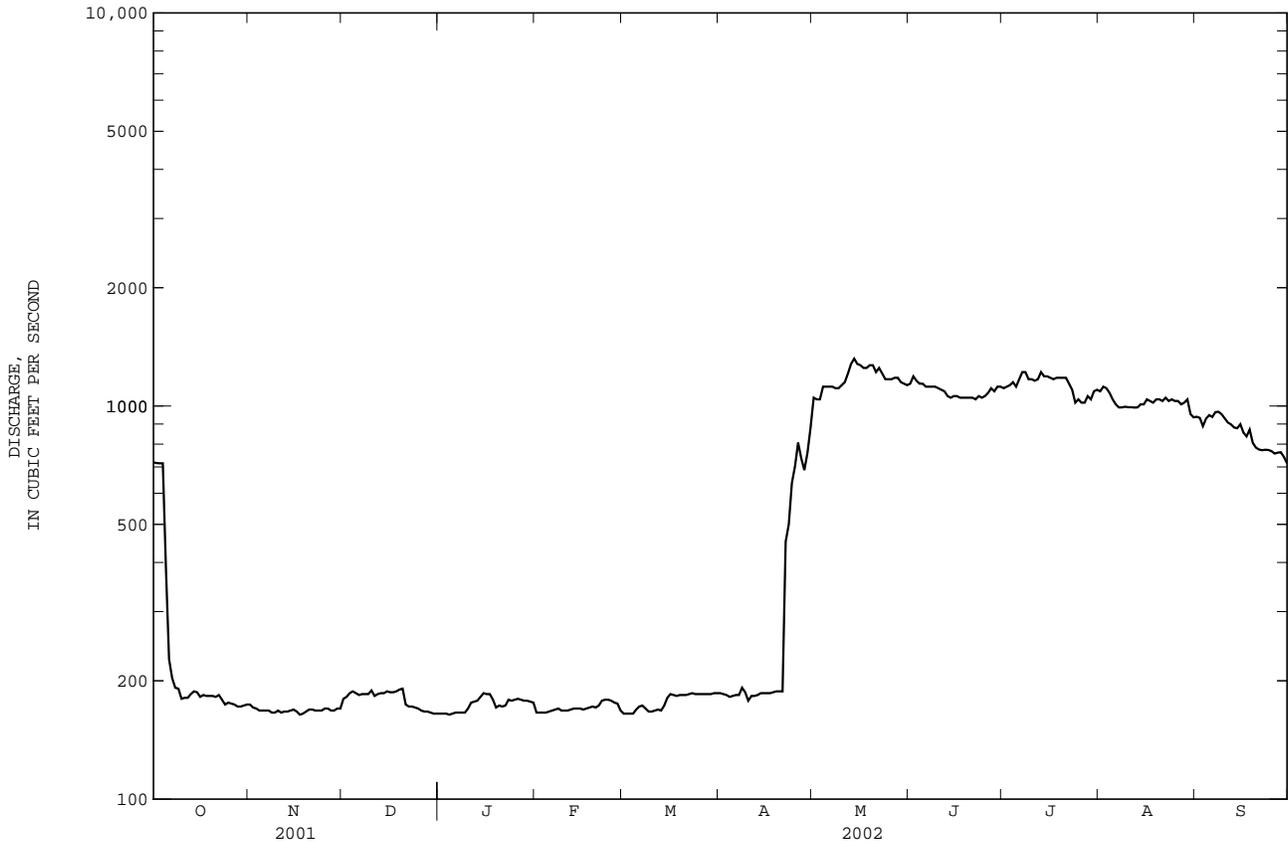
06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1943 - 2002*	
ANNUAL TOTAL	220305		206184		--	
ANNUAL MEAN	603.6		564.9		1062 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		--		1764 1943	
LOWEST ANNUAL MEAN	--		--		556 1988	
HIGHEST DAILY MEAN	1170	Jun 26	1320	May 14	15100	Jun 9 1981
LOWEST DAILY MEAN	164	Nov 17	164	Nov 17, Jan 4	59	Nov 19 1933#
ANNUAL SEVEN-DAY MINIMUM	167	Nov 12	165	Dec 30	64	Jan 21 1959
MAXIMUM PEAK FLOW	--		1690 Aug 29		17300	Jun 9 1981#
MAXIMUM PEAK STAGE	--		5.64 Aug 29		11.57	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	437000		409000		769300	
10 PERCENT EXCEEDS	1090		1150		1840	
50 PERCENT EXCEEDS	422		187		837	
90 PERCENT EXCEEDS	171		168		290	

\* For period following Heart Mountain Diversion. See REMARKS.

# For period of record through 2002.

a Average discharge (water years 1922-1942) prior to Heart Mountain Diversion 1,256 ft<sup>3</sup>/s.



YELLOWSTONE RIVER BASIN

06284500 BITTER CREEK NEAR GARLAND, WY

LOCATION.--Lat 44°45'13", long 108°35'29", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MM DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
OCT 23...	0900	50	644	10.5	104	8.4	1180	3.0	7.5	<.04	5.13	.020	<.02
FEB 04...	1730	19	665	11.7	92	8.1	1310	-7.5	.0	.04	6.34	.024	E.01
MAY 14...	0650	308	654	9.7	97	8.0	655	9.5	8.5	.15	3.23	.073	.11
AUG 06...	0940	350	658	8.4	96	7.9	635	25.0	14.5	<.04	2.85	.019	.08

Date	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)
OCT 23...	210	220
FEB 04...	110	130
MAY 14...	E190k	E130k
AUG 06...	340	930

E -- Estimated value  
 k -- Counts outside acceptable range (Non-ideal colony count)

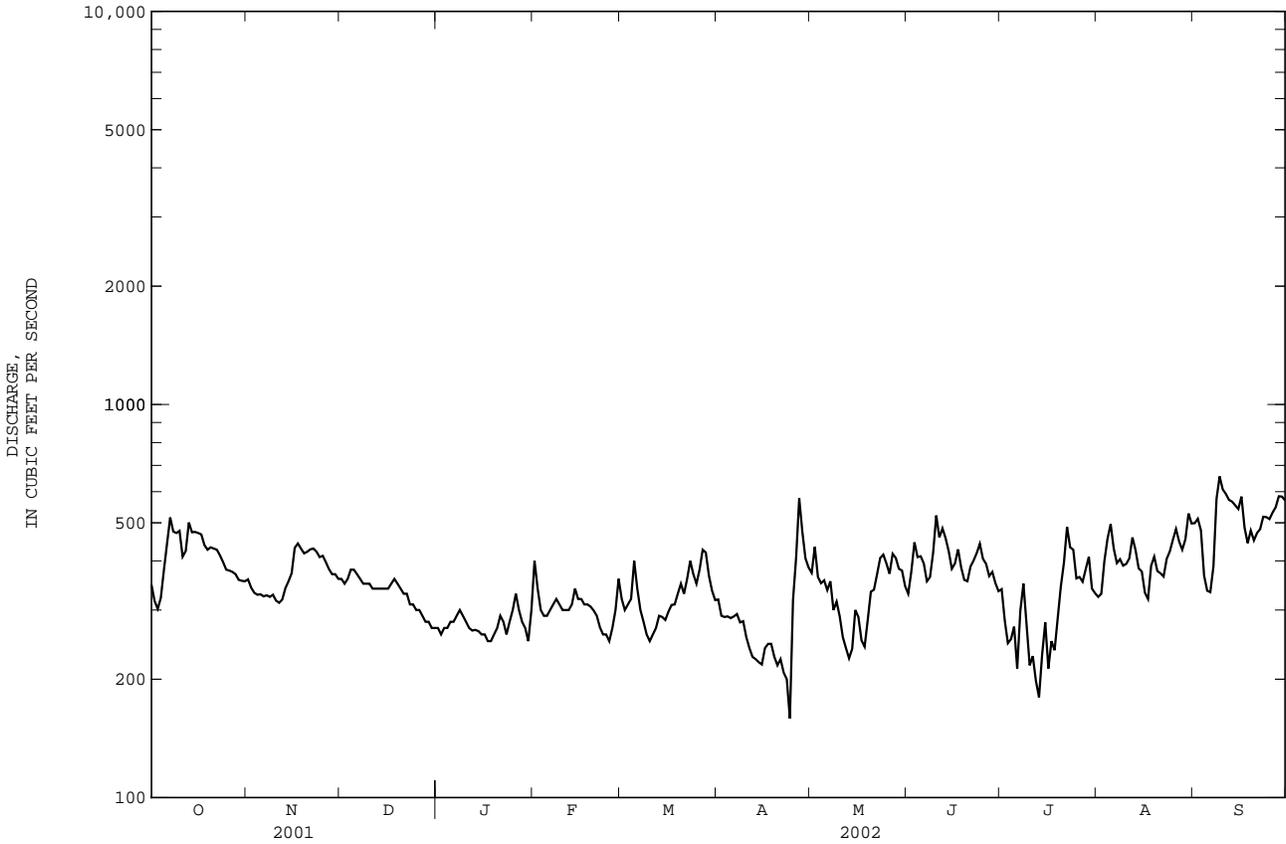


YELLOWSTONE RIVER BASIN

06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1967 - 2002	
ANNUAL TOTAL	160795		129959		--	
ANNUAL MEAN	440.5		356.1		898.1	
HIGHEST ANNUAL MEAN	--		--		1659 1997	
LOWEST ANNUAL MEAN	--		--		356 2002	
HIGHEST DAILY MEAN	5710	Jun 14	656	Sep 9	15200	Jun 10 1981
LOWEST DAILY MEAN	179	Jul 7	159	Apr 24	27	May 31 1977
ANNUAL SEVEN-DAY MINIMUM	223	Jul 3	212	Apr 18	48	May 30 1977
MAXIMUM PEAK FLOW	--		810 <sup>a</sup>		16400 <sup>b</sup>	
MAXIMUM PEAK STAGE	--		9.36 <sup>c</sup>		11.27	
ANNUAL RUNOFF (AC-FT)	318900		257800		650600	
10 PERCENT EXCEEDS	560		474		1460	
50 PERCENT EXCEEDS	392		350		660	
90 PERCENT EXCEEDS	270		256		323	

- a Gage height, 5.26 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 22...	1845	426	660	12.3	126	8.3	999	12.0	10.0	--	--	--	--
MAR 18...	1450	306	664	12.5	108	8.3	1040	3.0	3.5	--	--	--	--
MAY 13...	1915	185	665	10.7	128	8.8	728	21.0	17.0	--	--	--	--
AUG 06...	0730	474	664	7.6	90	7.9	706	24.0	16.5	200	52.3	16.5	2.70

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + DIS-ORGANIC (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 22...	--	--	--	--	--	--	--	--	--	<.04	--	1.26	E.007
MAR 18...	--	--	--	--	--	--	--	--	--	E.02	--	.98	.008
MAY 13...	--	--	--	--	--	--	--	--	--	<.04	--	1.97	.049
AUG 06...	2	55.1	199	5.80	13.8	152	.58	547	427	<.04	.36	2.17	.019

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
OCT 22...	--	<.02	--	44	49	--
MAR 18...	--	<.02	--	E7k	E8k	--
MAY 13...	--	.05	--	130	260	--
AUG 06...	E.05	.05	.45	E500k	>2000	E5

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

## YELLOWSTONE RIVER BASIN

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT

LOCATION.--Lat 45°19'00", long 107°55'05", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>. Area at site used prior to April 16, 1963, 19,626 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder. Datum 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1560	1370	1510	1670	1630	1560	1510	1770	1860	1630	1910	1900
2	1550	1350	1510	1670	1640	1560	1510	1750	1860	1640	1910	1890
3	1540	1350	1510	1680	1660	1570	1510	1740	1850	1680	1920	1900
4	1520	1330	1510	1500	1670	1570	1520	1750	1850	1680	1910	1900
5	1510	1310	1510	1510	1680	1590	1520	1750	1880	1680	1900	1900
6	1500	1290	1510	1510	1710	1600	1520	1750	1890	1690	1910	1890
7	1490	1280	1510	1510	1720	1600	1520	1760	1910	1690	1900	1880
8	1460	1360	1520	1510	1750	1610	1520	1800	1920	1800	1890	1870
9	1450	1350	1510	1510	1770	1620	1520	1770	1920	2000	1870	1820
10	1380	1330	1510	1510	1780	1620	1530	1730	1930	2010	1870	1720
11	1250	1320	1520	1510	1800	1630	1530	1730	1900	2010	1870	1680
12	1250	1300	1530	1500	1810	1630	1530	1740	1890	2000	1860	1670
13	1240	1290	1520	1520	1840	1640	1520	1740	1880	2000	1860	1670
14	1230	1280	1520	1510	1850	1640	1510	1760	1880	2010	1870	1660
15	1210	1270	1530	1530	1870	1650	1510	1790	1870	2010	1850	1650
16	1200	1450	1530	1520	1880	1650	1520	1820	1860	1990	1850	1630
17	1190	1510	1520	1510	1900	1670	1520	1850	1860	1860	1850	1630
18	1170	1500	1530	1500	1920	1660	1520	1860	1860	1890	1870	1630
19	1160	1490	1510	1500	1950	1620	1530	1850	1860	1970	1860	1620
20	1270	1500	1520	1500	1970	1630	1530	1870	1850	1970	1850	1610
21	1250	1490	1530	1500	1970	1640	1540	1880	1840	1970	1860	1610
22	1240	1510	1540	1510	1920	1630	1540	1840	1830	1980	1850	1610
23	1230	1500	1550	1520	1930	1640	1540	1860	1830	1970	1850	1600
24	1220	1510	1570	1530	1940	1640	1540	1860	1830	1970	1850	1600
25	1470	1510	1580	1530	1940	1640	1540	1860	1830	1970	1850	1600
26	1470	1510	1610	1530	1940	1640	1540	1860	1830	1970	1850	1600
27	1440	1510	1610	1550	1940	1640	1540	1860	1830	1970	1850	1600
28	1440	1510	1630	1560	1940	1640	1540	1860	1830	1970	1850	1600
29	1430	1510	1630	1580	1940	1640	1540	1860	1830	1970	1850	1600
30	1400	1510	1640	1590	1940	1640	1540	1860	1830	1970	1850	1600
31	1380	---	1660	1620	1940	1640	1540	1860	1830	1970	1850	1600
TOTAL	42100	42300	47890	47700	48550	48810	46490	55750	54970	58630	58200	50520
MEAN	1358	1410	1545	1539	1734	1575	1550	1798	1832	1891	1877	1684
MAX	1560	1510	1660	1680	1970	1670	1730	1920	1930	2010	1920	1900
MIN	1160	1270	1510	1500	1520	1490	1510	1730	1610	1630	1840	1470
AC-FT	83510	83900	94990	94610	96300	96810	92210	110600	109000	116300	115400	100200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2002, BY WATER YEAR (WY)

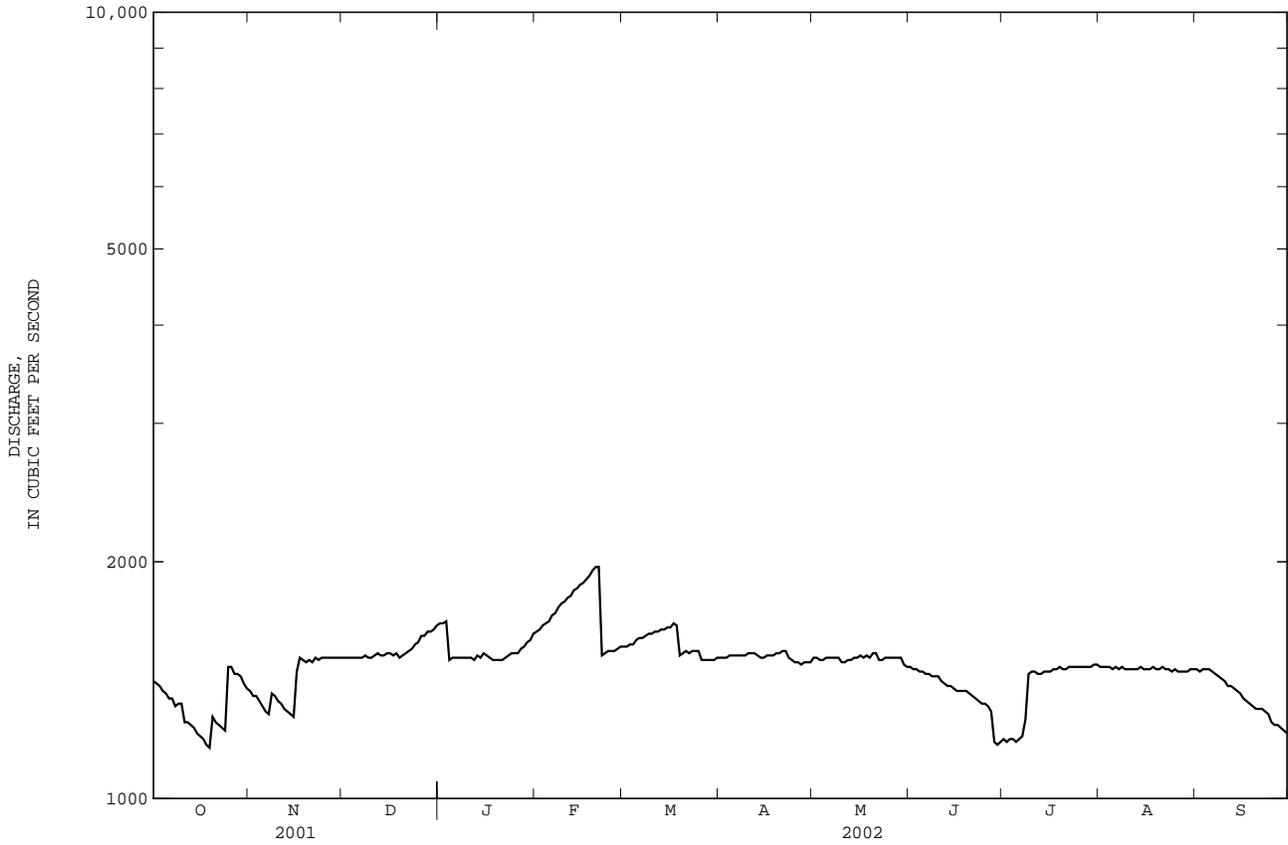
	MEAN	2956	2911	2723	2591	2659	2910	2895	3839	7061	5523	2885	2728
MAX	5142	5151	4999	5267	4384	4809	6675	8744	17900	18890	6784	4544	
(WY)	1972	1983	1968	1968	1976	1976	1972	1947	1935	1967	1997	1973	
MIN	1224	856	1095	1090	888	327	678	900	1078	1144	1260	1074	
(WY)	1978	1966	1935	1935	1936	1966	1966	1966	1966	1966	1966	1966	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1935 - 2002
ANNUAL TOTAL	711930	601910	
ANNUAL MEAN	1950	1649	3475
HIGHEST ANNUAL MEAN			5059
LOWEST ANNUAL MEAN			1565
HIGHEST DAILY MEAN	2420	Jul 30	2010
LOWEST DAILY MEAN	1160	Oct 19	1160
ANNUAL SEVEN-DAY MINIMUM	1200	Oct 13	1200
MAXIMUM PEAK FLOW			2030
MAXIMUM PEAK STAGE			60.03
INSTANTANEOUS LOW FLOW			49
ANNUAL RUNOFF (AC-FT)	1412000	1194000	2517000
10 PERCENT EXCEEDS	2340	1900	5790
50 PERCENT EXCEEDS	2020	1620	2840
90 PERCENT EXCEEDS	1450	1450	1570

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT--Continued

SUMMARY STATISTICS	WATER YEARS 1935 - 1961*		WATER YEARS 1967 - 2002**	
ANNUAL MEAN	3426		3493	
HIGHEST ANNUAL MEAN	5059	1947	4839	1999
LOWEST ANNUAL MEAN	1706	1961	1650	2002
HIGHEST DAILY MEAN	37400	Jun 16 1935	24800	Jul 6 1967
LOWEST DAILY MEAN	300	Dec 20 1951	112	Apr 2 1967
ANNUAL SEVEN-DAY MINIMUM	656	Dec 25 1934	518	Mar 25 1970
MAXIMUM PEAK FLOW	37400	Jun 16 1935	25300	Jul 5 1967
MAXIMUM LOW FLOW	228	Dec 9 1937	112 <sup>a</sup>	Apr 2 1967
ANNUAL RUNOFF (AC-FT)	2482000		2531000	
10 PERCENT EXCEEDS	6440		5540	
50 PERCENT EXCEEDS	2450		3120	
90 PERCENT EXCEEDS	1370		1840	

\* Prior to construction of Yellowtail Dam.  
 \*\* After completion of Yellowtail Dam.  
 a Result of discharge measurement.

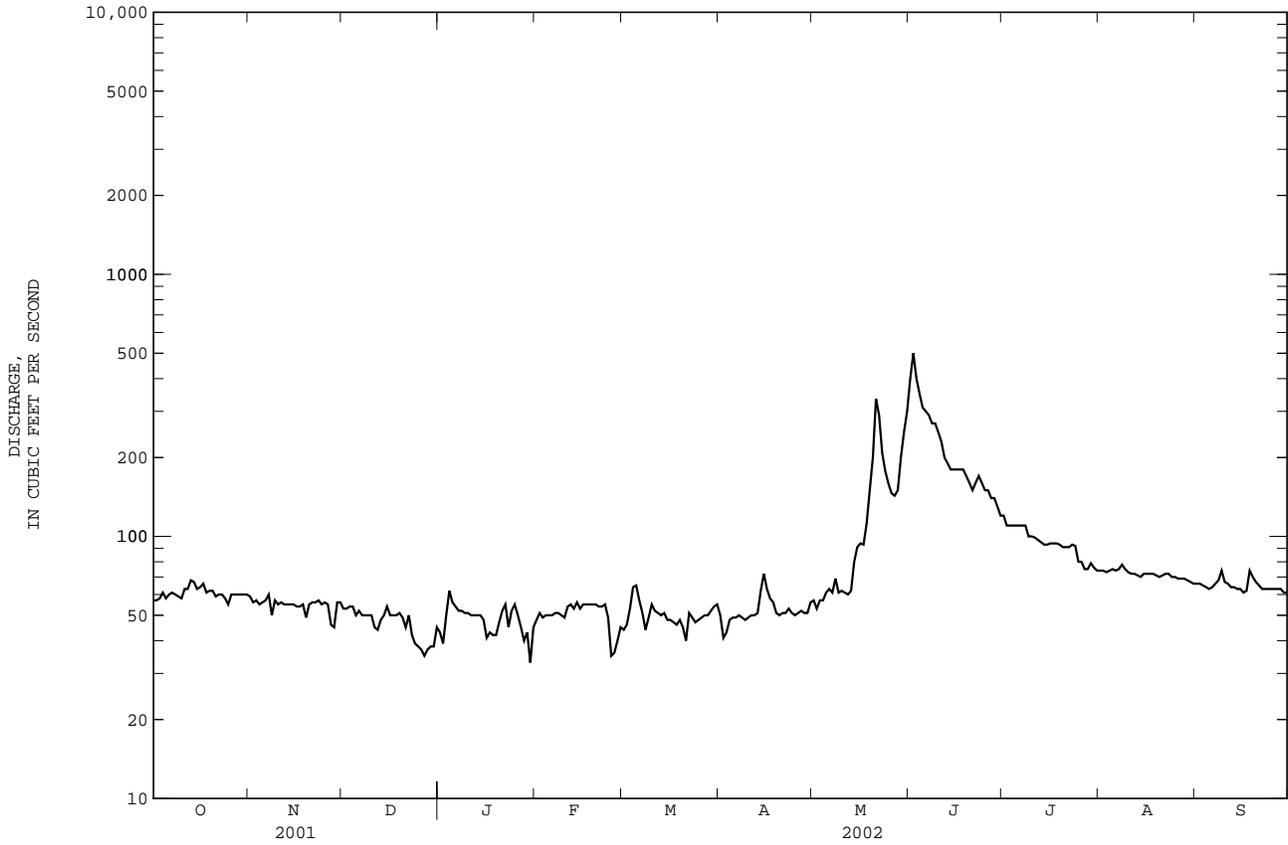




06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1940 - 2002	
ANNUAL TOTAL	31088.0	28718	--	
ANNUAL MEAN	85.17	78.68	148.8	
HIGHEST ANNUAL MEAN	--	--	253	1975
LOWEST ANNUAL MEAN	--	--	78.7	2002
HIGHEST DAILY MEAN	451 May 15	500 Jun 2	2340	Jun 4 1944
LOWEST DAILY MEAN	35 <sup>e</sup> Dec 27	33 Jan 30	18	Feb 2 1989
ANNUAL SEVEN-DAY MINIMUM	37 Dec 24	37 Dec 24	27	Dec 18 1983
MAXIMUM PEAK FLOW	--	Unknown	2730 <sup>a</sup>	Jun 3 1944
MAXIMUM PEAK STAGE	--	Unknown	5.93 <sup>b</sup>	Jun 9 1944
10 PERCENT EXCEEDS	148	150	335	
50 PERCENT EXCEEDS	65	58	83	
90 PERCENT EXCEEDS	54	46	56	

a Gage height, 4.97 ft, from rating curve extended above 1,400 ft<sup>3</sup>/s.  
 b Result of log jam.  
 e Estimated.

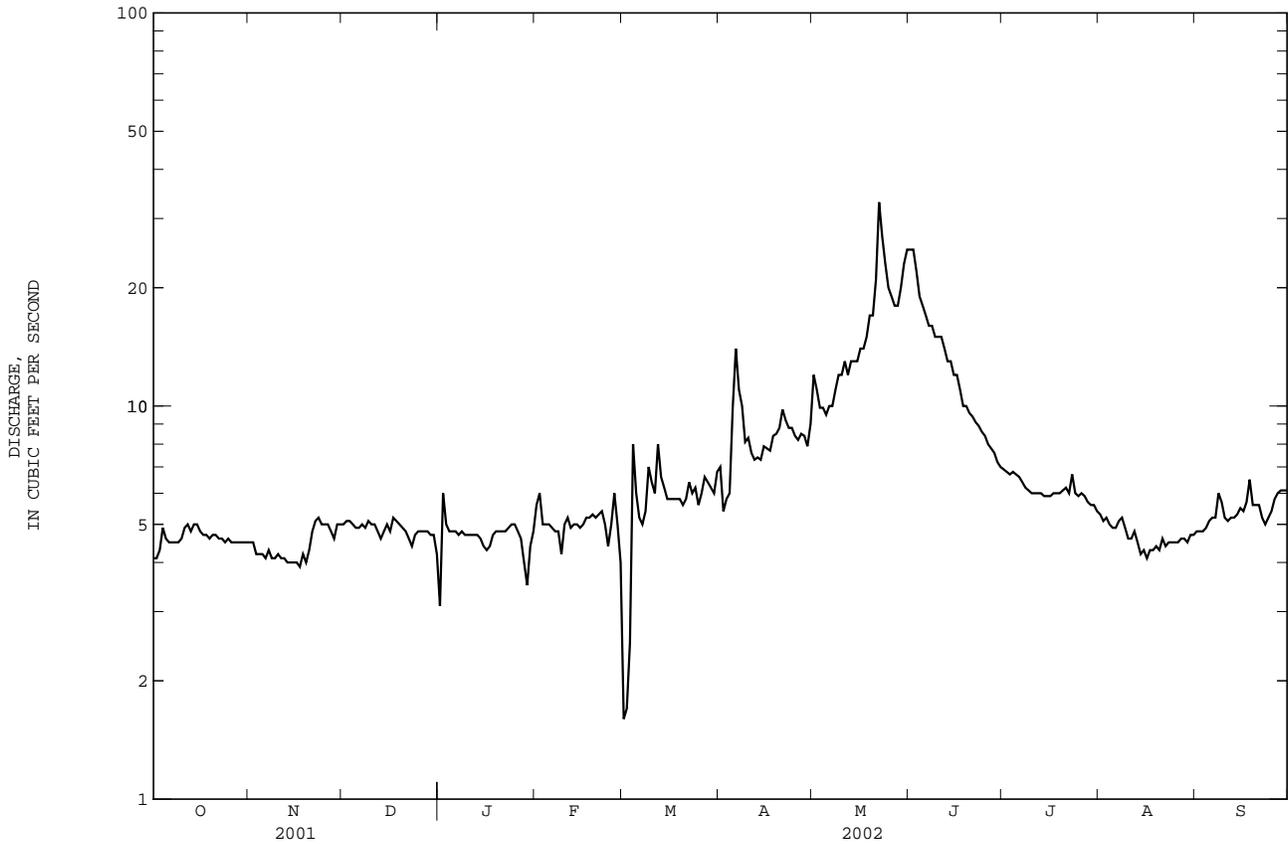




06289600 WEST PASS CREEK NEAR PARKMAN, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1983 - 2002*	
ANNUAL TOTAL	2304.1		2522.9		--	
ANNUAL MEAN	6.313		6.912		12.28	
HIGHEST ANNUAL MEAN	--		--		21.2 1995	
LOWEST ANNUAL MEAN	--		--		6.81 2001	
HIGHEST DAILY MEAN	19	May 17,18	33	May 22	291	May 9 1995
LOWEST DAILY MEAN	3.9	Nov 17	1.6 <sup>e</sup>	Mar 1	0.00 <sup>a</sup>	Dec 25 1998
ANNUAL SEVEN-DAY MINIMUM	4.0	Nov 11	3.7	Feb 25	0.81	Feb 3 1989
MAXIMUM PEAK FLOW	--		36	May 22	340	May 9 1995
MAXIMUM PEAK STAGE	--		2.27	May 22	4.76 <sup>b</sup>	Apr 28 1984
ANNUAL RUNOFF (AC-FT)	4570		5000		8900	
10 PERCENT EXCEEDS	9.4		12		23	
50 PERCENT EXCEEDS	5.3		5.2		8.0	
90 PERCENT EXCEEDS	4.5		4.3		5.5	

\* For period of operation.  
 a Result of channel blockage or diversion upstream.  
 b Backwater from ice, site and datum then in use.  
 e Estimated.





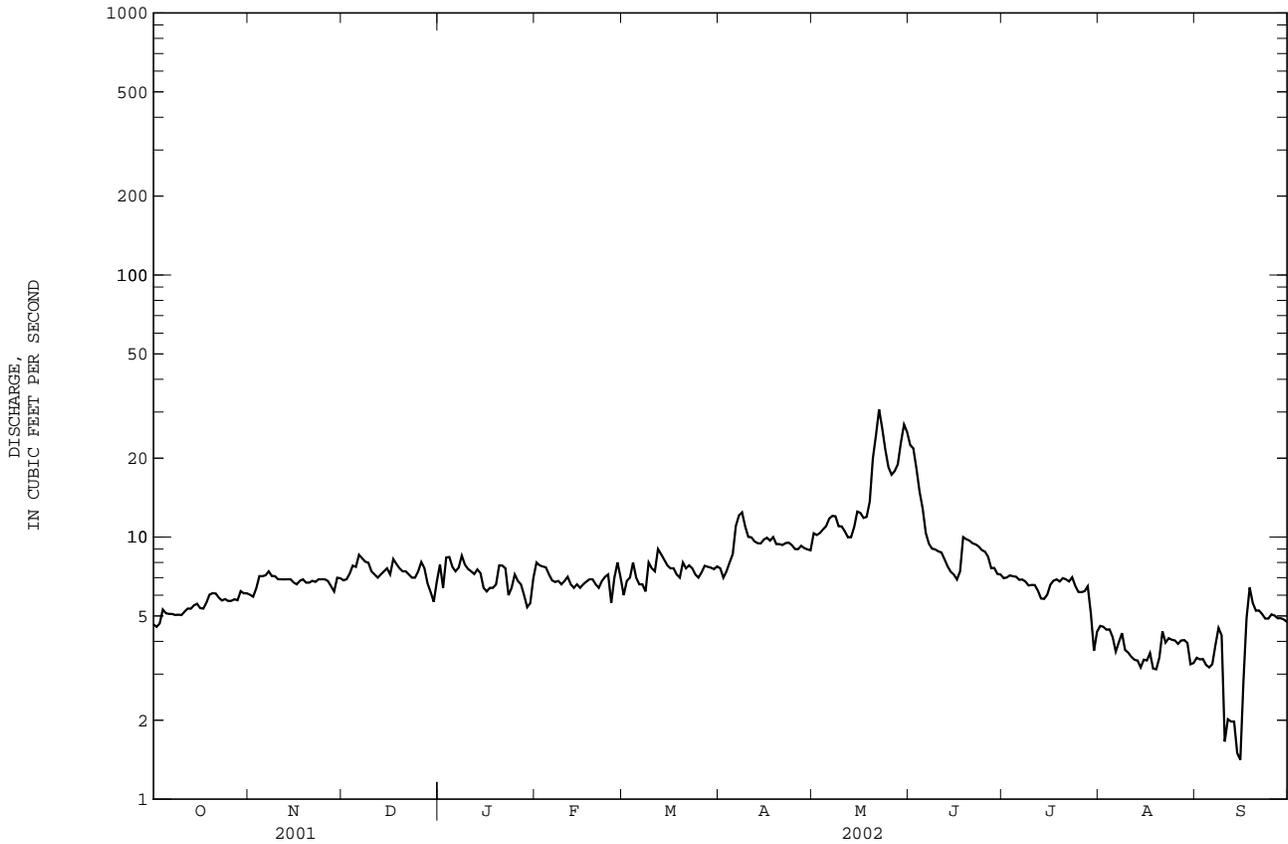
06289820 EAST PASS CREEK NEAR DAYTON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1983 - 2002	
ANNUAL TOTAL	3049.4		2752.4		--	
ANNUAL MEAN	8.355		7.541		14.56	
HIGHEST ANNUAL MEAN	--		--		23.6	
LOWEST ANNUAL MEAN	--		--		7.54	
HIGHEST DAILY MEAN	34	May 15	31	May 22	304	May 9 1995
LOWEST DAILY MEAN	3.0	Aug 16,17	1.4	Sep 15	1.4	Sep 15 2002
ANNUAL SEVEN-DAY MINIMUM	3.2	Aug 13	1.9	Sep 10	1.9	Sep 10 2002
MAXIMUM PEAK FLOW	--		33	May 22	511 <sup>a</sup>	May 9 1995
MAXIMUM PEAK STAGE	--		5.93	May 22	9.00 <sup>b</sup>	Feb 6 1996
INSTANTANEOUS LOW FLOW	--		--		1.7	Aug 6 1988
ANNUAL RUNOFF (AC-FT)	6050		5460		10550	
10 PERCENT EXCEEDS	12		10		28	
50 PERCENT EXCEEDS	7.4		7.0		9.2	
90 PERCENT EXCEEDS	4.7		4.0		6.0	

a Gage height, 4.47 ft, site and datum then in use, from rating curve extended above 221 ft<sup>3</sup>/s.

b Ice jam, site and datum then in use.

e Estimated.





06290000 PASS CREEK NEAR WYOLA, MT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1939 - 2002*	
ANNUAL TOTAL	7097.60	4963.09	--	
ANNUAL MEAN	19.45	13.60	36.02	
HIGHEST ANNUAL MEAN	--	--	76.8 1944	
LOWEST ANNUAL MEAN	--	--	13.6 2002	
HIGHEST DAILY MEAN	250 May 15	90 <sup>e</sup> Apr 7	1120 Jun 20	1947
LOWEST DAILY MEAN	0.40 Sep 11	0.00 Sep 1-7	0.00 Sep 1	2002
ANNUAL SEVEN-DAY MINIMUM	0.51 Sep 10	0.00 Sep 1	0.00 Sep 1	2002
MAXIMUM PEAK FLOW	--	90 <sup>a</sup> Apr 7	1150 <sup>c</sup> Jun 4	1944
MAXIMUM PEAK STAGE	--	4.45 <sup>b</sup> Apr 5	6.96 May 9	1995
ANNUAL RUNOFF (AC-FT)	14080	9840	26090	
10 PERCENT EXCEEDS	45	27	77	
50 PERCENT EXCEEDS	10	9.3	21	
90 PERCENT EXCEEDS	1.8	4.0	8.0	

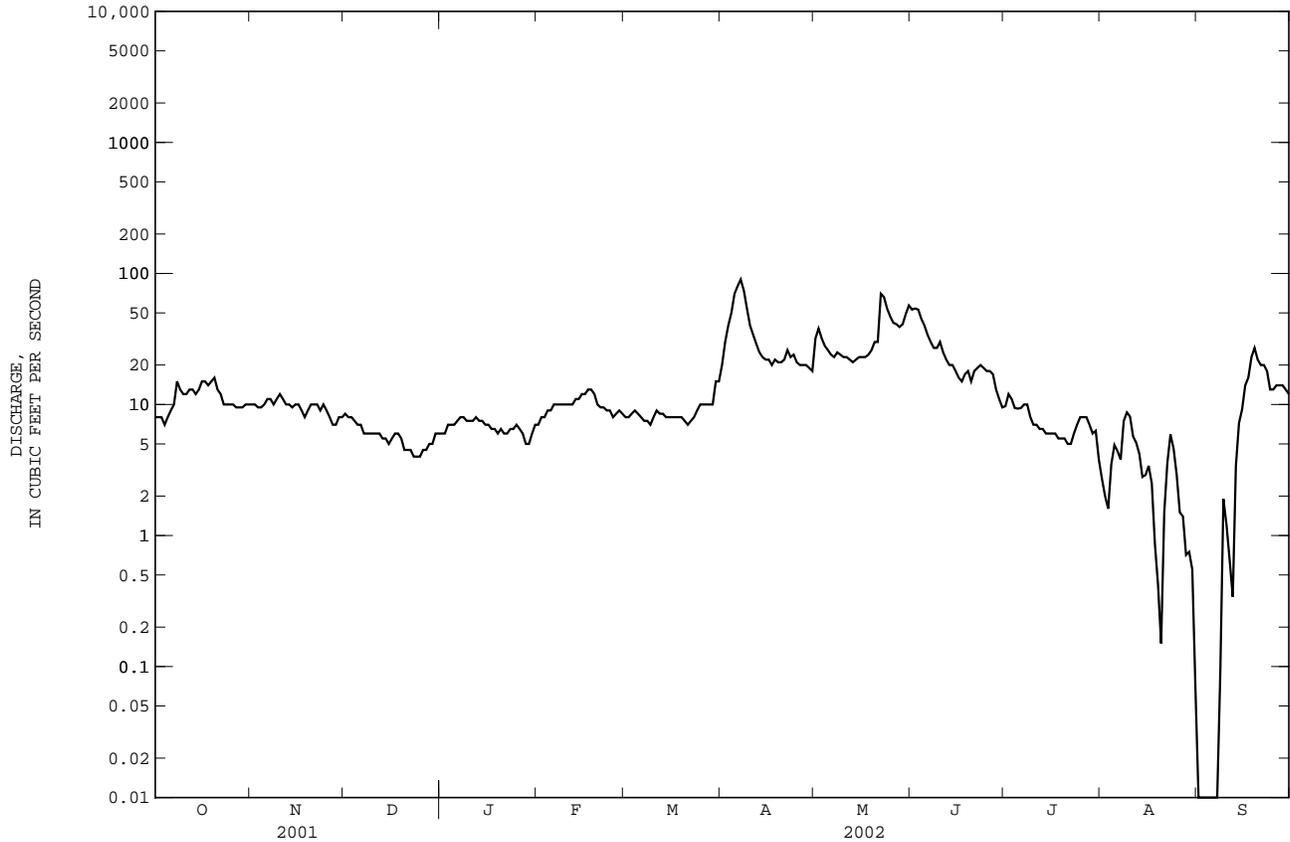
\* For period of operation.

a About.

b May have been higher during period of no gage-height record April 5.

c Gage height, 4.83 ft, from rating curve extended above 400 ft<sup>3</sup>/s.

e Estimated.



## YELLOWSTONE RIVER BASIN

06297500 HIGHLINE DITCH NEAR DAYTON, WY

LOCATION.--Lat 44°51'11", long 107°18'14", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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.--April 1941 to current year (no winter records).

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 fair. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.8	---	---	---	---	---	5.3	17	19	12	e13
2	2.3	1.6	---	---	---	---	---	5.2	17	19	12	e13
3	2.3	1.6	---	---	---	---	---	5.3	17	19	12	e13
4	2.4	1.6	---	---	---	---	---	5.3	17	19	12	e13
5	2.4	1.5	---	---	---	---	---	5.3	17	19	12	e13
6	2.4	1.5	---	---	---	---	---	7.2	17	19	12	e13
7	2.4	1.5	---	---	---	---	---	8.7	17	19	12	e13
8	2.4	0.52	---	---	---	---	---	8.9	17	19	12	e13
9	2.4	---	---	---	---	---	---	8.7	16	19	12	e13
10	2.5	---	---	---	---	---	---	8.6	16	18	12	e13
11	2.4	---	---	---	---	---	---	8.5	16	21	12	e13
12	2.4	---	---	---	---	---	---	8.3	16	24	12	e13
13	2.4	---	---	---	---	---	---	8.3	16	24	12	e13
14	2.4	---	---	---	---	---	---	8.5	16	24	12	e13
15	2.2	---	---	---	---	---	---	8.8	16	24	12	e13
16	2.2	---	---	---	---	---	---	8.7	16	24	12	e13
17	2.3	---	---	---	---	---	---	8.7	16	24	12	e13
18	2.3	---	---	---	---	---	---	8.7	16	24	12	e13
19	2.3	---	---	---	---	---	---	8.9	19	24	12	e13
20	2.3	---	---	---	---	---	---	8.9	20	24	12	e13
21	2.3	---	---	---	---	---	---	9.1	20	24	12	e13
22	2.3	---	---	---	---	---	---	8.3	20	25	13	e13
23	2.3	---	---	---	---	---	---	7.2	20	25	12	e13
24	2.2	---	---	---	---	---	---	12	19	24	12	e13
25	2.1	---	---	---	---	---	1.4	16	19	24	12	13
26	2.1	---	---	---	---	---	4.2	16	19	18	12	13
27	2.0	---	---	---	---	---	5.3	16	19	12	13	13
28	1.9	---	---	---	---	---	5.3	16	19	12	13	13
29	1.9	---	---	---	---	---	5.3	17	19	12	13	13
30	1.9	---	---	---	---	---	5.3	17	19	12	13	7.0
31	1.9	---	---	---	---	---	---	17	---	12	e13	---
TOTAL	69.9	---	---	---	---	---	---	306.4	528	626	378	384.0
MEAN	2.255	---	---	---	---	---	---	9.884	17.60	20.19	12.19	12.80
MAX	2.5	---	---	---	---	---	---	17	20	25	13	13
MIN	1.9	---	---	---	---	---	---	5.2	16	12	12	7.0
AC-FT	139	---	---	---	---	---	---	608	1050	1240	750	762

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2002, BY WATER YEAR (WY)\*

	5.490	0.287	0.000	0.000	0.000	0.000	0.310	7.035	17.16	19.35	19.64	14.87
MEAN	5.490	0.287	0.000	0.000	0.000	0.000	0.310	7.035	17.16	19.35	19.64	14.87
MAX	20.7	5.00	0.000	0.000	0.000	0.007	8.59	27.2	30.5	30.9	27.6	23.7
(WY)	1955	1944	1921	1921	1921	1989	1981	1998	1996	1996	1983	1952
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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 2002 WATER YEAR\*

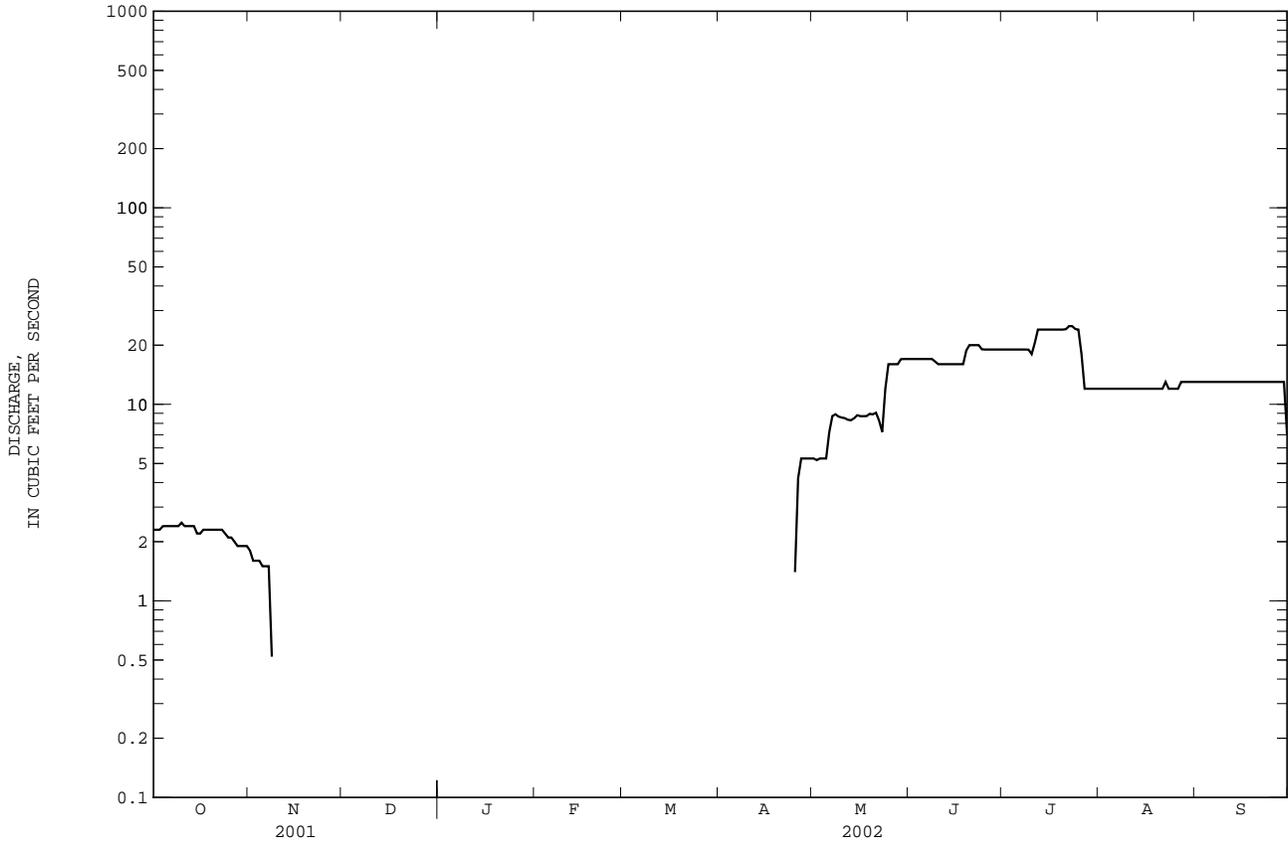
WATER YEARS 1920 - 2002\*

HIGHEST DAILY MEAN  
 LOWEST DAILY MEAN

25 Jul 22,23  
 0.52 Nov 8

35 Jun 13 1979  
 0.00 Many days,  
 each year

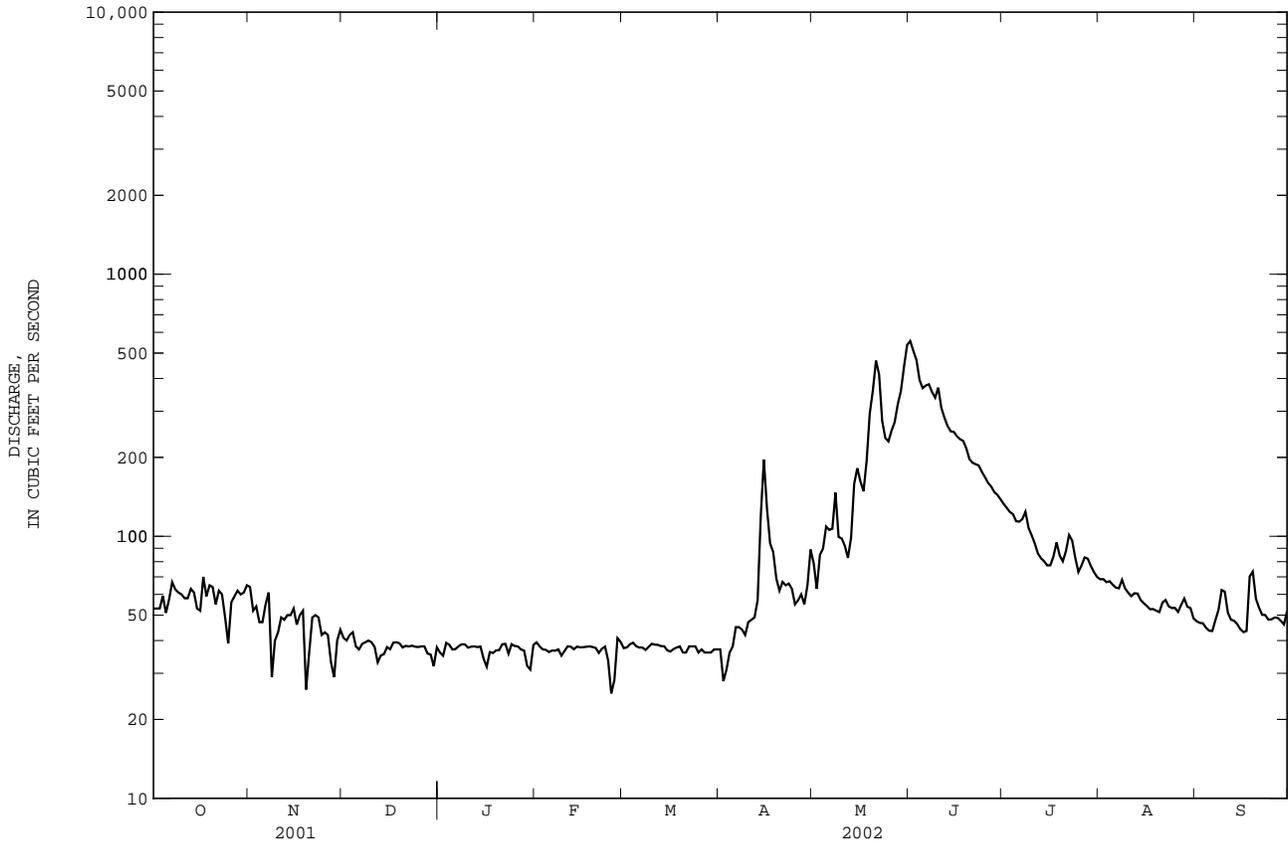
\* For period of operation.  
 e Estimated.





06298000 TONGUE RIVER NEAR DAYTON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1919 - 2002	
ANNUAL TOTAL	28763		30689		--	
ANNUAL MEAN	78.80		84.08		178.2	
HIGHEST ANNUAL MEAN	--		--		316 1924	
LOWEST ANNUAL MEAN	--		--		82.0 2001	
HIGHEST DAILY MEAN	517	May 15	556	Jun 1	2590	Jun 5 1968
LOWEST DAILY MEAN	26	Nov 19	25	Feb 25	18	Nov 29 1919
ANNUAL SEVEN-DAY MINIMUM	36	Dec 24	34	Feb 20	31	Nov 9 1940
MAXIMUM PEAK FLOW	--		678	Jun 1	3400	Jun 3 1944
MAXIMUM PEAK STAGE	--		3.53	Jun 1	6.45	Jun 3 1944
ANNUAL RUNOFF (AC-FT)	57050		60870		129100	
10 PERCENT EXCEEDS	173		189		475	
50 PERCENT EXCEEDS	54		51		73	
90 PERCENT EXCEEDS	40		36		48	





06299500 WOLF CREEK AT WOLF, WY--Continued

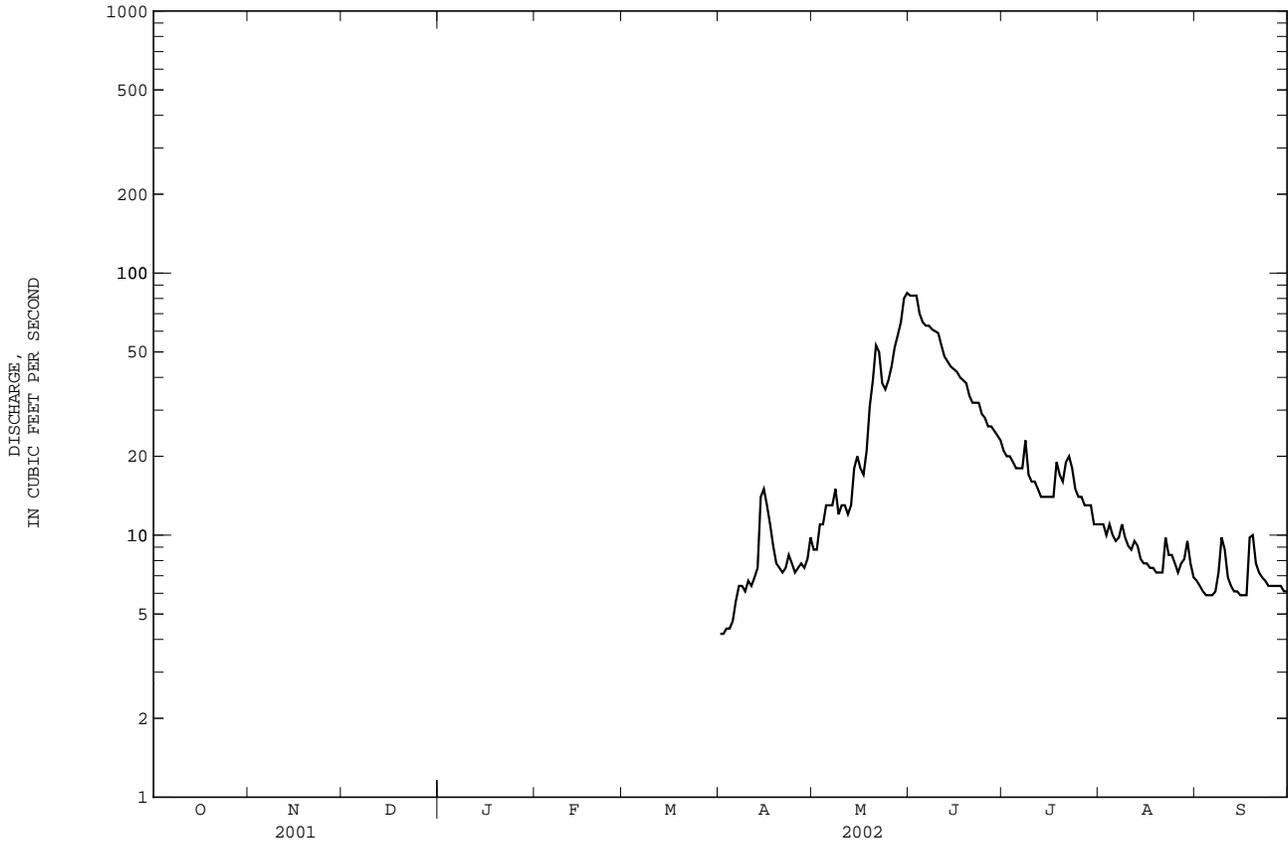
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1946 - 2002\*

ANNUAL MEAN	--	29.29	
HIGHEST ANNUAL MEAN	--	45.0	1964
LOWEST ANNUAL MEAN	--	13.8	1960
HIGHEST DAILY MEAN	84	May 31	601 Jun 9 1964
LOWEST DAILY MEAN	4.2	Apr 1,2	1.8 Feb 26 1947
MAXIMUM PEAK FLOW	93	May 30	1130 <sup>a</sup> Jun 15 1963
MAXIMUM PEAK STAGE	2.00	May 30	4.60 Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		21220

\* For period of operation.  
 a From rating curve extended above 500 ft<sup>3</sup>/s.  
 e Estimated.



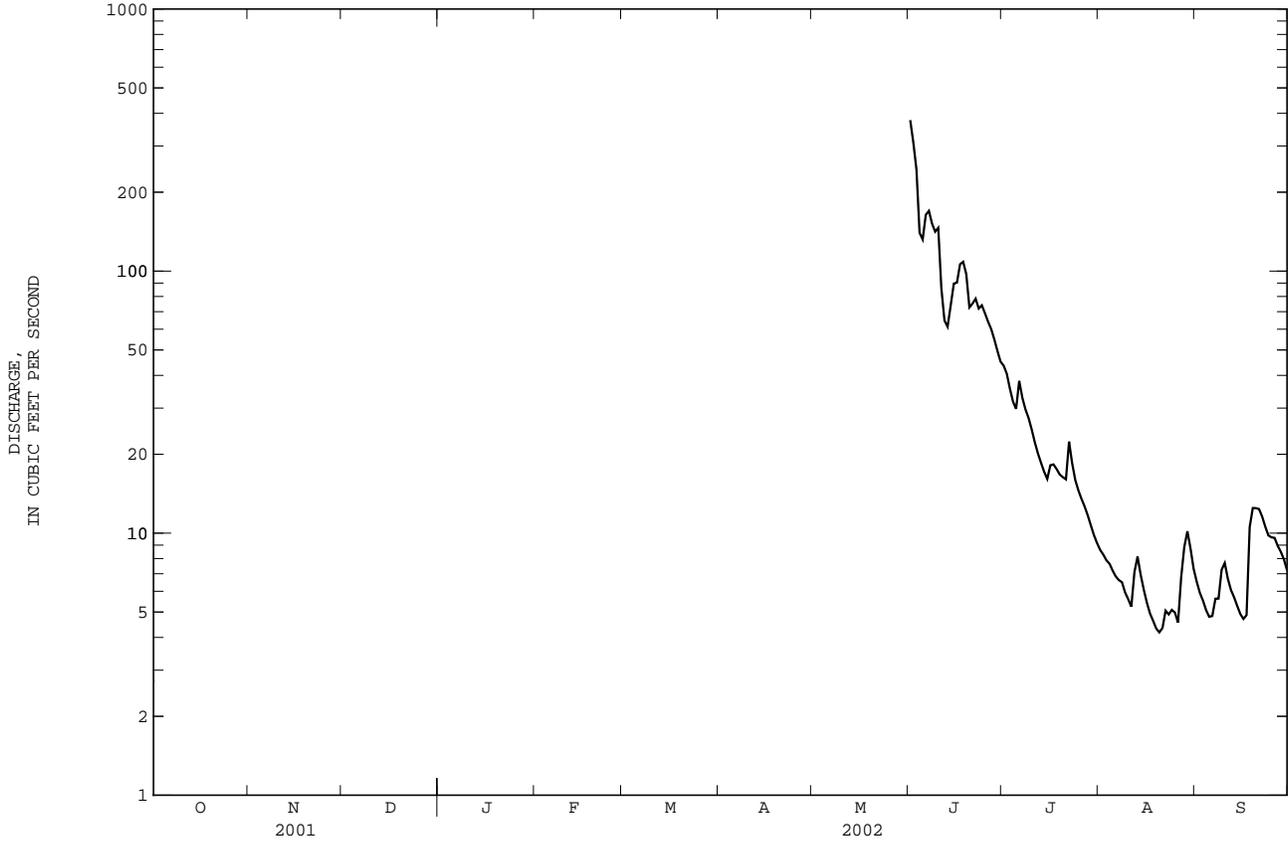


06300500 EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1954 - 2002*	
ANNUAL MEAN	--	32.58	
HIGHEST ANNUAL MEAN	--	41.8	1963
LOWEST ANNUAL MEAN	--	21.4	1966
HIGHEST DAILY MEAN	377 Jun 1	775	Jun 15 1963
LOWEST DAILY MEAN	4.2 Aug 20	1.0	Dec 11 1963
MAXIMUM PEAK FLOW	611 Jun 1	1230 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	5.68 Jun 1	5.68	Jun 1 2002
ANNUAL RUNOFF (AC-FT)	--	23600	

\* For period of operation.

a From rating curve extended above 250 ft<sup>3</sup>/s on basis of slope-area measurement, gage height, 4.59 ft, site and datum then in use.



## YELLOWSTONE RIVER BASIN

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<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year (no winter records 1993 to 1996, 1998-2002).

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 measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 10 . . . 0.11

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e0.80	60	4.1	0.32	0.15
2	---	---	---	---	---	---	---	e0.80	47	3.8	0.29	0.14
3	---	---	---	---	---	---	---	e0.80	38	3.7	0.26	0.13
4	---	---	---	---	---	---	---	e0.80	24	3.4	0.25	0.12
5	---	---	---	---	---	---	---	e0.90	21	3.1	0.22	0.10
6	---	---	---	---	---	---	---	e0.90	24	3.0	0.20	0.10
7	---	---	---	---	---	---	---	e0.90	26	3.1	0.18	0.10
8	---	---	---	---	---	---	---	e0.80	21	3.0	0.18	0.11
9	---	---	---	---	---	---	---	e0.80	18	2.6	0.15	0.18
10	---	---	---	---	---	---	---	e0.80	19	2.4	0.14	0.19
11	---	---	---	---	---	---	---	e0.70	14	2.3	0.13	0.19
12	---	---	---	---	---	---	---	e0.70	11	2.0	0.15	0.19
13	---	---	---	---	---	---	---	e0.80	9.1	1.8	0.14	0.20
14	---	---	---	---	---	---	---	e1.2	8.8	1.6	0.13	0.18
15	---	---	---	---	---	---	---	e1.6	10	1.5	0.12	0.17
16	---	---	---	---	---	---	---	2.2	11	1.3	0.11	0.16
17	---	---	---	---	---	---	---	2.3	12	1.2	0.10	0.18
18	---	---	---	---	---	---	---	2.9	12	1.8	0.09	0.31
19	---	---	---	---	---	---	---	4.9	12	1.5	0.08	0.32
20	---	---	---	---	---	---	---	17	9.6	1.3	0.08	0.29
21	---	---	---	---	---	---	---	38	8.6	1.3	0.09	0.32
22	---	---	---	---	---	---	---	33	e8.4	1.5	0.10	0.32
23	---	---	---	---	---	---	---	16	e8.2	1.5	0.10	0.33
24	---	---	---	---	---	---	---	12	7.9	1.3	0.11	0.33
25	---	---	---	---	---	---	---	8.9	7.4	1.2	0.11	0.39
26	---	---	---	---	---	---	---	9.1	6.9	1.1	0.12	0.44
27	---	---	---	---	---	---	---	12	6.3	0.96	0.15	0.40
28	---	---	---	---	---	---	---	21	5.7	0.88	0.16	0.39
29	---	---	---	---	---	---	---	35	5.1	0.73	0.21	0.34
30	---	---	---	---	---	---	---	62	4.5	0.57	0.18	0.29
31	---	---	---	---	---	---	---	76	---	0.41	0.16	---
TOTAL	---	---	---	---	---	---	---	365.60	476.5	59.95	4.81	7.06
MEAN	---	---	---	---	---	---	---	11.79	15.88	1.934	0.155	0.235
MAX	---	---	---	---	---	---	---	76	60	4.1	0.32	0.44
MIN	---	---	---	---	---	---	---	0.70	4.5	0.41	0.08	0.10
AC-FT	---	---	---	---	---	---	---	725	945	119	9.5	14

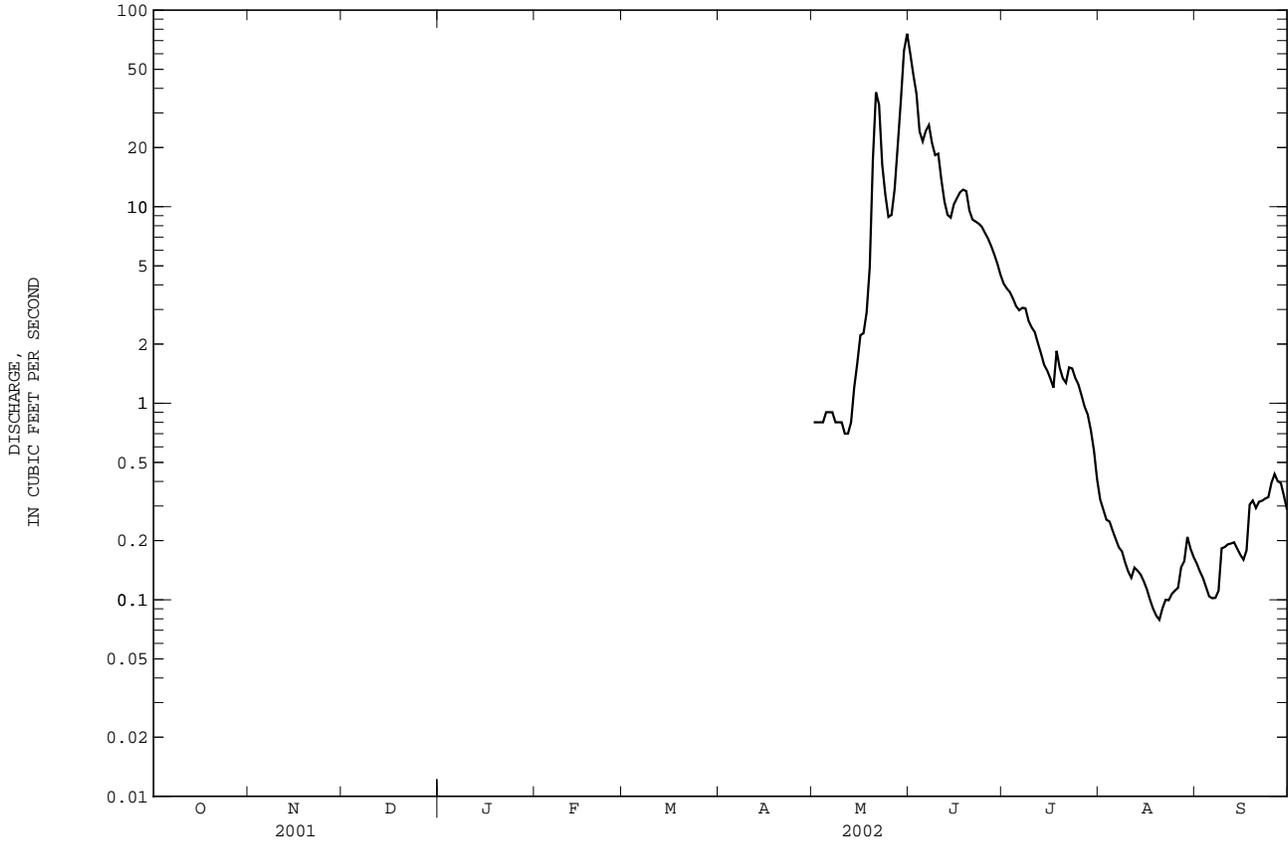
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)\*

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	0.573	0.496	0.274	0.160	0.133	0.137	0.581	18.13	25.54	6.089	1.303	0.594
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	0.089	0.055	0.15	8.58	6.46	1.01	0.073	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 2002 WATER YEAR*	WATER YEARS 1991 - 2002*	
ANNUAL MEAN	--	5.433	
HIGHEST ANNUAL MEAN	--	5.84	1992
LOWEST ANNUAL MEAN	--	4.83	1991
HIGHEST DAILY MEAN	76 May 31	105	Jun 16 1995
LOWEST DAILY MEAN	0.08 Aug 19,20	0.00	Sep 4,5 2001
MAXIMUM PEAK FLOW	99 May 31	135 <sup>a</sup>	Jun 15 1995
MAXIMUM PEAK STAGE	4.00 May 31	5.05 <sup>b</sup>	May 14 1991
ANNUAL RUNOFF (AC-FT)	--	3940	

\* For period of operation.  
 a Gage height, 4.35 ft.  
 b Backwater from snow and ice.  
 e Estimated.



## YELLOWSTONE RIVER BASIN

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<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to September 1994, October 1995 to current year (no winter records 1993, 1994, 1996, 1998-2002).

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.

REMARKS.--Records fair. 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 measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 10 . . . 0.18

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.18	0.26	0.22	6.0	2.7
2	---	---	---	---	---	---	---	0.17	0.25	0.37	6.0	2.7
3	---	---	---	---	---	---	---	0.17	0.22	0.56	6.0	2.6
4	---	---	---	---	---	---	---	0.18	0.21	0.56	6.0	2.6
5	---	---	---	---	---	---	---	0.17	0.22	1.8	6.0	2.6
6	---	---	---	---	---	---	---	0.18	0.22	3.4	6.0	2.6
7	---	---	---	---	---	---	---	0.19	0.20	3.4	5.9	2.6
8	---	---	---	---	---	---	---	0.18	0.20	3.3	5.9	2.6
9	---	---	---	---	---	---	---	0.17	0.21	3.3	5.9	2.6
10	---	---	---	---	---	---	---	0.17	0.21	3.3	6.1	2.6
11	---	---	---	---	---	---	---	0.17	0.21	7.2	6.0	2.6
12	---	---	---	---	---	---	---	0.17	0.21	11	6.0	2.6
13	---	---	---	---	---	---	---	0.18	0.21	11	3.4	2.5
14	---	---	---	---	---	---	---	0.20	0.20	11	1.7	2.5
15	---	---	---	---	---	---	---	0.19	0.19	9.8	1.7	2.6
16	---	---	---	---	---	---	---	0.19	0.19	8.5	1.6	2.6
17	---	---	---	---	---	---	---	0.20	0.19	8.6	1.5	2.6
18	---	---	---	---	---	---	---	0.23	0.19	8.6	1.5	2.6
19	---	---	---	---	---	---	---	0.24	0.19	8.5	1.5	2.6
20	---	---	---	---	---	---	---	0.26	0.18	8.6	1.5	4.4
21	---	---	---	---	---	---	---	0.25	0.19	8.6	1.5	5.4
22	---	---	---	---	---	---	---	0.21	0.20	7.8	1.5	5.4
23	---	---	---	---	---	---	---	0.20	0.21	7.0	1.5	5.4
24	---	---	---	---	---	---	---	0.20	0.21	7.0	1.5	5.4
25	---	---	---	---	---	---	---	0.22	0.21	6.3	1.4	5.4
26	---	---	---	---	---	---	---	0.25	0.21	6.0	1.4	5.4
27	---	---	---	---	---	---	---	0.26	0.21	6.0	2.0	5.4
28	---	---	---	---	---	---	---	0.27	0.24	6.0	2.7	5.4
29	---	---	---	---	---	---	---	0.28	0.22	6.0	2.7	5.4
30	---	---	---	---	---	---	---	0.30	0.22	6.0	2.7	5.4
31	---	---	---	---	---	---	---	0.28	---	6.0	2.7	---
TOTAL	---	---	---	---	---	---	---	6.51	6.28	185.71	107.8	107.8
MEAN	---	---	---	---	---	---	---	0.210	0.209	5.991	3.477	3.593
MAX	---	---	---	---	---	---	---	0.30	0.26	11	6.1	5.4
MIN	---	---	---	---	---	---	---	0.17	0.18	0.22	1.4	2.5
AC-FT	---	---	---	---	---	---	---	13	12	368	214	214

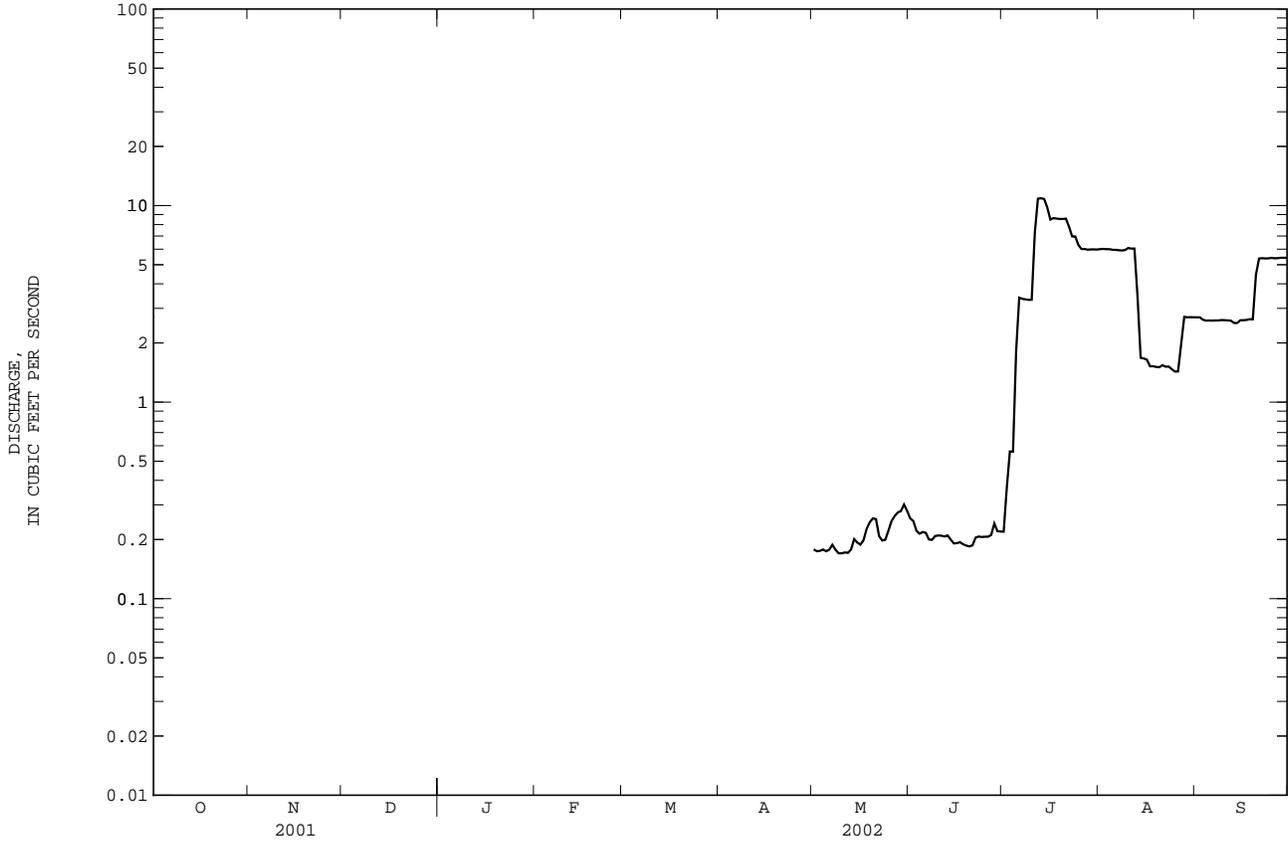
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2002, BY WATER YEAR (WY)\*

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1.677	0.383	0.197	0.144	0.171	0.231	0.525	25.57	40.04	12.96	8.122	5.902
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	0.045	0.040	0.041	0.20	0.21	0.21	5.08	2.03	0.78
(WY)	1992	1993	1997	1997	1997	1997	1993	2002	2002	1994	1996	1996

06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1991 - 2002*	
ANNUAL MEAN	--	12.02	
HIGHEST ANNUAL MEAN	--	12.6	1992
LOWEST ANNUAL MEAN	--	11.2	1991
HIGHEST DAILY MEAN	11 Jul 12-14	172	May 29 1993
LOWEST DAILY MEAN	0.17 Several days	0.03	Many days, 2001
MAXIMUM PEAK FLOW	-- Jul 12	223 <sup>a</sup>	May 29 1993
MAXIMUM PEAK STAGE	0.95 Jul 12	4.32 <sup>b</sup>	May 1 1997

\* 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.



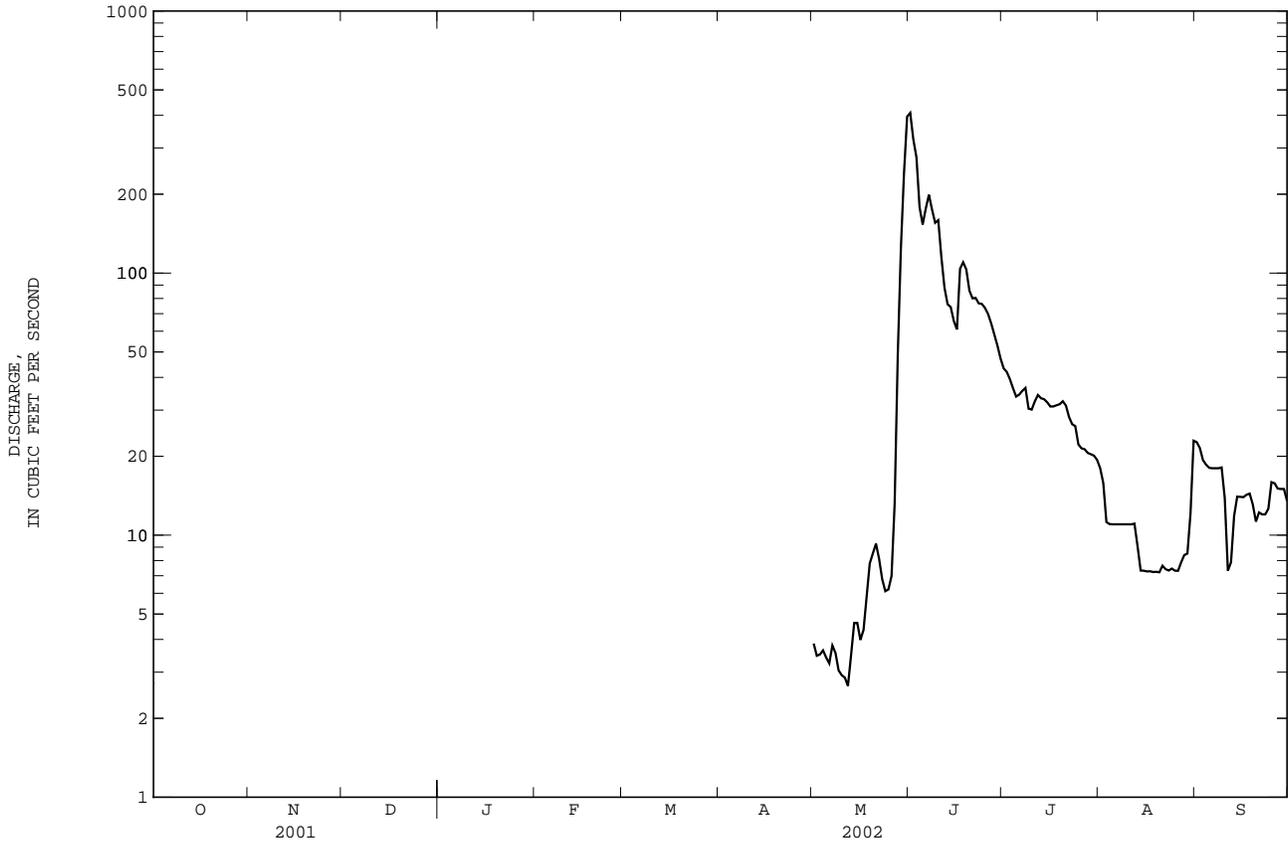


06301500 WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*		WATER YEARS 1954 - 2002*	
ANNUAL MEAN	--		34.34	
HIGHEST ANNUAL MEAN	--		45.7	1965
LOWEST ANNUAL MEAN	--		21.7	1960
HIGHEST DAILY MEAN	409	Jun 1	674	Jun 16 1995
LOWEST DAILY MEAN	2.7	May 12	0.80	Several days 1963, 1964
MAXIMUM PEAK FLOW	518	Jun 1	1030 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	4.28	Jun 1	5.37	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		24880	

\* For period of operation.

a From rating curve extended above 410 ft<sup>3</sup>/s on basis of velocity-area study.



## YELLOWSTONE RIVER BASIN

06301850 BIG GOOSE CREEK ABOVE PK DITCH, IN CANYON, NEAR SHERIDAN, WY

LOCATION.--Lat 44°41'45", long 107°11'27", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.35, T.55 N., R.86 W, Sheridan County, Hydrologic Unit 10090101, on left bank 515 ft above the headgate of PK ditch, 0.4 mi above Red Canyon, and 13.5 mi southwest of Sheridan.

DRAINAGE AREA.--124 mi<sup>2</sup>.

PERIOD OF RECORD.--April 2001 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 4,678 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and daily discharges greater than 250 ft<sup>3</sup>/s, which are poor. Natural flow affected by transbasin diversions and storage reservoirs. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 2 . . . 21.0

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	14	26	500	67	52	50
2	---	---	---	---	---	---	13	24	383	64	56	50
3	---	---	---	---	---	---	19	29	342	62	62	46
4	---	---	---	---	---	---	14	32	236	60	62	46
5	---	---	---	---	---	---	15	35	200	57	59	48
6	---	---	---	---	---	---	17	34	214	58	56	50
7	---	---	---	---	---	---	19	33	245	61	59	53
8	---	---	---	---	---	---	19	39	219	65	62	54
9	---	---	---	---	---	---	17	30	196	55	60	57
10	---	---	---	---	---	---	19	31	202	52	58	56
11	---	---	---	---	---	---	19	30	158	53	58	48
12	---	---	---	---	---	---	19	28	124	55	58	47
13	---	---	---	---	---	---	22	31	108	55	55	54
14	---	---	---	---	---	---	39	41	101	55	49	57
15	---	---	---	---	---	---	49	45	104	54	49	57
16	---	---	---	---	---	---	39	39	87	51	48	56
17	---	---	---	---	---	---	28	37	138	58	48	56
18	---	---	---	---	---	---	26	45	150	71	47	62
19	---	---	---	---	---	---	e22	59	143	64	47	50
20	---	---	---	---	---	---	e21	62	123	65	53	45
21	---	---	---	---	---	---	e20	71	115	69	55	45
22	---	---	---	---	---	---	e23	69	114	69	61	44
23	---	---	---	---	---	---	e22	56	108	61	54	43
24	---	---	---	---	---	---	22	54	106	58	52	43
25	---	---	---	---	---	---	20	54	102	54	51	47
26	---	---	---	---	---	---	21	50	98	52	50	47
27	---	---	---	---	---	---	22	54	92	54	54	47
28	---	---	---	---	---	---	21	74	85	53	54	50
29	---	---	---	---	---	---	23	152	79	52	57	50
30	---	---	---	---	---	---	29	258	71	53	50	45
31	---	---	---	---	---	---	---	438	---	53	49	---
TOTAL	---	---	---	---	---	---	673	2060	4943	1810	1685	1503
MEAN	---	---	---	---	---	---	22.43	66.45	164.8	58.39	54.35	50.10
MAX	---	---	---	---	---	---	49	438	500	71	62	62
MIN	---	---	---	---	---	---	13	24	71	51	47	43
AC-FT	---	---	---	---	---	---	1330	4090	9800	3590	3340	2980

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)\*

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	---	---	---	---	24.57	76.50	120.5	58.74	56.23	49.25
MAX	---	---	---	---	---	---	26.7	86.5	165	59.1	58.1	50.1
(WY)	---	---	---	---	---	---	2001	2001	2002	2001	2001	2002
MIN	---	---	---	---	---	---	22.4	66.5	76.2	58.4	54.4	48.4
(WY)	---	---	---	---	---	---	2002	2002	2001	2002	2002	2001

06301850 BIG GOOSE CREEK ABOVE PK DITCH, IN CANYON, NEAR SHERIDAN, WY--Continued

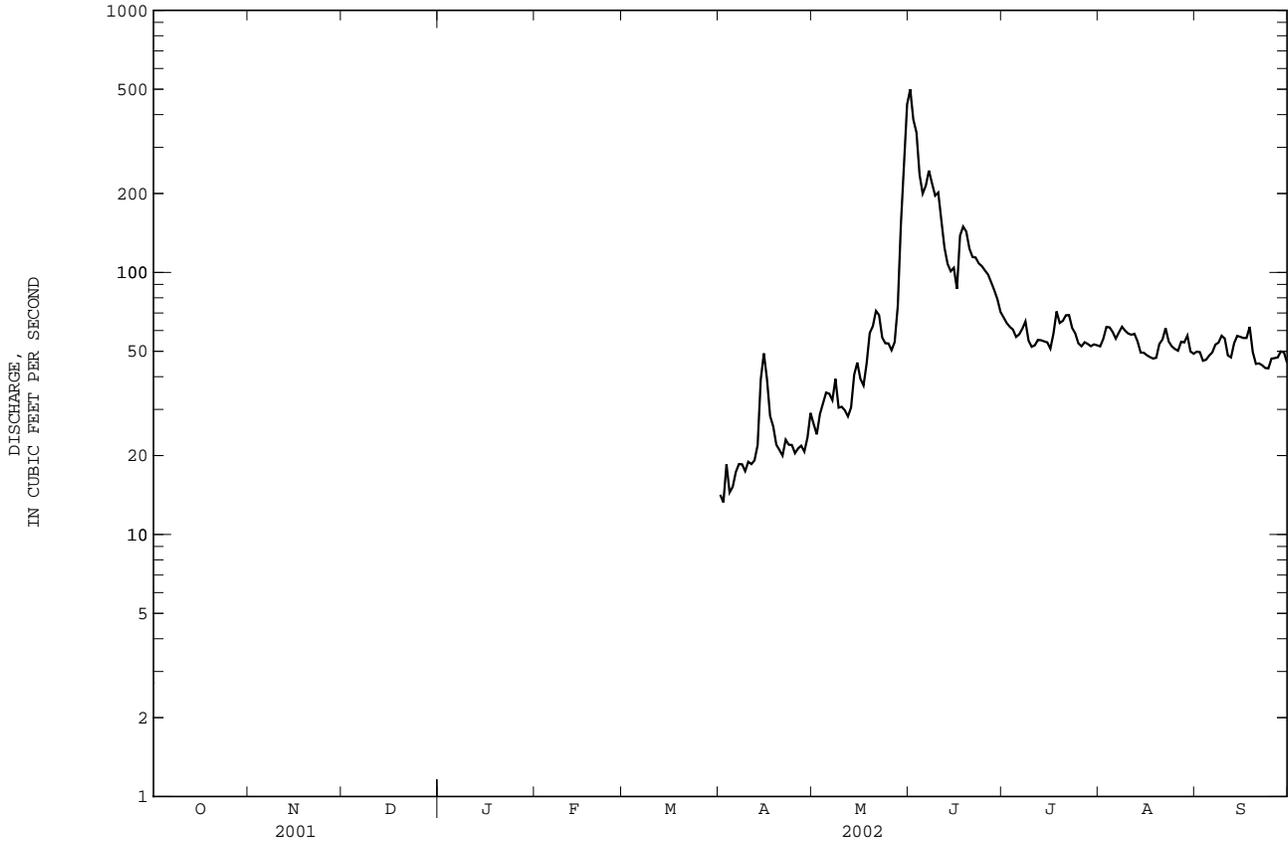
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 2001 - 2002\*

HIGHEST DAILY MEAN	500	Jun 1	500	Jun 1 2002
LOWEST DAILY MEAN	13	Apr 2	13	Apr 2 2002
MAXIMUM PEAK FLOW	635 <sup>a</sup>	Jun 1	635 <sup>a</sup>	Jun 1 2002
MAXIMUM PEAK STAGE	3.37	Jun 1	3.37	Jun 1 2002

\* For period of operation.  
 a From rating curve extended above 244 ft<sup>3</sup>/s.  
 e Estimated.

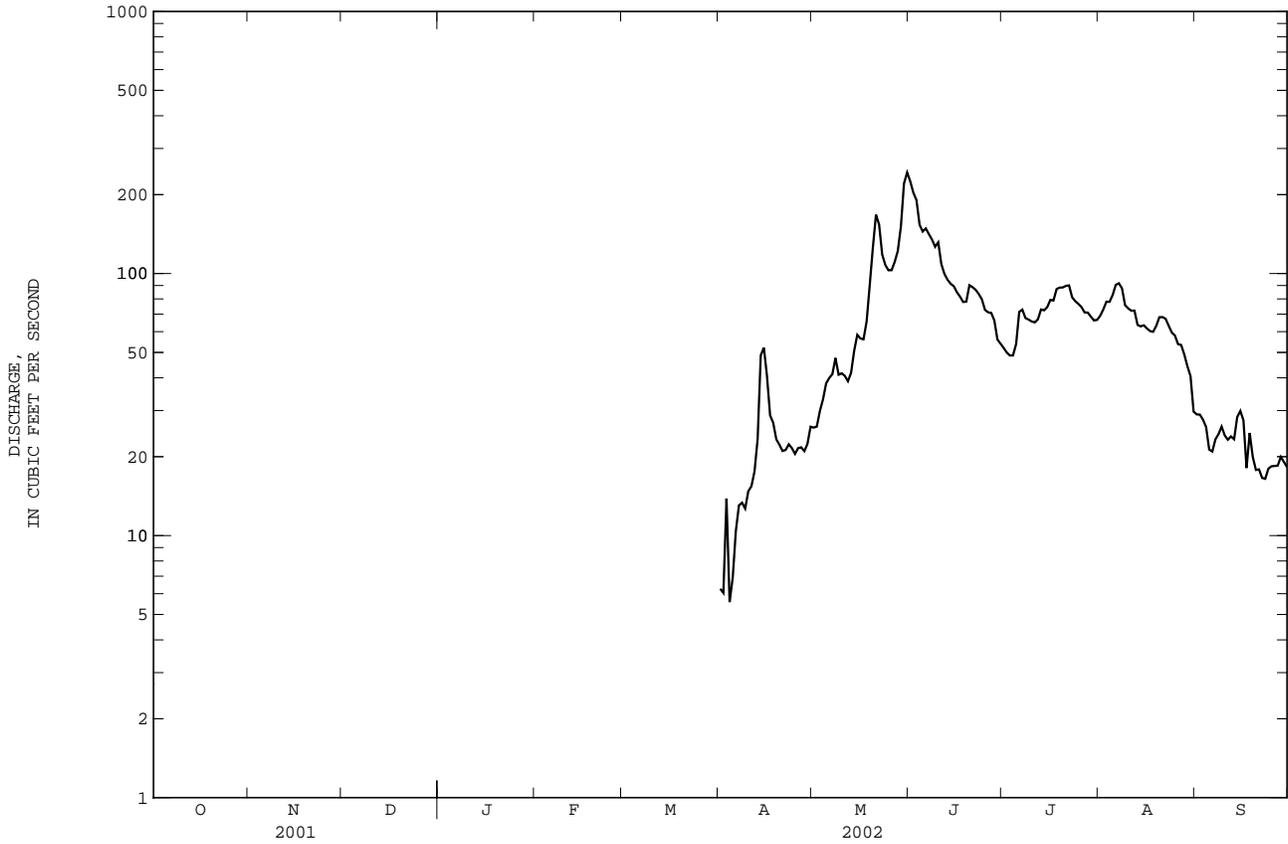




06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1941 - 2002*	
ANNUAL MEAN	--	63.36	
HIGHEST ANNUAL MEAN	--	83.9	1970
LOWEST ANNUAL MEAN	--	40.6	1960
HIGHEST DAILY MEAN	243 May 31	837	Jun 15 1963
LOWEST DAILY MEAN	5.6 Apr 4	3.0	Jan 3 1950
MAXIMUM PEAK FLOW	330 May 31	1350 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	3.62 May 31	6.78	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--	45900	

\* For period of operation.  
 a From rating curve extended above 900 ft<sup>3</sup>/s.



## YELLOWSTONE RIVER BASIN

06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY

LOCATION.--Lat 44°48'10", long 106°57'10", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
12...	1115	20	668	12.6	120	8.1	738	6.5	7.5	360	68.8	45.9	2.71
NOV													
15...	1045	24	670	13.3	118	8.2	689	16.0	4.5	340	68.5	42.1	2.24
DEC													
11...	1110	38	660	15.2	121	8.1	647	1.0	.0	330	65.0	40.1	1.88
JAN													
10...	0805	19	673	10.9	85	7.7	604	-6.5	.0	300	58.2	36.4	1.93
FEB													
14...	1055	19	670	11.7	91	8.2	613	2.5	.0	300	60.1	35.9	1.74
MAR													
18...	1710	20	668	14.2	121	8.4	663	-2.5	3.0	310	60.7	38.3	2.29
APR													
11...	0725	27	670	9.4	87	8.2	654	4.0	6.5	320	62.7	39.9	2.55
MAY													
09...	0730	31	671	10.5	94	8.2	562	-1.5	5.0	270	53.8	33.9	1.94
JUN													
12...	0925	14	670	11.5	126	8.4	722	17.5	13.5	370	69.2	47.7	2.96
JUL													
08...	1840	4.0	674	9.0	118	8.1	838	32.0	22.5	390	57.6	60.4	3.23
AUG													
15...	0705	11	669	7.0	81	7.8	690	10.5	16.0	320	60.1	41.2	2.51
SEP													
11...	1735	21	667	9.7	121	8.6	677	25.5	19.5	330	62.2	42.4	2.62
Date		SODIUM AD-SORPTION RATIO (00931)	ALKA-LINITY WAT. DIS-FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT													
12...	.5	22.8	282	4.75	.4	10.2	114	.53	21.2	392	439	--	--
NOV													
15...	.5	20.1	314	4.48	.3	8.89	102	.59	28.0	432	437	<.04	E.04
DEC													
11...	.4	18.5	280	3.71	.3	10.4	95.5	.54	40.5	400	403	--	--
JAN													
10...	.5	17.9	258	3.63	.3	9.31	86.0	.54	20.2	394	369	--	--
FEB													
14...	.4	16.8	269	3.57	.3	8.68	84.8	.53	20.0	390	373	--	--
MAR													
18...	.6	25.7	249	14.5	.2	7.00	100	.57	22.7	420	398	<.04	.06
APR													
11...	.5	21.7	246	5.21	.3	4.48	120	.58	30.8	423	405	--	--
MAY													
09...	.5	17.8	225	4.72	.2	7.51	87.2	.47	29.1	348	342	<.04	<.05
JUN													
12...	.6	25.1	294	5.02	1.2	9.90	136	.67	18.7	495	473	--	--
JUL													
08...	.7	34.0	263	6.82	.4	11.5	195	.78	6.22	576	526	--	--
AUG													
15...	.5	21.6	275	4.23	.3	7.97	112	.54	11.9	400	415	<.04	<.05
SEP													
11...	.5	22.3	230	4.24	.3	10.4	109	.58	24.3	429	391	--	--

06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT								
12...	--	--	--	--	<2	63.0	11	6.2
NOV								
15...	<.008	<.02	E21k	25	<4	65.2	20	11.1
DEC								
11...	--	--	--	--	<2	59.3	13	17.5
JAN								
10...	--	--	--	--	<2	58.3	17	15.0
FEB								
14...	--	--	--	--	<2	54.0	20	14.4
MAR								
18...	<.008	<.02	58	66	<2	56.6	28	31.1
APR								
11...	--	--	--	--	<2	58.0	34	56.2
MAY								
09...	<.008	<.02	170	160	<2	52.1	14	24.0
JUN								
12...	--	--	--	--	<2	66.1	30	37.5
JUL								
08...	--	--	--	--	E1	50.4	E7	E2.5
AUG								
15...	<.008	<.02	380	360	M	50.7	16	5.1
SEP								
11...	--	--	--	--	<2	54.7	11	5.7

E -- Estimated value

M -- Presence verified, not quantified

k -- Counts outside acceptable range (Non-ideal colony count)

## YELLOWSTONE RIVER BASIN

06305500 GOOSE CREEK BELOW SHERIDAN, WY

LOCATION.--Lat 44°49'25", long 106°57'40", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--Water years 1959-65, 1968 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
12...	1000	36	670	11.5	108	8.0	768	5.5	7.0	360	67.8	45.8	3.65
NOV													
15...	0930	49	670	11.7	101	8.1	706	6.0	3.5	350	68.6	42.2	2.83
DEC													
11...	1240	60	660	16.9	138	8.2	667	3.0	1.0	320	63.5	39.0	2.69
JAN													
10...	0915	44	672	10.6	82	7.8	620	-3.0	.0	290	57.9	36.5	2.56
FEB													
14...	0940	43	670	10.9	85	8.1	643	-.5	.0	300	59.7	35.9	2.47
MAR													
19...	1550	37	673	13.7	116	8.5	663	.0	3.0	300	60.5	37.3	2.84
APR													
11...	0815	61	670	9.7	92	8.1	668	11.5	7.5	310	59.8	38.4	2.91
MAY													
09...	0830	74	671	11.2	101	8.2	541	1.0	5.5	250	50.5	29.9	2.11
JUN													
12...	0820	99	670	10.0	103	8.1	340	11.5	11.0	160	33.0	18.6	1.74
JUL													
08...	1735	9.6	670	12.3	180	8.4	802	29.0	28.0	350	59.5	49.3	4.86
AUG													
14...	1720	11	660	13.7	189	8.7	641	31.5	24.0	310	54.1	41.4	3.75
SEP													
12...	0800	34	669	7.3	84	8.1	704	12.0	15.5	320	62.3	40.6	3.17

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ALKA-LINITY WAT.DIS FET LAB CaCO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT													
12...	.6	27.9	288	6.90	.4	10.2	142	.68	48.4	498	477	--	--
NOV													
15...	.6	25.5	292	6.25	.4	9.16	130	.71	68.8	520	462	.16	.27
DEC													
11...	.6	25.0	246	6.75	.3	10.2	125	.57	67.7	418	420	--	--
JAN													
10...	.5	21.3	226	5.84	.3	9.05	116	.56	48.7	410	385	--	--
FEB													
14...	.5	21.2	248	6.09	.3	8.55	112	.57	48.3	416	395	--	--
MAR													
19...	.6	25.4	236	7.64	.3	7.46	122	.58	42.8	428	408	1.27	.06
APR													
11...	.6	24.6	226	6.56	.3	3.96	139	.59	71.9	436	412	--	--
MAY													
09...	.5	19.7	188	5.30	.2	7.43	105	.46	66.9	335	333	<.04	.08
JUN													
12...	.4	11.5	120	2.96	.3	6.99	63.1	.30	59.8	224	210	--	--
JUL													
08...	1	42.3	230	16.1	.3	5.99	189	.74	14.1	546	506	--	--
AUG													
14...	.7	29.8	222	9.24	.3	7.11	130	.58	12.7	429	411	<.04	.20
SEP													
12...	.6	24.9	261	6.13	.3	8.15	118	.62	41.9	456	420	--	--

06305500 GOOSE CREEK BELOW SHERIDAN, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT								
12...	--	--	--	--	<2	50.9	12	7.4
NOV								
15...	.058	.06	260	370	<4	52.9	24	16.1
DEC								
11...	--	--	--	--	<2	45.6	15	20.1
JAN								
10...	--	--	--	--	<2	48.3	20	21.3
FEB								
14...	--	--	--	--	E1	47.5	21	19.3
MAR								
19...	<.008	.09	900	580	<2	45.1	29	34.9
APR								
11...	--	--	--	--	<2	51.3	30	59.2
MAY								
09...	.027	.06	61	110	<2	41.4	14	23.0
JUN								
12...	--	--	--	--	<2	33.0	44	31.8
JUL								
08...	--	--	--	--	<2	35.3	24	16.6
AUG								
14...	E.005	.32	350	450	<2	38.0	12	9.2
SEP								
12...	--	--	--	--	<2	50.2	17	11.9

E -- Estimated value

## YELLOWSTONE RIVER BASIN

06305700 GOOSE CREEK NEAR ACME, WY

LOCATION.--Lat 44°53'11", long 106°59'18", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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.--411 mi<sup>2</sup>.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	52	e47	e42	e44	e31	92	100	497	21	13	29
2	13	52	e44	e42	e39	e36	65	e90	388	21	14	25
3	14	49	e48	e48	e38	e38	53	e60	354	18	9.5	25
4	28	48	e52	e43	e38	e39	60	e70	255	11	8.8	24
5	38	50	e49	e43	e37	e43	71	e90	191	9.6	13	23
6	41	47	e47	e47	e37	e38	91	e80	170	8.0	11	24
7	43	51	e47	e47	e37	e37	89	e80	187	6.8	8.7	27
8	40	48	e43	e50	e42	e32	96	e100	182	9.6	9.7	34
9	39	48	e52	e60	e35	e38	82	e70	160	9.2	22	50
10	39	50	e48	e50	e39	e38	74	59	172	8.4	20	47
11	39	48	e42	e47	e44	e40	72	54	152	8.5	16	44
12	42	48	e38	e52	e40	e46	65	49	110	9.9	13	42
13	50	49	e39	e47	e36	e50	62	43	82	9.2	14	41
14	52	48	e45	e43	e40	e40	70	38	59	9.2	16	38
15	54	49	e42	e39	e38	e34	123	30	49	6.4	15	38
16	49	48	e35	e35	e43	e38	121	27	50	3.8	14	36
17	48	47	e50	e36	e37	e33	97	25	40	3.2	9.8	30
18	48	51	e44	e35	e37	e36	88	25	73	12	9.5	47
19	46	51	e39	e33	e36	e37	78	27	77	e45	11	60
20	45	45	e40	e40	e38	e42	69	41	69	e20	12	51
21	46	52	e42	e50	e39	e42	69	59	61	e25	37	44
22	47	53	e40	e45	e45	e42	65	119	52	33	64	43
23	46	52	e35	e36	e40	e48	60	67	56	39	33	43
24	45	52	e37	e43	e38	e46	52	47	54	29	30	42
25	45	50	e40	e49	e33	e44	48	36	49	20	33	42
26	43	54	e42	e54	e37	52	42	28	41	17	27	48
27	44	49	e42	e47	e39	73	49	30	36	15	27	47
28	47	e44	e38	e40	e36	82	50	27	38	15	43	43
29	45	e50	e33	e36	---	70	48	45	33	18	46	46
30	50	e54	e30	e32	---	70	51	175	24	15	54	41
31	52	---	e40	e38	---	90	---	399	---	13	39	---
TOTAL	1291	1489	1310	1349	1082	1425	2152	2190	3761	488.8	693.0	1174
MEAN	41.65	49.63	42.26	43.52	38.64	45.97	71.73	70.65	125.4	15.77	22.35	39.13
MAX	54	54	52	60	45	90	123	399	497	45	64	60
MIN	13	44	30	32	33	31	42	25	24	3.2	8.7	23
AC-FT	2560	2950	2600	2680	2150	2830	4270	4340	7460	970	1370	2330

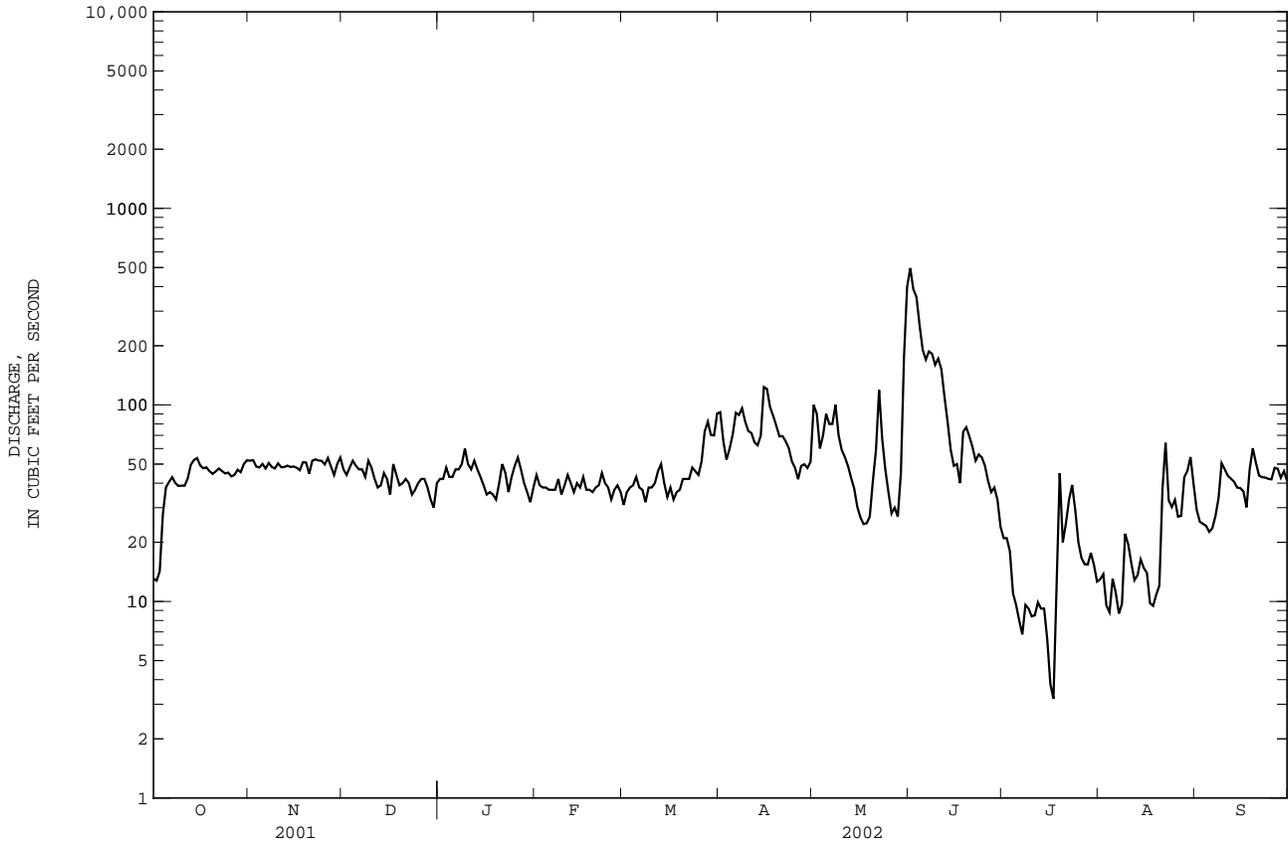
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

MEAN	102.2	94.34	78.56	69.77	84.68	98.20	132.8	379.1	568.7	146.1	61.09	85.33
MAX	156	144	107	109	137	185	195	891	1592	547	157	158
(WY)	1985	1999	1996	1990	1996	1994	1994	1984	1995	1995	1998	1998
MIN	41.6	49.6	42.3	43.5	36.7	46.0	71.7	52.4	39.2	9.51	15.6	28.0
(WY)	2002	2002	2002	2002	1989	2002	2002	2001	2001	2001	1988	2001

06305700 GOOSE CREEK NEAR ACME, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1984 - 2002
ANNUAL TOTAL	17694.4	18404.8	--
ANNUAL MEAN	48.48	50.42	152.3
HIGHEST ANNUAL MEAN	--	--	303
LOWEST ANNUAL MEAN	--	--	50.4
HIGHEST DAILY MEAN	159 Aug 20	497 Jun 1	3040 Jun 17 1995
LOWEST DAILY MEAN	3.0 <sup>e</sup> Aug 24	3.2 Jul 17	3.0 Aug 24 2001
ANNUAL SEVEN-DAY MINIMUM	4.3 Aug 22	7.2 Jul 11	4.3 Aug 22 2001
MAXIMUM PEAK FLOW	--	545 Jun 1	3330 Jun 17 1995
MAXIMUM PEAK STAGE	--	4.05 Jun 1	7.65 <sup>a</sup> Feb 25 1986
ANNUAL RUNOFF (AC-FT)	35100	36510	110300
10 PERCENT EXCEEDS	83	73	306
50 PERCENT EXCEEDS	48	43	90
90 PERCENT EXCEEDS	9.2	15	38

a From floodmarks, backwater from ice.  
e Estimated.



## YELLOWSTONE RIVER BASIN

06306250 PRAIRIE DOG CREEK NEAR ACME, WY

LOCATION.--Lat 44°59'02", long 106°50'21", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> 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.

## WATER-DISCHARGE RECORDS

DRAINAGE AREA.--358 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to September 1979, June 2000 to current year. Records for May 1965 to September 1970 in files of Office of Wyoming State Engineer.

GAGE.--Water-stage recorder. Elevation of gage is 3,450 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 13,600 acres above station, of which about 60 acres are below 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	e12	e9.4	e12	e8.8	46	17	11	1.9	21	60
2	13	13	e12	e8.0	e11	e9.0	102	20	5.7	1.7	18	62
3	13	12	e12	e8.8	e11	e9.4	46	23	3.7	2.5	14	60
4	14	14	e12	e8.6	e11	e10	36	24	3.4	2.0	12	61
5	16	12	e13	e8.4	e11	e9.4	36	22	3.0	2.2	11	61
6	16	12	e14	e8.2	e10	e9.0	53	20	2.5	2.0	12	59
7	16	12	e13	e8.4	e10	e8.6	159	18	2.8	2.4	12	58
8	18	12	e13	e8.6	e10	e8.2	145	18	2.8	2.7	13	60
9	18	12	e12	e8.0	e10	e10	108	17	2.4	2.2	16	60
10	18	12	e12	e7.8	e10	e9.6	73	15	2.3	2.9	20	61
11	20	13	e12	e7.6	e10	e9.4	47	15	2.1	3.0	18	54
12	19	13	e11	e7.6	e10	e11	37	15	2.6	2.4	19	48
13	17	13	e11	e7.8	e10	e14	31	14	2.3	1.3	18	47
14	17	13	e11	e7.6	e10	e16	27	14	1.7	0.97	19	45
15	16	13	e11	e7.4	e10	e31	24	12	1.9	1.2	23	42
16	16	13	e10	e7.7	e10	e23	23	12	2.2	1.2	26	40
17	16	13	e12	e8.2	e10	e19	22	11	2.3	0.94	27	40
18	16	13	e12	e8.8	e11	e18	21	19	2.8	0.70	27	45
19	17	12	e11	e9.4	e11	e17	20	21	2.1	1.7	29	47
20	16	11	e10	e10	e10	e16	18	16	2.0	3.9	31	49
21	15	e12	e9.8	e10	e10	e15	16	14	1.7	10	48	48
22	15	e12	e9.6	e9.2	e10	e15	16	11	2.1	12	146	41
23	15	e12	e9.2	e8.4	e10	e14	15	7.8	2.2	12	66	39
24	15	e12	e9.0	e9.0	e10	e16	14	15	1.9	17	53	40
25	14	e12	e9.2	e9.8	e9.0	e22	14	21	3.6	19	48	e39
26	14	e12	e10	e9.4	e10	e20	11	23	4.2	20	47	39
27	14	e11	e9.2	e9.0	e12	e21	15	13	4.1	24	43	38
28	14	e11	e9.0	e8.2	e10	e26	14	8.9	4.3	30	48	37
29	13	e12	e8.4	e7.4	---	e36	13	4.4	4.6	28	54	36
30	13	e12	e8.2	e8.6	---	e33	14	5.7	2.5	26	60	34
31	14	---	e8.8	e9.8	---	e33	---	9.1	---	26	61	---
TOTAL	481	370	336.4	265.1	289.0	517.4	1216	475.9	92.8	263.81	1060	1450
MEAN	15.52	12.33	10.85	8.552	10.32	16.69	40.53	15.35	3.093	8.510	34.19	48.33
MAX	20	14	14	10	12	36	159	24	11	30	146	62
MIN	13	11	8.2	7.4	9.0	8.2	11	4.4	1.7	0.70	11	34
AC-FT	954	734	667	526	573	1030	2410	944	184	523	2100	2880

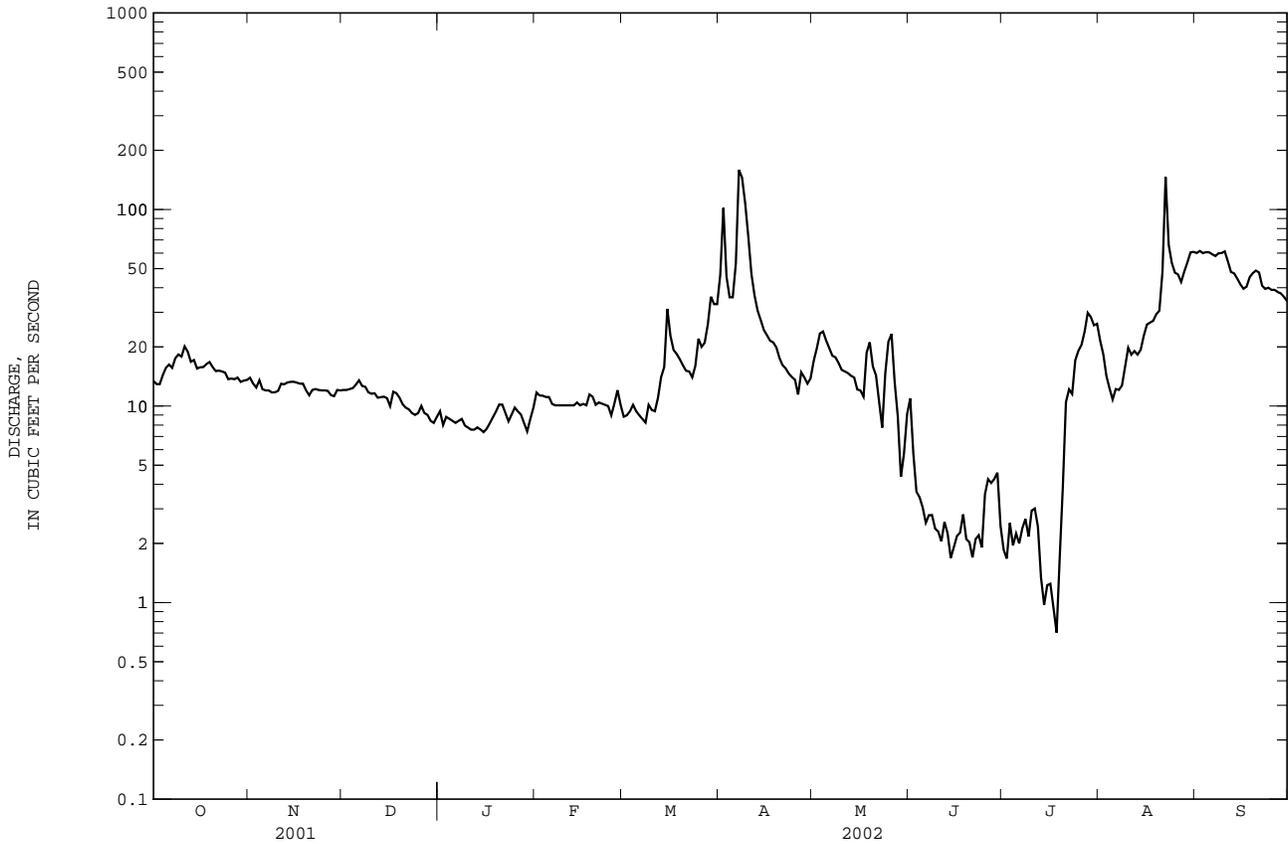
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2002, BY WATER YEAR (WY)\*

	MEAN	MAX	MIN	(WY)								
MEAN	38.08	29.64	24.00	18.69	35.63	76.64	61.97	85.11	35.36	19.36	26.91	38.86
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	10.3	16.7	21.8	7.82	3.09	4.39	3.00	13.4
(WY)	2002	2002	2002	2002	2002	2002	2001	2001	2002	2001	2001	2001

06306250 PRAIRIE DOG CREEK NEAR ACME, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1971 - 2002*	
ANNUAL TOTAL	5745.49	6817.41	--	
ANNUAL MEAN	15.74	18.68	41.08	
HIGHEST ANNUAL MEAN	--	--	72.8	
LOWEST ANNUAL MEAN	--	--	17.7	
HIGHEST DAILY MEAN	200 <sup>e</sup> Mar 11	159 Apr 7	3090	May 19 1978
LOWEST DAILY MEAN	0.48 Jul 7	0.70 Jul 18	0.48	Jul 7 2001
ANNUAL SEVEN-DAY MINIMUM	0.70 Jul 5	1.1 Jul 13	0.70	Jul 5 2001
MAXIMUM PEAK FLOW	--	198 Apr 7	3940 <sup>a</sup>	May 18 1978
MAXIMUM PEAK STAGE	--	4.18 Apr 7	12.60 <sup>b</sup>	May 18 1978
ANNUAL RUNOFF (AC-FT)	11400	13520	29760	
10 PERCENT EXCEEDS	33	45	69	
50 PERCENT EXCEEDS	14	12	30	
90 PERCENT EXCEEDS	1.8	2.8	11	

\* For period of operation.  
 a From rating curve extended above 760 ft<sup>3</sup>/s on basis of slope-area determination of peak flow.  
 b From floodmerkas.  
 e Estimated.



## YELLOWSTONE RIVER BASIN

06306250 PRAIRIE DOG CREEK NEAR ACME, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-1992, April 2000 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT														
12...	0830	19	675	10.4	95	8.1	1210	4.0	6.0	590	119	71.1	5.80	
NOV														
15...	0745	13	675	11.1	92	8.0	1530	.0	2.0	730	142	91.4	7.59	
DEC														
11...	1450	12	668	13.2	104	8.0	1500	1.0	.0	750	146	93.1	7.00	
JAN														
09...	1650	8.1	675	10.1	78	7.7	1480	2.5	.0	690	136	84.9	6.47	
FEB														
14...	0755	10	675	9.7	75	8.0	1460	-1.0	.0	690	135	84.8	6.69	
MAR														
19...	1430	17	674	12.4	98	8.2	1360	2.5	.5	640	123	79.7	8.16	
APR														
10...	1755	68	675	9.1	93	8.1	1030	13.0	10.5	450	87.2	57.1	10.7	
MAY														
08...	1625	19	675	10.4	103	8.3	1690	4.5	9.5	790	143	103	8.94	
JUN														
12...	0640	2.3	678	7.4	75	7.9	2060	10.0	10.5	960	179	125	9.53	
JUL														
08...	1555	2.5	674	8.4	121	7.9	2280	28.0	27.0	1000	181	136	10.3	
AUG														
14...	1250	19	669	8.7	105	8.0	1170	31.5	18.0	550	113	63.8	6.34	
SEP														
11...	1600	51	674	7.6	91	8.2	739	26.5	18.0	330	70.3	36.4	3.57	
Date		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)
OCT														
12...	.9	52.6	280	3.11	.3	12.8	401	1.11	41.9	816	835	1	901	
NOV														
15...	1	74.1	384	4.16	.3	11.9	581	1.61	41.6	1180	1140	1	--	
DEC														
11...	1	73.8	391	4.01	.3	13.0	528	1.39	33.0	1020	1100	1	156	
JAN														
09...	1	68.0	388	3.74	.4	12.9	529	1.59	25.6	1170	1080	<1	162	
FEB														
14...	1	72.3	379	4.14	.3	12.6	512	1.56	31.0	1150	1060	<1	297	
MAR														
19...	1	68.2	332	4.75	.3	11.8	465	1.43	48.1	1050	962	1	590	
APR														
10...	1	52.1	232	3.93	.3	9.80	343	1.03	139	758	704	1	3590	
MAY														
08...	2	99.2	334	3.31	.3	8.42	670	1.80	67.9	1320	1240	<1	142	
JUN														
12...	2	157	418	5.42	.5	15.1	891	2.44	11.1	1790	1640	1	26	
JUL														
08...	2	182	363	7.68	.4	17.5	983	2.57	12.7	1890	1740	<1	<2	
AUG														
14...	1	61.3	279	2.57	.3	14.1	392	1.21	45.5	887	822	2	859	
SEP														
11...	.6	26.9	202	2.35	.2	10.6	192	.69	70.0	509	464	4	1570	

06306250 PRAIRIE DOG CREEK NEAR ACME, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)
OCT 12...	.13	.8	29	43.3	<.06	117	.08	<.8	.30	4.3	<10	<.08	27.5
NOV 15...	.05	<4	35	37.7	<.06	131	E.02	<.8	.35	1.7	<10	<.08	37.4
DEC 11...	.07	.7	33	36.5	<.06	127	.19	<.8	.40	2.5	<10	<.08	33.7
JAN 09...	<.05	.7	40	41.2	<.06	156	<.04	<.8	.39	1.9	<10	<.08	42.1
FEB 14...	E.04	.7	37	39.1	<.06	107	<.04	<.8	.33	2.3	<10	.09	30.5
MAR 19...	.07	.9	37	47.7	<.06	103	.31	E.5	.46	2.6	E10	<.08	30.4
APR 10...	.25	1.0	33	108	<.06	87	E.03	<.8	.44	2.6	11	<.08	21.9
MAY 08...	.09	.8	41	42.9	<.06	121	E.04	<.8	.46	3.4	<10	<.08	36.8
JUN 12...	.10	.9	44	44.2	<.06	220	.06	<.8	1.07	6.3	<30	E.05	58.5
JUL 08...	.12	1.5	55	55.3	<.06	181	E.02	<.8	.98	6.5	<30	E.05	64.0
AUG 14...	.13	.9	34	48.5	<.06	112	.10	<.8	.36	2.3	<10	<.08	28.4
SEP 11...	E.03	.8	28	53.2	<.06	66	E.04	<.8	.22	1.7	<10	<.08	15.7

Date	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	THALLIUM, DIS-SOLVED (UG/L AS TL) (01057)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM, NATURAL DIS-SOLVED (UG/L AS U) (22703)
OCT 12...	53.3	1.3	<.06	1.5	<1	1620	<.04	.8	4	7.48
NOV 15...	84.7	1.2	.40	1.2	<1	2090	<.04	.7	3	9.61
DEC 11...	61.7	1.4	1.00	2.0	<1	1900	<.04	.6	2	10.2
JAN 09...	84.4	1.2	1.83	2.6	<1	2060	<.04	4.5	2	9.87
FEB 14...	63.7	1.2	.12	2.4	<1	2150	<.04	2.5	2	9.39
MAR 19...	46.5	1.6	3.83	1.7	<1	1750	<.04	<.2	2	10.2
APR 10...	29.4	2.0	2.49	1.6	<1	1010	<.04	2.1	2	7.86
MAY 08...	54.2	1.9	3.54	1.3	<1	1970	<.04	1.9	4	11.0
JUN 12...	338	2.2	3.65	1.3	<1	2290	<.04	1.5	5	9.05
JUL 08...	311	3.2	7.14	1.6	<1	2500	<.04	3.2	4	8.62
AUG 14...	96.3	1.6	.31	1.0	<1	1350	<.04	1.3	2	6.01
SEP 11...	24.5	.9	3.22	.6	<1	818	<.04	1.1	2	3.68

E -- Estimated value

## YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT

LOCATION.--Lat 45°00'32", long 106°50'08", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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.--1,477 mi<sup>2</sup>.

## 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.

GAGE.--Water-stage recorder. Datum 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	140	e120	e85	e70	e75	e75	188	857	130	64	117
2	64	141	e120	e90	e70	e80	e80	218	874	120	58	109
3	63	137	e120	e90	e70	e90	e90	194	784	113	51	101
4	70	131	e110	e90	e70	e100	e100	196	703	106	46	97
5	90	129	e110	e80	e75	e90	e110	198	545	100	48	93
6	108	125	e110	e80	e80	e80	e120	207	470	92	49	91
7	110	129	e110	e90	e80	e75	e110	214	453	87	53	95
8	115	134	e110	e90	e70	e75	e110	207	463	89	59	106
9	113	130	e110	e80	e75	e80	e120	242	442	87	63	123
10	117	114	e100	e90	e80	e90	e130	209	434	81	74	145
11	119	124	e100	e90	e75	e110	e130	196	445	76	75	141
12	118	120	e100	e90	e80	e110	e130	182	375	77	71	132
13	125	126	e110	e80	e80	e100	e150	167	320	68	60	131
14	131	124	e110	e80	e80	e100	e160	162	285	62	59	125
15	137	126	e100	e80	e80	e95	e190	204	252	55	65	117
16	133	126	e110	e75	e85	e95	e220	220	234	51	66	113
17	128	126	e110	e70	e90	e90	e210	207	228	49	59	112
18	134	123	e100	e70	e90	e90	e200	198	223	52	57	123
19	144	130	e100	e75	e90	e85	e190	225	237	48	54	144
20	136	114	e100	e80	e90	e80	187	301	227	78	58	170
21	133	108	e100	e75	e100	e80	177	381	209	96	66	157
22	134	128	e110	e70	e90	e90	170	481	199	93	184	153
23	129	137	e110	e75	e80	e90	170	462	188	80	138	144
24	130	137	e110	e80	e80	e85	164	344	193	103	107	141
25	126	138	e120	e80	e70	e80	161	306	199	96	103	142
26	121	e130	e120	e75	e80	e90	150	288	179	85	99	143
27	118	e120	e110	e70	e80	e85	150	293	163	79	89	150
28	127	e110	e100	e70	e75	e85	156	302	159	86	89	149
29	132	e110	e90	e65	---	e90	146	317	155	87	110	141
30	132	e110	e90	e60	---	e90	147	388	138	78	121	142
31	136	---	e90	e65	---	e90	---	616	---	78	127	---
TOTAL	3639	3777	3310	2440	2235	2745	4403	8313	10633	2582	2422	3847
MEAN	117.4	125.9	106.8	78.71	79.82	88.55	146.8	268.2	354.4	83.29	78.13	128.2
MAX	144	141	120	90	100	110	220	616	874	130	184	170
MIN	63	108	90	60	70	75	75	162	138	48	46	91
AC-FT	7220	7490	6570	4840	4430	5440	8730	16490	21090	5120	4800	7630

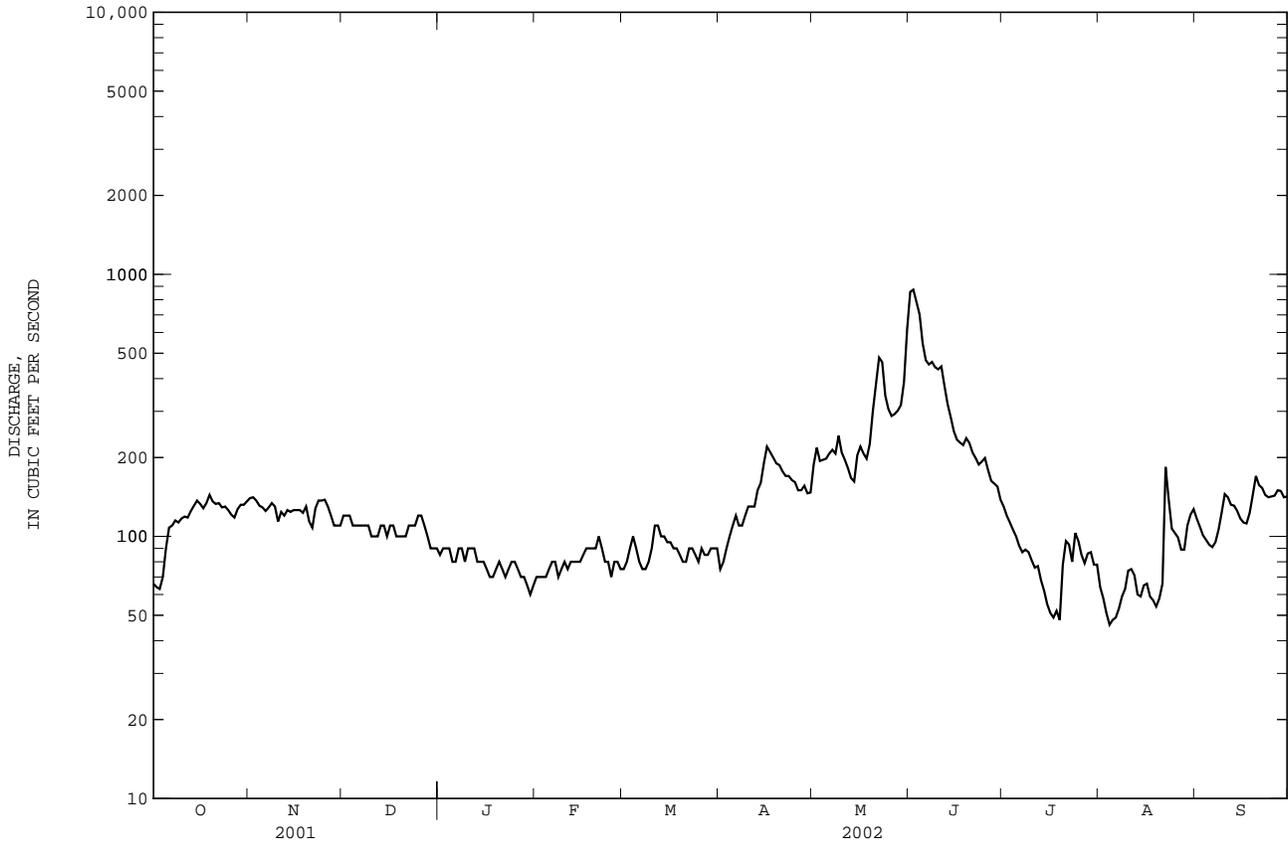
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2002, BY WATER YEAR (WY)

	1961	2002	1979.1	177.1	228.8	302.8	355.3	1136	1638	460.8	175.9	217.5
MEAN	253.2	223.7	179.1	177.1	228.8	302.8	355.3	1136	1638	460.8	175.9	217.5
MAX	403	324	271	330	672	855	676	3283	3570	1674	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	268	176	54.7	13.1	73.3
(WY)	1961	2002	1985	2002	2002	2002	1961	2002	2001	2001	2001	2001

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1961 - 2002	
ANNUAL TOTAL	54536.6		50346		--	
ANNUAL MEAN	149.4		137.9		445.6	
HIGHEST ANNUAL MEAN	--		--		862 1978	
LOWEST ANNUAL MEAN	--		--		138 2002	
HIGHEST DAILY MEAN	540	May 17	874	Jun 2	15400	May 19 1978
LOWEST DAILY MEAN	6.9	Aug 27	46	Aug 4	5.4	Aug 24 1961
ANNUAL SEVEN-DAY MINIMUM	8.0	Aug 25	52	Aug 2	7.2	Aug 22 1961
MAXIMUM PEAK FLOW	--		1050	Jun 2	17500	May 12 1978
MAXIMUM PEAK STAGE	--		4.53	Jun 2	14.25	May 12 1978
ANNUAL RUNOFF (AC-FT)	108200		99860		322800	
10 PERCENT EXCEEDS	250		219		1050	
50 PERCENT EXCEEDS	135		110		234	
90 PERCENT EXCEEDS	24		70		114	

e Estimated.



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 August 21, 2000.

REMARKS.--Unpublished records for many days 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 daily, 1,490 microsiemens/cm August 12, 1966; minimum daily, 192 microsiemens/cm, June 7, 1976.  
 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 daily mean, 1,120 microsiemens/cm, November 11; minimum daily mean, 204 microsiemens/cm, June 2.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (MG/L) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT														
01...	1230	66	673	--	--	8.4	870	24.0	15.0	330	62.0	42.1	3.62	
NOV														
15...	1145	131	685	--	--	8.3	765	15.0	3.0	330	64.9	40.1	2.92	
DEC														
11...	1100	E100	667	9.7	76	8.3	760	.0	.0	340	69.5	39.9	3.01	
JAN														
07...	1000	E90	672	13.1	96	8.2	600	4.0	1.0	270	57.7	29.3	2.22	
FEB														
07...	1000	E80	675	10.5	81	8.3	590	2.0	.0	260	54.9	29.7	2.37	
MAR														
18...	1130	E90	676	13.1	107	8.3	583	.0	2.0	250	52.7	29.0	2.56	
APR														
03...	1030	E90	670	7.2	74	8.6	699	7.0	10.5	310	60.8	37.7	3.02	
MAY														
29...	1230	314	671	6.1	80	8.4	330	26.0	22.0	150	34.6	15.2	1.44	
JUN														
05...	1130	543	672	6.6	77	8.2	245	26.0	17.0	110	26.7	11.2	1.20	
JUL														
10...	1030	80	682	7.3	96	8.3	625	25.0	23.0	240	45.9	30.8	3.11	
AUG														
07...	0945	50	675	5.8	76	8.1	990	25.0	22.0	350	61.9	48.2	4.96	
SEP														
16...	1115	114	667	10.8	137	8.2	735	21.0	20.0	310	60.4	39.2	3.66	
Date		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT														
01...	1	53.3	--	254	4.22	.4	7.6	186	.70	91.3	512	<.04	.32	
NOV														
15...	1	40.6	--	291	4.28	.4	6.3	155	.67	173	490	E.02	.30	
DEC														
11...	.9	37.0	--	280	5.22	.4	7.3	148	.65	--	480	<.04	.23	
JAN														
07...	.6	23.7	--	240	5.21	.3	6.4	91.9	.49	--	362	E.03	1.1	
FEB														
07...	.7	27.1	--	242	5.71	.3	5.7	95.7	.50	--	368	.11	.32	
MAR														
18...	.8	28.3	220	220	7.35	.3	3.5	90.6	.47	--	347	.17	.47	
APR														
03...	.9	35.9	229	227	3.54	.2	1.3	161	.60	--	440	<.04	.45	
MAY														
29...	.4	12.6	134	130	2.03	.1	5.3	45.9	.27	166	195	<.04	.65	
JUN														
05...	.4	8.57	100	97	1.49	E.1	7.1	30.6	.20	213	145	<.04	.56	
JUL														
10...	1	43.7	229	225	3.52	.3	5.7	115	.52	82.9	384	<.04	.60	
AUG														
07...	2	86.0	310	302	4.99	.5	7.5	238	.86	85.6	634	<.04	.40	
SEP														
16...	1	40.6	--	250	4.11	.3	7.2	156	.63	142	462	<.04	.36	

YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)
OCT 01...	<.013	<.002	<.007	.026	<1	.06	.7	<4	52	51.6	<.06	77	91
NOV 15...	.026	<.002	<.007	.017	<1	E.04	.4	<2	54	52.6	<.06	74	83
DEC 11...	.165	.044	<.007	.007	<1	.08	.4	M	52	52.5	<.06	80	72
JAN 07...	.151	.010	.016	.017	<1	E.04	.3	<2	52	47.8	<.06	60	62
FEB 07...	.173	.003	.019	.025	1	E.03	.3	<2	49	47.0	<.06	56	57
MAR 18...	.138	.003	<.007	.011	2	.19	.5	<2	49	46.3	<.06	57	54
APR 03...	.014	<.002	<.007	.042	1	.13	.6	<2	56	62.2	<.06	65	66
MAY 29...	<.013	<.002	<.007	.100	2	.17	.6	<2	41	50.3	<.06	28	29
JUN 05...	.018	E.002	.008	.112	3	E.04	.5	<2	28	43.0	<.06	24	22
JUL 10...	E.011	<.002	<.007	.091	1	.09	1.1	<2	64	79.3	<.06	73	72
AUG 07...	<.013	<.002	<.007	.040	1	.11	.9	E1	68	67.5	<.06	109	102
SEP 16...	.014	<.002	<.007	.050	1	.11	.7	<2	52	53.3	<.06	78	87

Date	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
OCT 01...	<.04	<.04	<.8	<1.6	.26	1.0	2.3	280	<.08	<1	27.6	16.3	33.8
NOV 15...	<.04	E.02	<.8	<.8	.24	.8	1.5	200	E.05	<1	22.4	14.9	22.0
DEC 11...	E.02	<.04	<.8	<.8	.25	1.1	1.5	150	E.05	<1	23.4	11.7	16.8
JAN 07...	<.04	<.04	<.8	<.8	.14	.7	.9	80	E.07	<1	23.0	8.7	10.7
FEB 07...	<.04	E.03	E.4	.8	.15	.9	.9	90	.09	<1	14.4	12.2	14.5
MAR 18...	<.04	<.04	E.4	<.8	.24	.9	1.2	140	E.05	<1	16.5	25.4	28.5
APR 03...	<.04	E.03	<.8	<.8	.41	1.2	4.6	640	E.07	<1	18.8	50.6	92.5
MAY 29...	<.04	E.02	<.8	E.7	.23	.7	2.1	910	E.06	<1	7.6	12.2	83.8
JUN 05...	<.04	E.03	<.8	.9	.14	.6	2.4	1020	E.06	1	5.2	8.1	78.9
JUL 10...	<.04	E.03	<.8	E.5	.29	1.3	3.4	1090	E.06	1	24.6	27.3	111
AUG 07...	<.04	E.03	<.8	<.8	.25	1.6	2.8	410	E.04	<1	39.0	9.3	47.7
SEP 16...	<.04	E.03	<.8	<.8	.29	1.2	2.5	680	.09	<1	21.0	24.7	69.5

## YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT 01...	--	1.0	.17	3	.6	.6	<1	686	<.04	1.2	<1	3	4.63
NOV 15...	--	.8	1.52	2	.4	E.2	<1	585	<.04	.5	1	3	4.98
DEC 11...	--	.8	1.68	1	.5	.6	<1	558	E.04	1.4	2	5	4.97
JAN 07...	--	.6	E.04	2	.4	E.2	<1	341	<.04	3.3	2	3	3.71
FEB 07...	--	.6	.23	2	.5	.5	<1	322	<.04	1.2	2	4	3.67
MAR 18...	--	.8	.70	3	.9	E.2	<1	311	<.04	<.2	2	4	4.06
APR 03...	--	.7	.89	5	.3	.8	<1	505	<.04	1.7	1	7	4.29
MAY 29...	--	.4	1.44	2	E.2	<.4	<1	169	<.04	2.7	<1	5	1.44
JUN 05...	E.01	.3	.90	2	.4	<.4	<1	121	<.04	1.2	<1	6	1.08
JUL 10...	--	1.1	1.66	4	.4	E.3	<1	345	<.04	1.6	<1	7	2.66
AUG 07...	--	1.3	1.58	4	.5	.6	<1	760	<.04	2.2	<1	4	4.79
SEP 16...	--	.9	2.85	5	.4	.5	<1	576	<.04	1.5	1	5	4.37

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDEDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDE (T/DAY) (80155)
OCT 01...	80	14.3
NOV 15...	58	20.5
DEC 11...	35	--
JAN 07...	29	--
FEB 07...	23	--
MAR 18...	6.0	--
APR 03...	42	--
MAY 29...	71	60.2
JUN 05...	77	113
JUL 10...	56	12.1
AUG 07...	11	1.5
SEP 16...	56	17.2

E -- Estimated value  
M -- Presence verified, not quantified

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

SPECIFIC CONDUCTANCE (US/CM AT 25 DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

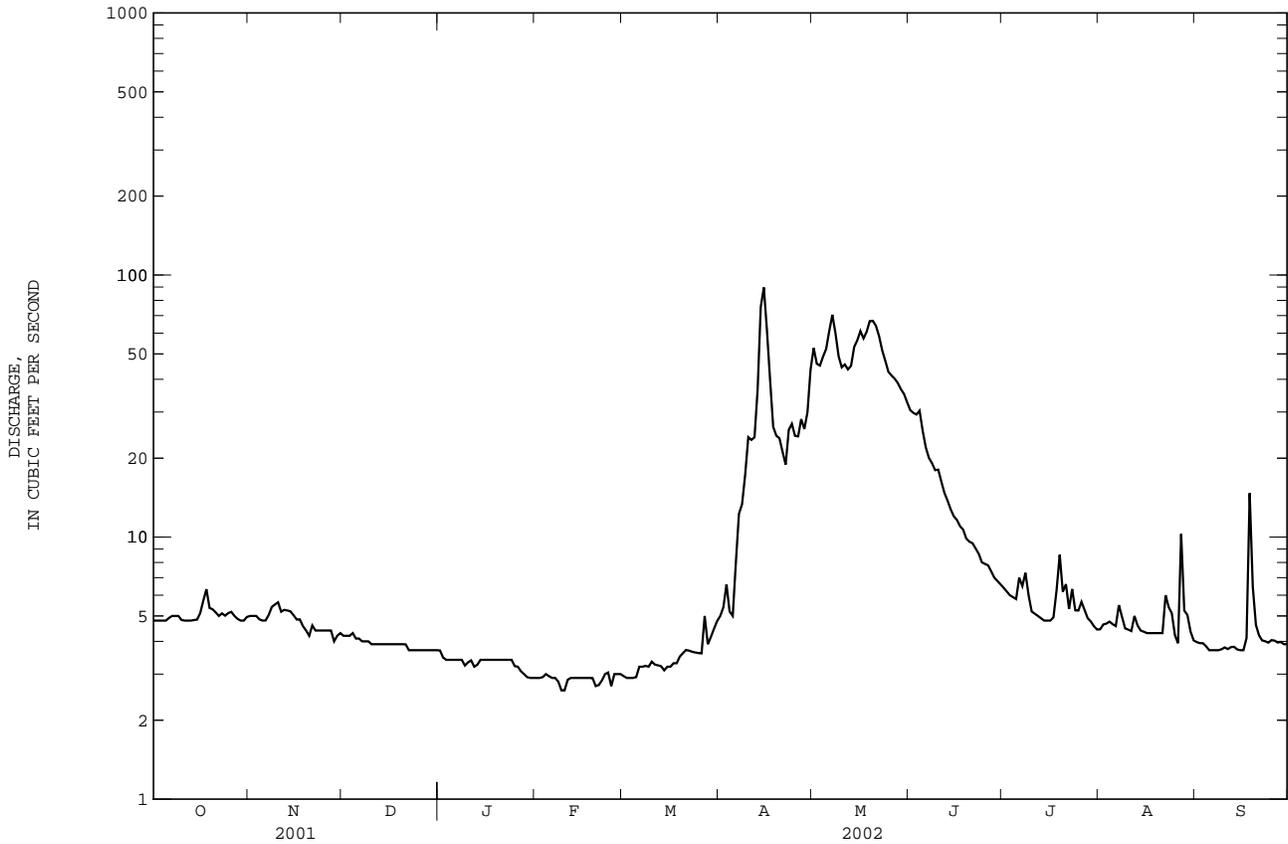
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	882	521	833	790	---	---	669	662	243	553	806	737
2	905	515	854	808	---	---	720	666	204	560	846	728
3	889	507	797	815	---	---	658	694	207	558	884	715
4	954	514	773	786	---	---	685	726	220	565	921	718
5	833	515	761	752	---	---	726	732	244	579	958	705
6	757	564	759	723	---	---	781	708	272	596	982	712
7	783	652	746	---	---	---	766	655	285	601	984	728
8	776	588	769	---	---	---	709	647	284	607	950	732
9	768	523	771	---	---	---	704	598	281	626	935	732
10	762	863	757	---	---	---	763	581	289	620	886	722
11	740	1120	751	---	---	---	770	599	299	670	823	713
12	721	1010	759	---	---	---	768	615	317	687	837	716
13	691	914	785	---	---	---	762	630	340	661	881	721
14	680	769	793	---	---	---	763	649	369	658	900	725
15	667	789	759	---	---	---	742	607	383	674	893	730
16	658	790	750	---	---	---	588	506	402	703	885	733
17	674	768	759	---	---	---	526	458	420	718	916	720
18	643	763	746	---	---	---	525	489	430	752	922	704
19	638	764	742	---	---	---	546	469	447	750	923	692
20	621	772	758	---	---	---	594	410	448	769	911	685
21	606	773	768	---	---	---	626	353	431	771	889	688
22	598	775	759	---	---	---	657	320	439	776	810	677
23	594	777	772	---	---	---	673	314	458	791	832	687
24	600	778	789	---	---	---	677	344	458	796	889	691
25	611	779	792	---	---	---	670	364	481	771	834	685
26	617	776	778	---	---	---	661	380	506	802	819	685
27	626	778	748	---	---	---	677	370	506	829	818	691
28	623	763	740	---	---	687	673	365	506	830	816	689
29	570	777	750	---	---	686	683	340	528	775	781	710
30	547	799	762	---	---	630	692	322	526	753	763	706
31	534	---	778	---	---	562	---	341	---	764	749	---
MAX	954	1120	854	---	---	---	781	732	528	830	984	737



06309200 MIDDLE FORK POWDER RIVER NEAR BARNUM, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	4333.7		3981.3		--	
ANNUAL MEAN	11.87		10.91		29.49	
HIGHEST ANNUAL MEAN	--		--		51.4 1999	
LOWEST ANNUAL MEAN	--		--		10.9 2002	
HIGHEST DAILY MEAN	160	May 1	90	Apr 15	954	Apr 29 1999
LOWEST DAILY MEAN	3.7	Dec 22-31	2.6	Feb 9,10	1.0	Dec 15 1964
ANNUAL SEVEN-DAY MINIMUM	3.7	Dec 22	2.8	Feb 5	1.2	Jan 22 1966
MAXIMUM PEAK FLOW	--		164	Apr 14	7110 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	--		6.85	Apr 14	12.60 <sup>b</sup>	Jun 15 1963
INSTANTANEOUS LOW FLOW	--		--		1.0	Dec 15 1964
ANNUAL RUNOFF (AC-FT)	8600		7900		21360	
10 PERCENT EXCEEDS	22		34		72	
50 PERCENT EXCEEDS	5.0		4.7		7.1	
90 PERCENT EXCEEDS	4.2		3.0		4.6	

a On basis of slope-area measurement of peak flow.  
 b From floodmarks, site and datum then in use.  
 e Estimated.

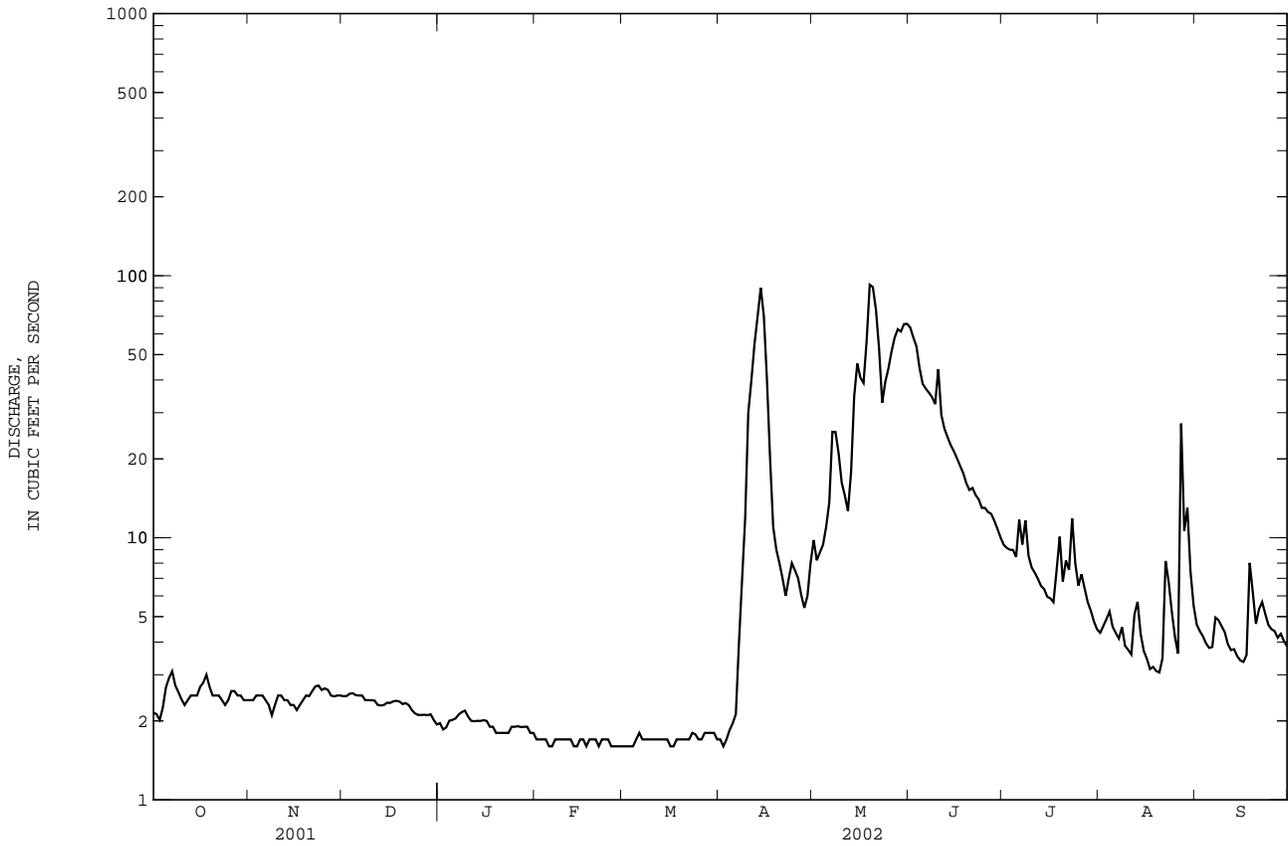




06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1946 - 2002	
ANNUAL TOTAL	1803.8	3457.5	--	
ANNUAL MEAN	4.942	9.473	14.95	
HIGHEST ANNUAL MEAN	--	--	26.7	1967
LOWEST ANNUAL MEAN	--	--	5.05	2001
HIGHEST DAILY MEAN	50 <sup>e</sup> May 1	92 May 19	354	Jun 15 1953
LOWEST DAILY MEAN	1.2 <sup>e</sup> Feb 9-11	1.6 Many days	0.60 <sup>a</sup>	Oct 30 1960
ANNUAL SEVEN-DAY MINIMUM	1.3 Feb 6	1.6 Feb 25	0.64	Apr 12 1961
MAXIMUM PEAK FLOW	--	170 <sup>b</sup> May 19	886 <sup>c</sup>	Jun 15 1953
MAXIMUM PEAK STAGE	--	4.04 <sup>d</sup> Apr 14	6.21 <sup>f</sup>	May 14 1984
INSTANTANEOUS LOW FLOW	--	--	0.60	Oct 30 1960
ANNUAL RUNOFF (AC-FT)	3580	6860	10830	
10 PERCENT EXCEEDS	13	28	43	
50 PERCENT EXCEEDS	2.5	2.7	3.9	
90 PERCENT EXCEEDS	1.4	1.7	1.9	

- a May have been less during winter months of water years 1947 and 1948.
- b Gage height, 3.69 ft.
- c Gage height, 4.34 ft, site and datum then in use, from rating curve extended above 110 ft<sup>3</sup>/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.



## YELLOWSTONE RIVER BASIN

06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY

LOCATION.--Lat 43°54'41", long 106°53'20", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	18	e19	e18	e18	17	21	19	40	29	26
2	18	19	18	e19	e19	e18	17	20	19	39	29	25
3	19	18	18	e19	e19	e18	21	20	19	37	30	23
4	20	19	18	e19	e19	e18	18	21	19	36	31	23
5	20	19	18	e19	e19	18	18	21	23	35	31	23
6	21	19	18	19	19	17	19	21	28	39	31	23
7	21	19	18	19	19	17	19	23	30	41	31	22
8	21	19	18	19	19	e17	19	24	31	41	31	21
9	21	19	18	19	19	e17	18	21	32	41	30	21
10	21	19	19	18	19	e17	18	21	35	41	30	21
11	21	19	19	18	19	17	19	20	37	42	30	21
12	22	19	18	18	19	17	18	20	34	42	31	21
13	22	19	18	19	19	17	19	19	33	44	30	21
14	22	19	19	19	19	17	27	20	32	44	30	20
15	21	19	19	19	19	17	40	20	42	44	30	19
16	21	18	19	e18	19	e17	29	20	47	44	31	19
17	20	18	19	e18	20	17	24	20	48	44	31	19
18	20	19	19	e18	20	e17	22	19	47	45	32	20
19	20	18	19	e18	20	17	21	20	47	46	32	19
20	19	18	19	e18	20	17	20	21	48	43	32	19
21	19	18	19	e18	20	e17	19	21	50	39	31	19
22	19	17	19	e19	20	e18	19	22	47	34	31	19
23	19	18	18	e19	20	18	19	21	44	35	31	19
24	19	17	17	19	e19	18	20	21	44	34	31	19
25	19	18	18	19	e19	17	19	22	44	33	29	19
26	19	17	19	19	e19	17	19	21	44	33	28	19
27	18	17	19	19	e18	18	20	21	44	32	31	19
28	18	16	19	19	e18	18	19	21	44	31	30	19
29	18	17	19	e18	---	18	19	21	43	30	28	19
30	18	18	e19	e18	---	17	19	20	41	30	25	19
31	18	---	e19	e18	---	17	---	19	---	30	25	---
TOTAL	611	547	574	577	536	538	615	642	1115	1189	932	616
MEAN	19.71	18.23	18.52	18.61	19.14	17.35	20.50	20.71	37.17	38.35	30.06	20.53
MAX	22	19	19	19	20	18	40	24	50	46	32	26
MIN	17	16	17	18	18	17	17	19	19	30	25	19
AC-FT	1210	1080	1140	1140	1060	1070	1220	1270	2210	2360	1850	1220

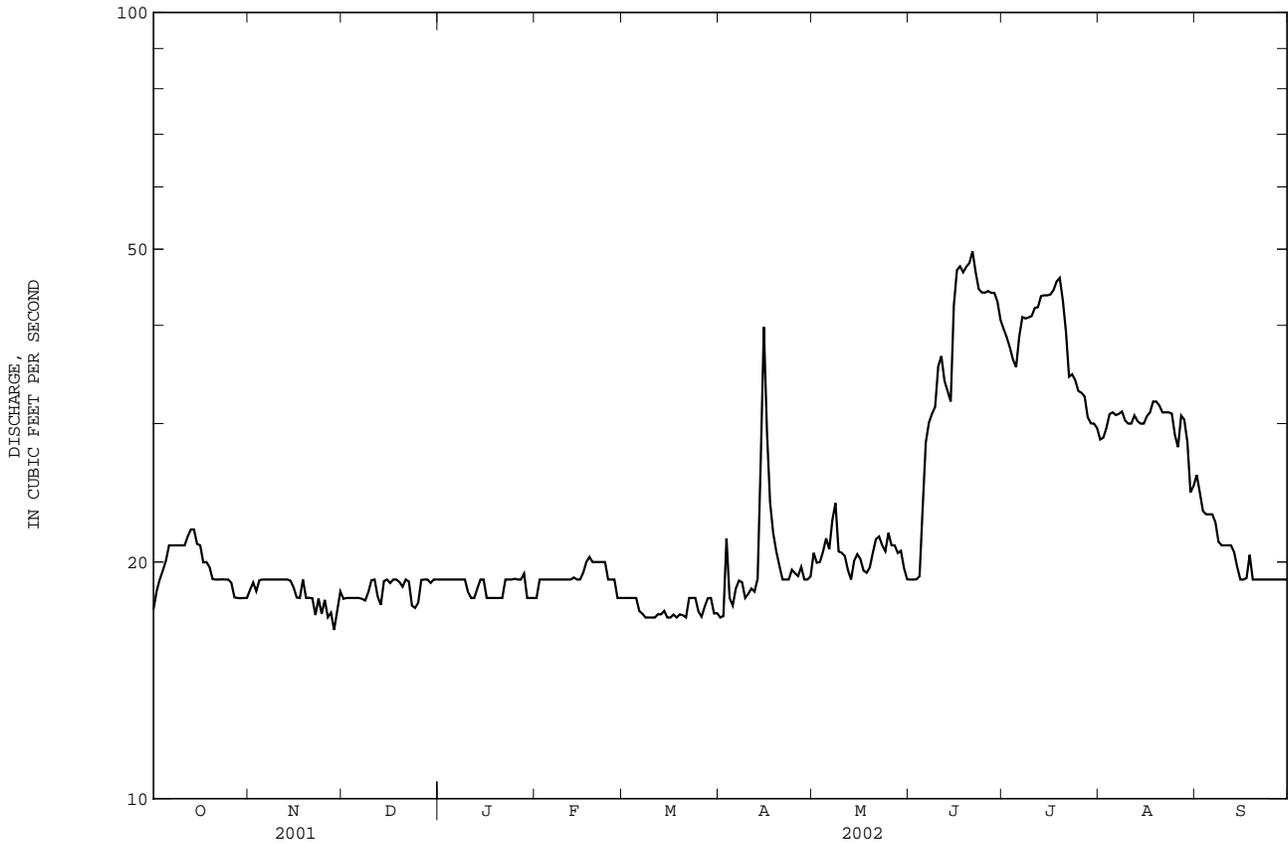
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)

MEAN	21.90	19.51	18.94	18.47	18.17	18.10	26.81	75.48	88.12	45.94	38.82	31.73
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	16.9	20.7	29.7	30.8	26.1	18.2
(WY)	1990	1990	1991	1991	1991	1991	1993	2002	2001	1977	1985	2001

06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1974 - 2002	
ANNUAL TOTAL	8061		8492		--	
ANNUAL MEAN	22.08		23.27		35.22	
HIGHEST ANNUAL MEAN	--		--		51.6 1978	
LOWEST ANNUAL MEAN	--		--		22.8 2001	
HIGHEST DAILY MEAN	44	Jul 23,24	50	Jun 21	379	Jun 5 1995
LOWEST DAILY MEAN	14 <sup>e</sup>	Feb 9	16	Nov 28	9.5	Feb 6 1991
ANNUAL SEVEN-DAY MINIMUM	16	Feb 8	17	Mar 6	11	Feb 5 1991
MAXIMUM PEAK FLOW	--		115 <sup>a</sup>	Jul 21	1590 <sup>b</sup>	Aug 1 1984
MAXIMUM PEAK STAGE	--		4.59	Aug 28	8.89 <sup>c</sup>	Aug 1 1984
INSTANTANEOUS LOW FLOW	--		--		9.5	Feb 6 1991
ANNUAL RUNOFF (AC-FT)	15990		16840		25520	
10 PERCENT EXCEEDS	33		37		61	
50 PERCENT EXCEEDS	20		19		21	
90 PERCENT EXCEEDS	18		18		17	

- a Gage height, 4.36 ft.
- b From rating curve extended above 400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- e Estimated.



## YELLOWSTONE RIVER BASIN

06313400 SALT CREEK NEAR SUSSEX, WY

LOCATION.--Lat 43°37'19", long 106°22'04", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--Water years 1949, 1952, 1968 to 1981, October 1982 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
Date		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
OCT 23...	1110	13	637	9.5	94	7.9	6420	6.0	6.5	500	112	53.7	31.9	
JAN 14...	1000	12	649	11.2	92	7.9	5460	-7.0	.0	780	208	62.7	33.8	
FEB 19...	1020	20	648	11.0	91	8.2	7050	5.0	.0	540	132	51.1	28.9	
MAR 18...	1105	22	650	10.7	88	8.3	5480	.5	.0	690	157	72.5	24.9	
APR 11...	1400	17	650	8.2	98	8.3	5950	16.0	15.0	640	138	70.7	29.1	
MAY 09...	1440	16	649	9.4	109	8.3	6480	9.5	13.5	660	131	81.3	31.4	
JUN 12...	1415	13	652	9.4	129	8.4	6700	18.0	22.0	490	87.7	66.5	32.1	
JUL 08...	1005	13	654	8.3	113	8.1	3430	25.0	22.5	420	105	37.4	17.1	
AUG 15...	1230	9.2	650	5.9	80	8.4	6030	26.5	21.5	370	65.6	49.4	31.3	
SEP 12...	1340	9.0	650	8.0	102	8.4	5890	19.5	18.5	420	84.3	50.9	28.6	
OCT 23...	21	1090	285	1240	2.5	27.8	1210	5.35	138	--	3930	--	--	
JAN 14...	14	876	348	890	3.3	31.8	1280	5.14	122	3780	3590	4	80.1	
FEB 19...	25	1340	469	1530	2.4	27.9	973	6.07	241	4460	4360	4	96.9	
MAR 18...	16	957	356	840	2.3	22.2	1400	5.28	231	3880	3690	3	--	
APR 11...	17	1010	345	911	2.3	19.0	1520	5.47	184	4020	3910	3	99.1	
MAY 09...	20	1210	365	1030	2.16	19.7	1600	5.97	190	4390	4320	4	84.0	
JUN 12...	26	1300	341	1270	2.69	18.5	1290	5.93	153	4360	4280	3	88.0	
JUL 08...	12	576	287	542	1.29	12.8	612	2.96	76.5	2180	2080	E2	140	
AUG 15...	28	1240	310	1250	2.53	21.8	998	5.25	95.9	3860	3840	3	117	
SEP 12...	23	1100	274	1120	2.46	25.0	1040	5.17	92.5	3800	3610	<2	116	

## YELLOWSTONE RIVER BASIN

237

06313400 SALT CREEK NEAR SUSSEX, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
OCT 23...	--	--	--
JAN 14...	<50	44.5	3.2
FEB 19...	<50	51.7	1.9
MAR 18...	<10	67.4	E.2
APR 11...	E8	61.0	2.6
MAY 09...	E23	46.1	2.8
JUN 12...	<50	20.5	6.9
JUL 08...	<30	7.4	3.2
AUG 15...	<50	E7.5	E.6d
SEP 12...	<30	7.3	2.7

E -- Estimated value

YELLOWSTONE RIVER BASIN

06313500 POWDER RIVER AT SUSSEX, WY

LOCATION.--Lat 43°41'44", long 106°18'24", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.13, T.43 N., R.79 W., Johnson County, Hydrologic Unit 10090202, 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<sup>2</sup>.

PERIOD OF RECORD.--Water years 1949-53, 1967-68, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1983 to September 1984.

WATER TEMPERATURE: October 1982 to September 1984.

SUSPENDED-SEDIMENT DISCHARGE: May 1983 to September 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
23...	1240	80	640	8.9	87	8.2	2520	4.0	6.5	540	131	52.4	9.69
NOV													
20...	0820	117	651	12.2	99	7.6	2040	3.5	.0	540	134	49.5	7.76
DEC													
17...	0905	99	647	8.2	67	8.0	2060	-1.0	.0	590	150	51.8	8.27
JAN													
14...	1200	113	651	9.1	73	7.8	1820	-7.0	.0	500	129	43.8	6.44
FEB													
19...	1215	144	649	12.2	99	8.2	2210	5.5	.0	480	120	42.9	6.93
MAR													
18...	0920	146	653	11.8	--	8.1	--	.5	.0	600	152	53.4	6.53
APR													
11...	1230	175	653	9.1	99	8.3	2060	12.0	12.0	510	126	48.4	6.77
MAY													
09...	1315	184	662	8.6	93	8.2	1640	9.0	12.0	380	92.8	36.6	5.34
JUN													
12...	1305	27	656	8.3	110	8.2	4810	22.0	21.0	860	194	91.2	18.3
JUL													
08...	1020	23	654	8.2	118	8.0	2600	26.0	25.5	560	136	53.3	12.8
AUG													
15...	1115	10	654	8.2	107	8.3	5420	16.0	20.0	570	118	66.0	24.2
SEP													
12...	1205	76	653	7.7	96	8.2	2270	18.5	18.0	630	164	52.3	7.44

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
OCT													
23...	6	337	205	303	.8	8.83	644	2.27	360	1670	1610	--	66.6
NOV													
20...	5	254	225	212	.7	13.4	590	1.96	455	1440	1400	<2	70.6
DEC													
17...	4	214	236	179	.8	12.9	608	2.00	393	1470	1370	E1	48.3
JAN													
14...	4	190	229	166	.8	11.5	532	1.75	393	1290	1220	E1	57.6
FEB													
19...	6	284	234	280	.7	11.5	506	2.00	572	1470	1390	E2	57.4
MAR													
18...	5	264	214	179	.8	10.2	764	2.30	667	1690	1560	<2	124
APR													
11...	5	243	208	162	.6	8.64	663	2.01	698	1480	1380	<2	72.5
MAY													
09...	4	187	167	125	.53	7.75	490	1.30	475	957	1050	M	122
JUN													
12...	12	800	279	610	.82	11.5	1440	4.71	253	3460	3330	E1	60.3
JUL													
08...	6	329	228	273	.83	9.18	721	2.42	111	1780	1670	E1	74.4
AUG													
15...	18	996	252	960	1.91	16.7	1160	4.83	95.9	3550	3500	2	110
SEP													
12...	4	256	160	188	.64	10.3	726	2.26	341	1660	1500	<2	55.5

## YELLOWSTONE RIVER BASIN

239

06313500 POWDER RIVER AT SUSSEX, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
OCT 23...	<10	12.8	2.8
NOV 20...	1810	141	2.0
DEC 17...	E8	19.3	3.0
JAN 14...	<10	10.5	3.4
FEB 19...	<10	15.5	1.9
MAR 18...	<10	15.4	7.3
APR 11...	<10	5.0	4.3
MAY 09...	<10	3.4	2.3
JUN 12...	<30	82.5	4.1
JUL 08...	<10	34.7	3.7
AUG 15...	<50	37.5	2.3
SEP 12...	<10	19.4	2.1

E -- Estimated value

M -- Presence verified, not quantified

YELLOWSTONE RIVER BASIN

06313605 POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44°08'50", long 106°08'34", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
10...	1545	51	661	9.5	107	8.3	3260	14.0	13.5	680	154	71.0	13.4
NOV													
21...	1110	134	654	12.8	109	8.2	2060	7.5	2.0	530	128	51.3	7.56
DEC													
12...	1450	108	659	10.6	85	8.2	2280	2.0	.0	640	156	61.3	7.78
JAN													
08...	1400	80	655	9.8	79	7.6	1840	15.5	.0	540	135	48.6	6.36
FEB													
12...	1720	114	668	10.6	83	8.1	2020	-1.5	.0	420	104	38.2	6.52
MAR													
12...	1530	141	--	--	--	8.3	1900	12.5	2.5	460	115	40.9	6.78
APR													
09...	1630	164	659	8.6	97	8.3	2400	18.5	14.0	580	143	54.2	9.16
MAY													
07...	1655	182	655	8.0	93	8.3	2180	9.0	15.0	470	111	45.4	7.96
JUN													
11...	1225	34	661	10.2	132	8.3	4170	20.5	20.0	770	164	87.0	18.4
JUL													
09...	1610	22	670	7.3	113	8.5	5790	29.0	30.0	520	97.2	66.3	23.9
AUG													
13...	1745	14	662	7.5	107	8.5	4260	29.5	25.5	550	126	56.6	23.7
SEP													
10...	1930	95	664	7.0	91	8.3	2460	20.5	21.0	630	164	53.0	9.39

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT. DIS-FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)
OCT													
10...	8	474	219	366	.9	7.52	912	2.98	302	2190	2130	4	943
NOV													
21...	5	246	205	189	.6	7.66	619	1.98	527	1460	1370	1	2970
DEC													
12...	5	273	256	205	.7	11.3	712	2.02	433	1480	1580	1	1770
JAN													
08...	4	188	270	138	.6	10.7	526	1.78	283	1310	1220	1	1170
FEB													
12...	6	267	259	256	.7	10.3	421	1.80	406	1320	1260	1	641
MAR													
12...	5	236	239	166	.6	8.89	528	1.77	495	1300	1250	1	2020
APR													
09...	6	310	226	180	.8	9.58	794	2.31	752	1700	1640	3	5370
MAY													
07...	6	295	220	125	.7	8.13	756	2.08	751	1530	1480	3	8910
JUN													
11...	11	687	320	443	.2	9.03	1300	4.10	277	3020	2900	<2	200
JUL													
09...	20	1040	393	926	1.7	6.31	1240	5.21	228	3830	3630	8	1800
AUG													
13...	14	759	361	431	1.3	9.68	1300	4.13	115	3040	2930	4	7270
SEP													
10...	5	287	173	180	.7	9.89	863	2.55	480	1870	1670	3	1600

06313605 POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC, DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHROMIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
OCT 10...	.47	--	1.7	46	60.1	<.10	1020	.83	<.8	.63	20.4	<30	<.20
NOV 21...	.08	--	1.0	31	72.9	<.06	257	E.02	<.8	.22	1.7	<10	<.08
DEC 12...	.09	--	1.0	37	59.8	<.06	292	<.04	<.8	.35	2.8	<10	<.08
JAN 08...	<.05	--	.9	45	61.1	<.06	246	<.04	<.8	.28	2.1	<10	<.08
FEB 12...	.09	<.9	.9	44	50.3	<.06	290	<.04	<.8	.22	2.2	<10	.14
MAR 12...	.18	<.9	.8	60	93.0	<.06	272	E.02	<.8	.27	2.6	<10	.12
APR 09...	.36	<.9	1.4	46	135	<.06	285	.04	<.8	.37	4.3	<10	<.08
MAY 07...	.20	<.9	1.2	43	195	<.06	217	1.60	<.8	.31	4.0	<10	.09
JUN 11...	.23	--	1.1	141	140	<.10	646	.08	<.8	.32	8.4	<30	<.20
JUL 09...	.34	--	1.3	87	152	<.10	1260	E.04	<.8	.34	7.7	<50	<.20
AUG 13...	.49	--	1.6	129	186	<.10	671	<.07	<.8	.49	9.3	<30	E.15
SEP 10...	.25	--	1.0	59	88.2	<.06	284	<.04	<.8	.38	4.1	<10	<.08

Date	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	THALLIUM, DIS-SOLVED (UG/L AS TL) (01057)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM, NATURAL DIS-SOLVED (UG/L AS U) (22703)
OCT 10...	325	8.9	6.4	<.10	7.0	<2	2700	.09	1.2	13	21.1
NOV 21...	109	2.2	1.3	<.06	2.0	<1	1840	<.04	.8	2	6.53
DEC 12...	137	4.0	2.1	2.42	4.0	<1	2170	E.03	1.3	2	7.88
JAN 08...	97.4	3.4	1.5	1.54	3.2	<1	1810	.06	4.0	1	6.79
FEB 12...	89.9	3.6	1.3	.68	2.7	<1	1570	<.04	1.4	5	4.84
MAR 12...	105	3.6	1.6	.95	3.7	<1	1520	<.04	<.2	2	5.90
APR 09...	115	2.6	3.2	2.10	6.2	<1	1940	<.04	2.0	2	7.96
MAY 07...	92.8	2.1	2.7	3.20	5.4	<1	1610	E.02	1.4	5	6.59
JUN 11...	234	9.1	3.7	.52	5.0	<2	2770	<.08	3.5	6	10.9
JUL 09...	253	4.4	4.2	3.30	2.9	<2	1350	<.08	3.6	4	7.16
AUG 13...	237	5.8	5.3	4.13	3.6	<2	2140	<.08	1.7	3	7.15
SEP 10...	102	4.1	5.0	7.20	2.6	<1	1980	<.04	.9	2	9.15

E -- Estimated value

YELLOWSTONE RIVER BASIN

06313700 DEAD HORSE CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°12'54", long 106°06'41", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--Water years 1987-1989, April 2000 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 11...	1655	.0	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	1655	.05	--	--	--	7.8	3150	4.5	2.0	970	196	117	10.7
APR 09...	1740	.01	654	11.5	131	8.1	4000	18.5	13.5	1700	338	213	13.5
JUL 09...	1450	1.3	671	6.1	91	7.8	2340	29.0	28.5	1400	414	80.2	15.8

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
OCT 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	6	414	361	19.4	.5	5.81	1500	3.63	.36	2670	2480	<2	45.8
APR 09...	6	554	334	20.1	.3	1.43	2180	5.05	.10	3710	3520	<2	64.9
JUL 09...	.8	71.6	80	8.19	.52	5.18	1370	3.03	7.82	2230	2020	E1	98.1

Date	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
OCT 11...	--	--
MAR 12...	30	1000
APR 09...	48	1050
JUL 09...	<30	44.4

E -- Estimated value

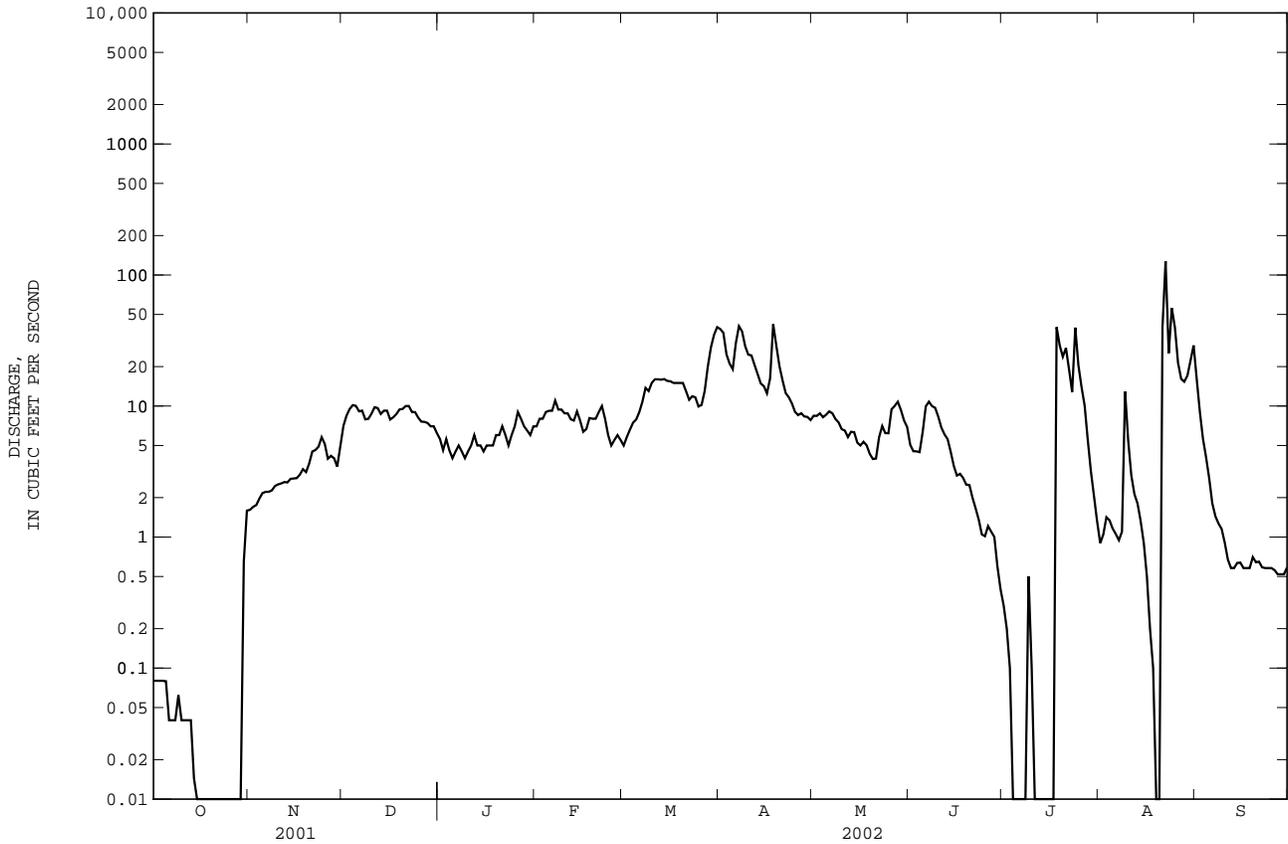


YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1963 - 2002	
ANNUAL TOTAL	5532.39		2928.52		--	
ANNUAL MEAN	15.16		8.023		44.41	
HIGHEST ANNUAL MEAN	--		--		119 1978	
LOWEST ANNUAL MEAN	--		--		8.03 2002	
HIGHEST DAILY MEAN	800 <sup>e</sup>	Jul 10	128	Aug 22	2030	May 20 1978
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 15	0.00	Oct 15	0.00	Some years
MAXIMUM PEAK FLOW	--	--	587	Aug 21	15800 <sup>a</sup>	Jun 15 1965
MAXIMUM PEAK STAGE	--	--	5.58	Aug 21	16.02 <sup>b</sup>	Jun 15 1965
ANNUAL RUNOFF (AC-FT)	10970		5810		32180	
10 PERCENT EXCEEDS	26		16		85	
50 PERCENT EXCEEDS	7.6		5.8		16	
90 PERCENT EXCEEDS	0.07		0.04		1.3	

a From rating curve extended above 1,300 ft<sup>3</sup>/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).

INSTRUMENTATION.--Water quality monitor for specific conductance and water temperature.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,280 microsiemens/cm, September 4-7, 2001 and July 18, 2002; minimum daily, 547 microsiemens/cm, August 21, 2002.  
 WATER TEMPERATURE: Maximum, 31.4°C, August 6, 2001; minimum, 0.0°C, April 11, 12, 2002.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,280 microsiemens/cm, July 18; minimum daily, 547 microsiemens/cm, August 21.  
 WATER TEMPERATURE: Maximum, 30.7°C, July 18; minimum, 0.0°C, April 11, 12.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT														
11...	1230	.05	--	--	--	8.0	2940	12.5	8.5	1100	268	115	7.05	
NOV														
21...	0825	3.8	660	11.0	89	8.0	2860	3.0	.5	1200	243	150	7.28	
DEC														
12...	1250	9.8	665	10.8	85	8.1	2030	2.0	.0	960	194	114	4.73	
JAN														
09...	1120	4.0	666	11.0	87	7.7	2030	8.5	.0	880	185	101	4.21	
FEB														
13...	1520	8.1	663	11.4	90	7.6	1420	9.0	.0	590	128	64.6	3.27	
MAR														
18...	1440	15	672	11.0	86	8.0	1260	--	.0	530	113	59.6	2.86	
APR														
10...	1120	24	665	12.9	104	8.0	1110	12.5	1.0	450	93.0	51.5	2.63	
MAY														
08...	1145	7.5	665	10.7	108	8.2	1930	3.0	9.5	780	162	90.2	4.84	
JUN														
11...	1415	7.2	666	10.4	125	8.2	2620	27.0	17.0	1200	219	151	7.31	
JUL														
09...	1255	.87	674	8.2	113	7.9	3150	24.0	24.5	1300	280	151	9.48	
AUG														
13...	1520	1.9	668	9.1	117	8.0	2460	28.5	20.5	1000	226	112	13.1	
SEP														
11...	1055	.71	667	7.4	87	8.0	1840	22.0	16.5	770	183	75.8	10.2	
Date		SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	ALKA-LINITY WAT.DIS FET LAB CaCO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS Cl) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT														
11...	4	279	294	11.6	.4	6.07	1450	3.50	.35	2580	2310	--	--	
NOV														
21...	3	232	278	14.7	.3	3.46	1510	3.61	27.3	2660	2330	--	--	
DEC														
12...	2	156	288	10.5	.4	8.72	966	2.22	43.2	1630	1630	--	--	
JAN														
09...	2	148	311	11.5	.4	8.40	916	2.38	18.9	1750	1560	--	--	
FEB														
13...	2	88.8	245	6.17	.3	8.51	588	1.53	24.7	1130	1040	--	--	
MAR														
18...	2	81.0	190	6.01	.2	6.36	530	1.38	41.0	1010	915	--	--	
APR														
10...	2	81.1	127	5.01	.2	2.99	482	1.18	56.2	867	796	<.04	E.03	
MAY														
08...	2	148	213	7.85	.3	.79	912	2.24	33.3	1640	1460	<.04	<.05	
JUN														
11...	3	226	234	14.9	.5	2.79	1380	3.28	46.9	2410	2150	<.04	<.05	
JUL														
09...	3	291	286	15.7	.4	6.17	1650	3.94	6.81	2900	2580	--	--	
AUG														
13...	2	179	210	12.5	.5	1.59	1300	2.98	11.2	2190	1970	--	--	
SEP														
11...	2	123	200	7.87	.4	3.37	842	2.10	2.96	1550	1370	--	--	

## YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
OCT													
11...	--	--	<2	245	<.10	.7	65	67.0	<.10	121	.40	E.4	1.59
NOV													
21...	--	--	<2	67	.10	.8	31	35.5	<.10	198	E.04	<.8	.64
DEC													
12...	--	--	2	70	.09	.7	25	26.3	<.06	188	E.02	<.8	.52
JAN													
09...	--	--	1	24	<.05	.8	35	33.8	<.06	194	.04	<.8	.53
FEB													
13...	--	--	1	32	.07	.6	27	27.5	<.06	102	<.04	<.8	.35
MAR													
18...	--	--	1	53	.08	.6	28	25.5	<.06	101	.04	E.6	.39
APR													
10...	<.008	<.02	1	313	.17	.5	20	25.6	<.06	70	.26	<.8	.46
MAY													
08...	<.008	<.02	2	169	.18	.7	39	42.0	<.06	127	.16	<.8	.70
JUN													
11...	E.004	<.02	<2	384	.39	1.1	54	59.2	<.10	202	<.07	<.8	.96
JUL													
09...	--	--	4	241	.26	1.4	66	69.8	<.10	256	1.24	<.8	1.70
AUG													
13...	--	--	54	594	.46	1.3	84	90.7	<.06	171	.04	<.8	1.23
SEP													
11...	--	--	2	360	.36	.9	74	81.0	<.06	129	E.02	<.8	.99
Date	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT													
11...	16.5	<30	<.20	46.2	760	4.6	<.10	<.7	<2	2580	<.08	.6	9
NOV													
21...	4.6	E15	<.20	59.6	105	2.2	<.10	.8	<2	2030	<.08	.5	5
DEC													
12...	4.1	<30	<.08	59.8	48.1	1.9	3.04	2.1	<1	1650	<.04	1.8	3
JAN													
09...	3.5	38	<.08	57.9	98.8	1.6	2.68	2.5	<1	1630	<.04	4.1	3
FEB													
13...	3.0	20	<.08	29.9	52.9	1.2	1.07	1.9	<1	1110	<.04	1.3	3
MAR													
18...	2.6	13	<.08	32.4	36.0	1.3	2.87	1.7	<1	1010	<.04	<.2	3
APR													
10...	2.6	E6	<.08	21.3	99.1	1.1	1.72	1.1	<1	739	<.04	.8	5
MAY													
08...	4.6	19	<.08	35.9	123	2.7	4.08	1.2	<1	1400	<.04	1.1	3
JUN													
11...	8.2	E16	<.20	65.9	176	3.8	2.44	1.9	<2	1990	<.08	1.7	5
JUL													
09...	11.2	<30	.16	75.3	700	6.3	9.27	1.6	<2	2420	<.08	2.8	9
AUG													
13...	7.4	90	.25	53.5	280	5.8	6.20	1.9	<1	1750	.06	1.5	6
SEP													
11...	4.3	28	E.04	37.3	244	4.6	9.76	1.0	<1	1300	<.04	.4	4

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 11...	10.1	--	--
NOV 21...	18.0	--	--
DEC 12...	15.9	--	--
JAN 09...	14.7	--	--
FEB 13...	9.42	--	--
MAR 18...	10.2	--	--
APR 10...	7.57	29	1.9
MAY 08...	11.5	91	1.8
JUN 11...	18.9	46	.89
JUL 09...	13.7	--	--
AUG 13...	15.9	--	--
SEP 11...	13.1	--	--

E -- Estimated value

SPECIFIC CONDUCTANCE (US/CM @ 25 DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	2730	2700	2710
24	---	---	---	---	---	---	---	---	---	2740	2720	2730
25	---	---	---	---	---	---	---	---	---	2820	2740	2780
26	---	---	---	---	---	---	---	---	---	2820	2740	2790
27	---	---	---	---	---	---	---	---	---	2740	2650	2690
28	---	---	---	---	---	---	---	---	---	2650	2580	2610
29	---	---	---	---	---	---	---	---	---	2580	2490	2530
30	---	---	---	---	---	---	---	---	---	2510	2480	2500
31	---	---	---	---	---	---	---	---	---	2530	2500	2510
MONTH	---	---	---	---	---	---	---	---	---	2820	2480	2650

## YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

SPECIFIC CONDUCTANCE (US/CM @ 25 DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	2560	2530	2540	2850	2740	2800	2010	1890	1950	1160	1060	1110
2	2610	2560	2590	2900	2840	2870	2070	1990	2030	1290	1150	1250
3	2680	2610	2650	2900	2880	2890	2110	2060	2080	1320	1280	1290
4	2690	2600	2660	---	---	---	2160	2090	2140	1420	1320	1370
5	2770	2620	2680	---	---	---	2240	2160	2200	1490	1420	1460
6	2920	2770	2880	---	---	---	2330	2220	2280	1560	1490	1530
7	2870	2750	2800	---	---	---	2440	2330	2400	1640	1560	1600
8	2770	2710	2750	---	---	---	2480	2410	2450	1710	1630	1670
9	2710	2500	2610	3170	3010	3050	2570	2280	2470	1760	1710	1730
10	2590	2500	2540	3040	2950	3010	2430	2310	2350	1820	1750	1780
11	2630	2560	2600	---	---	---	2440	2370	2400	1900	1820	1850
12	2660	2610	2630	---	---	---	2470	2410	2430	1950	1900	1920
13	2660	2560	2620	---	---	---	2470	2420	2450	2080	1910	1980
14	2560	2450	2500	---	---	---	2540	2420	2480	2160	1950	2040
15	2450	2430	2440	---	---	---	2660	2540	2610	2150	2030	2080
16	2500	2450	2470	---	---	---	2730	2660	2690	2180	2070	2130
17	2540	2500	2520	---	---	---	2780	2720	2740	2290	2140	2200
18	2600	2540	2570	3280	2160	3080	2840	2760	2810	2220	2160	2170
19	2640	2590	2620	2390	1750	2120	---	---	---	2210	2120	2180
20	2630	2600	2620	2530	1760	2220	---	---	---	2250	2200	2220
21	2620	2590	2610	2150	1810	2030	3020	547	2730	2290	2200	2230
22	2610	2570	2600	2380	2020	2210	2240	1030	1510	2310	2240	2270
23	2610	2580	2600	2260	1620	1880	1170	870	979	2390	2270	2310
24	2630	2590	2610	2380	1620	2090	2010	1020	1300	2510	2310	2370
25	2650	2600	2630	2920	2280	2680	2060	1570	1920	2440	2360	2390
26	2660	2620	2640	2280	2050	2120	1960	1540	1750	2420	2340	2380
27	2690	2640	2660	2050	1830	1900	1970	1370	1720	2580	2380	2490
28	2720	2670	2700	1830	1720	1770	1370	1140	1220	2560	2430	2480
29	2750	2710	2730	1720	1690	1710	1140	1000	1050	2620	2430	2520
30	2780	2730	2750	1830	1720	1770	1080	990	1020	2680	2430	2560
31	---	---	---	1940	1830	1870	1180	1060	1140	---	---	---
MONTH	2920	2430	2630	3280	1690	2320	3020	547	2040	2680	1060	1990

WATER TEMPERATURE (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	---	---	10.6	6.2	25.0	19.3	28.8	19.3	26.1	17.9	21.6	17.3
2	---	---	13.4	4.2	22.8	18.2	28.7	18.9	23.7	17.9	22.2	17.1
3	---	---	14.2	8.8	18.7	16.4	28.1	20.2	24.0	17.9	23.2	16.6
4	---	---	15.7	7.4	21.4	14.5	---	---	28.3	19.0	22.8	18.5
5	---	---	16.2	10.4	23.4	16.5	---	---	25.4	20.9	22.9	18.0
6	---	---	14.0	10.3	25.2	17.7	---	---	27.3	19.7	21.5	17.4
7	---	---	15.1	8.2	22.9	18.2	---	---	26.3	19.6	21.9	17.8
8	---	---	12.7	8.3	22.4	18.0	---	---	20.9	16.6	20.0	17.2
9	---	---	13.6	5.4	18.5	14.6	27.3	19.3	19.4	15.2	20.8	15.9
10	---	---	15.6	9.4	20.4	13.8	27.2	19.9	23.9	14.7	22.6	14.6
11	3.6	0.0	15.4	10.8	18.6	13.5	---	---	22.4	17.2	21.6	14.6
12	5.2	0.0	15.5	9.2	19.2	13.2	---	---	22.1	17.1	19.6	16.1
13	11.0	4.6	19.0	10.0	21.0	14.0	---	---	21.6	15.0	21.7	15.9
14	13.0	7.8	21.1	13.0	23.5	14.6	---	---	24.5	16.3	22.4	14.9
15	13.5	9.6	19.8	13.6	25.0	17.6	---	---	25.2	16.8	22.0	14.8
16	---	---	15.4	12.3	25.5	17.7	---	---	25.6	15.8	20.4	14.3
17	---	---	18.5	11.2	26.8	19.3	---	---	22.0	12.7	18.8	13.9
18	9.0	4.4	19.0	12.1	24.4	19.9	30.7	20.8	20.7	14.2	15.3	12.6
19	5.2	3.1	20.6	13.4	23.9	16.8	26.5	22.0	---	---	18.7	10.1
20	4.8	3.3	20.4	12.6	23.2	15.8	26.6	22.0	---	---	16.3	11.6
21	9.8	2.3	21.6	13.9	25.0	18.5	25.0	21.4	23.8	14.6	14.8	11.5
22	13.6	6.3	15.2	9.1	25.6	19.8	25.5	21.7	20.5	14.4	15.2	8.4
23	13.0	8.2	9.3	6.7	27.0	19.0	26.8	21.2	20.9	17.1	17.2	10.4
24	---	---	15.0	6.3	28.6	20.9	26.7	21.7	21.7	17.0	15.6	11.0
25	---	---	19.5	10.4	28.4	20.3	24.7	20.5	22.6	17.8	12.5	9.6
26	---	---	19.1	14.5	28.5	21.5	23.9	18.5	23.2	18.3	15.9	8.2
27	---	---	22.3	15.1	29.7	22.5	25.6	19.3	20.6	17.7	13.4	10.0
28	---	---	22.7	16.0	27.8	22.0	25.0	18.8	21.8	16.4	15.6	9.7
29	---	---	22.0	18.1	26.9	21.7	26.8	18.7	22.1	18.7	16.8	10.7
30	13.5	10.6	25.0	17.2	28.6	19.7	27.4	19.7	22.0	17.6	15.8	10.6
31	---	---	25.8	18.4	---	---	27.0	19.9	21.9	18.0	---	---
MONTH	---	---	25.8	4.2	29.7	13.2	---	---	---	---	23.2	8.2

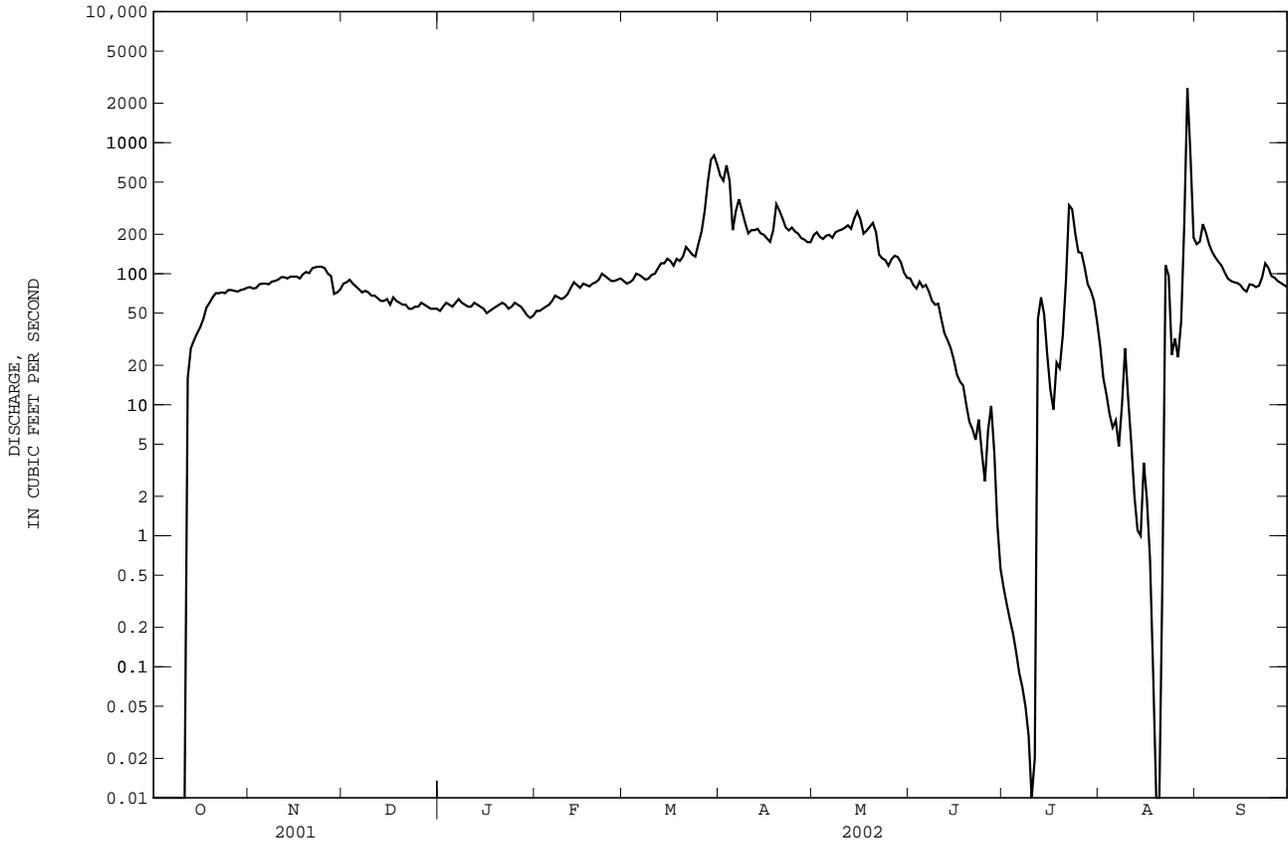


YELLOWSTONE RIVER BASIN

06317000 POWDER RIVER AT ARVADA, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1931 - 2002	
ANNUAL TOTAL	44203.79		40527.33		--	
ANNUAL MEAN	121.1		111.0		274.3	
HIGHEST ANNUAL MEAN	--		--		735 1978	
LOWEST ANNUAL MEAN	--		--		70.3 1961	
HIGHEST DAILY MEAN	1740	Jul 12	2600	Aug 29	22600	May 20 1978
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 12	0.00	Many days	0.00	Many days, some years
MAXIMUM PEAK FLOW	--		4350 <sup>a</sup>	Aug 29	100000 <sup>b</sup>	Sep 29 1923
MAXIMUM PEAK STAGE	--		5.83 <sup>c</sup>	Aug 29	23.70 <sup>d</sup>	Sep 29 1923
ANNUAL RUNOFF (AC-FT)	87680		80390		198700	
10 PERCENT EXCEEDS	249		215		589	
50 PERCENT EXCEEDS	84		79		130	
90 PERCENT EXCEEDS	0.00		4.3		15	

- a Gage height, 4.55 ft.
- b About, from rating curve extended above 20,000 ft<sup>3</sup>/s.
- c Backwater from debris jam.
- d 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
11...	1035	.0	--	--	--	--	--	--	--	--	--	--	--
18...	0900	57	640	10.9	104	8.1	3070	4.5	5.5	690	159	71.3	13.1
NOV													
20...	1445	105	671	14.1	112	8.0	2210	13.0	.5	550	127	56.6	7.96
DEC													
12...	1120	65	671	10.3	81	8.1	2550	-3.0	.0	780	179	81.4	9.24
JAN													
09...	1330	58	670	9.8	77	7.7	2160	8.0	.0	620	149	59.1	7.19
FEB													
13...	1350	86	668	10.9	86	7.9	2180	12.0	.0	500	123	47.3	7.06
MAR													
13...	1515	120	--	--	--	8.0	1940	2.0	.0	520	127	49.7	7.04
APR													
10...	0930	206	668	10.4	101	8.2	2300	9.0	8.0	570	138	55.1	9.21
MAY													
08...	1000	205	668	10.2	98	8.2	2160	2.5	7.5	480	114	47.0	7.30
JUN													
11...	1620	43	675	8.9	111	8.4	3700	19.0	19.5	830	169	98.8	13.8
JUL													
09...	1030	.08	678	9.0	124	8.3	5170	25.5	24.5	1100	224	133	21.9
AUG													
14...	0845	.47	666	8.9	101	8.1	3860	22.5	14.5	1200	307	106	18.2
SEP													
11...	0915	90	671	8.4	95	8.3	2470	18.5	14.5	680	184	51.9	9.65
Date		SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	7	446	215	337	.8	5.90	968	2.94	332	2160	2130	--	--
NOV													
20...	5	267	214	195	.7	6.40	689	2.14	447	1580	1480	--	--
DEC													
12...	5	297	287	194	.7	9.76	896	2.19	283	1610	1840	--	--
JAN													
09...	4	237	307	163	.6	11.0	654	2.17	250	1600	1470	--	--
FEB													
13...	5	280	280	247	.6	10.2	534	2.04	348	1500	1420	--	--
MAR													
13...	5	243	247	174	.6	9.12	581	1.93	460	1420	1340	--	--
APR													
10...	5	282	215	157	.7	7.71	820	2.34	957	1720	1600	--	--
MAY													
08...	5	264	197	152	.7	7.14	734	2.13	868	1570	1450	--	--
JUN													
11...	8	547	258	345	.8	6.47	1330	3.82	326	2810	2670	--	--
JUL													
09...	10	752	211	488	.6	3.14	2010	5.58	.89	4100	3770	--	--
AUG													
14...	6	488	215	227	.6	6.82	1770	4.58	4.27	3360	3050	E.04	.54
SEP													
11...	5	270	155	146	.7	8.11	956	2.60	465	1910	1720	--	--

## YELLOWSTONE RIVER BASIN

06317000 POWDER RIVER AT ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ANTI- MONY, TOTAL SOLVED (UG/L AS SB) (01097)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)
OCT													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	<2	3890	.39	--	.7	28	82.5
NOV													
20...	--	--	--	--	--	--	1	4550	.11	--	.6	21	90.0
DEC													
12...	--	--	--	--	--	--	1	1120	.06	--	.5	14	45.2
JAN													
09...	--	--	--	--	--	--	1	1690	<.05	--	.8	29	45.6
FEB													
13...	--	--	--	--	--	--	<1	675	.10	--	.8	28	34.2
MAR													
13...	--	--	--	--	--	--	1	--	.19	<.9	.8	31	43.1
APR													
10...	--	--	--	--	--	--	2	9900	.39	--	1.1	32	221
MAY													
08...	--	--	--	--	--	--	3	15300	.22	--	1.2	29	343
JUN													
11...	--	--	--	--	--	--	3	474	.46	--	1.2	55	60.9
JUL													
09...	--	--	--	--	--	--	6	52	.43	--	1.2	66	65.0
AUG													
14...	.87	<.05	<.008	.011	<.02	.065	3	324	.51	--	1.4	87	88.1
SEP													
11...	--	--	--	--	--	--	4	4150	.35	--	.9	42	112
Date	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM, DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
OCT													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	<.10	480	<.07	<1.6	.39	4.1	<30	<.20	182	2.2	3.9	3.16	3.2
NOV													
20...	<.06	263	.08	E.4	.23	2.1	<10	E.05	110	2.2	1.9	<.06	1.8
DEC													
12...	<.06	179	.04	<.8	.20	2.1	22	<.08	130	2.6	1.4	1.73	1.9
JAN													
09...	<.06	296	E.02	<.8	.32	2.4	<10	<.08	120	7.0	1.9	2.09	3.2
FEB													
13...	<.06	289	<.04	<.8	.25	2.7	<10	E.07	96.0	4.8	1.6	.73	2.9
MAR													
13...	<.06	294	E.04	<.8	.28	2.7	<10	.14	105	4.4	1.9	.93	3.3
APR													
10...	<.06	253	.04	<.8	.35	4.3	<30	E.05	104	2.0	3.8	1.44	5.2
MAY													
08...	<.06	218	.11	<.8	.32	3.5	<10	.10	90.9	1.6	3.4	3.03	6.2
JUN													
11...	<.10	542	E.04	<.8	.43	8.5	<30	<.20	172	4.2	4.7	1.58	4.1
JUL													
09...	<.10	677	2.03	<.8	.98	14.7	<30	E.09	243	92.2	7.3	7.76	3.3
AUG													
14...	<.10	336	E.06	<.8	.77	8.8	<30	E.12	125	36.2	7.1	2.14	3.4
SEP													
11...	<.06	250	.04	<.8	.41	4.8	<10	<.08	91.9	2.0	7.8	8.21	2.6

## YELLOWSTONE RIVER BASIN

253

06317000 POWDER RIVER AT ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT						
11...	--	--	--	--	--	--
18...	<2	2230	E.08	E.4	3	11.0
NOV						
20...	<1	1790	<.04	.6	2	7.93
DEC						
12...	<1	1140	<.04	1.0	2	5.54
JAN						
09...	<1	2030	<.04	3.7	2	8.53
FEB						
13...	<1	1670	<.04	1.7	2	6.42
MAR						
13...	<1	1670	<.04	<.2	4	7.18
APR						
10...	<1	1740	<.04	1.6	4	9.64
MAY						
08...	<1	1570	E.02	1.2	2	7.09
JUN						
11...	<2	2500	<.08	1.8	6	12.9
JUL						
09...	<2	3570	<.08	2.5	10	14.4
AUG						
14...	<2	2710	<.08	.9	4	15.0
SEP						
11...	<1	1940	<.04	1.0	4	11.6

E -- Estimated value

YELLOWSTONE RIVER BASIN

06317020 WILD HORSE CREEK NEAR ARVADA, WY

LOCATION.--Lat44° 37' 57", long106° 01' 53", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec. 29, T.54 N., R. 76 W., Sheridan County, Hydrologic Unit 10090202, on left bank 0.2 ft upstream from county culvert, 0.4 mi upstream from Middle Prong Wildhorse Creek, and 5.0 mi southeast of Arvada.

DRAINAGE AREA.--250 mi<sup>2</sup>.

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 excellent except those for daily discharges greater than .00 ft<sup>3</sup>/s, which are fair. Natural flow of stream affected by numerous small reservoirs and coalbed methane production water.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.30	0.04	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.26	0.06	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.24	0.05	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.28	0.04	0.00	0.00	0.00	0.00
5	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.33	0.03	0.00	0.00	0.00	0.00
6	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.34	0.01	0.00	0.00	0.00	0.00
7	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.25	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.14	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.12	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.10	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.09	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.06	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.04	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.03	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.03	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.04	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.03	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.03	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.05	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.09	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.10	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.08	0.00	0.00	0.00	e0.00	0.00
23	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.05	0.00	0.00	0.00	e0.00	0.00
24	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.04	0.00	0.00	e0.00	0.00	0.00
25	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.02	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.01	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.02	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	e0.00	e0.00	e0.00	e0.00	0.03	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	e0.00	e0.00	---	e0.20	0.03	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	e0.00	e0.00	---	0.31	0.03	0.00	0.00	0.00	0.00	0.00
31	0.00	---	e0.00	e0.00	---	0.32	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.83	3.26	0.23	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.027	0.109	0.007	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.32	0.34	0.06	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	1.6	6.5	0.5	0.00	0.00	0.00	0.00

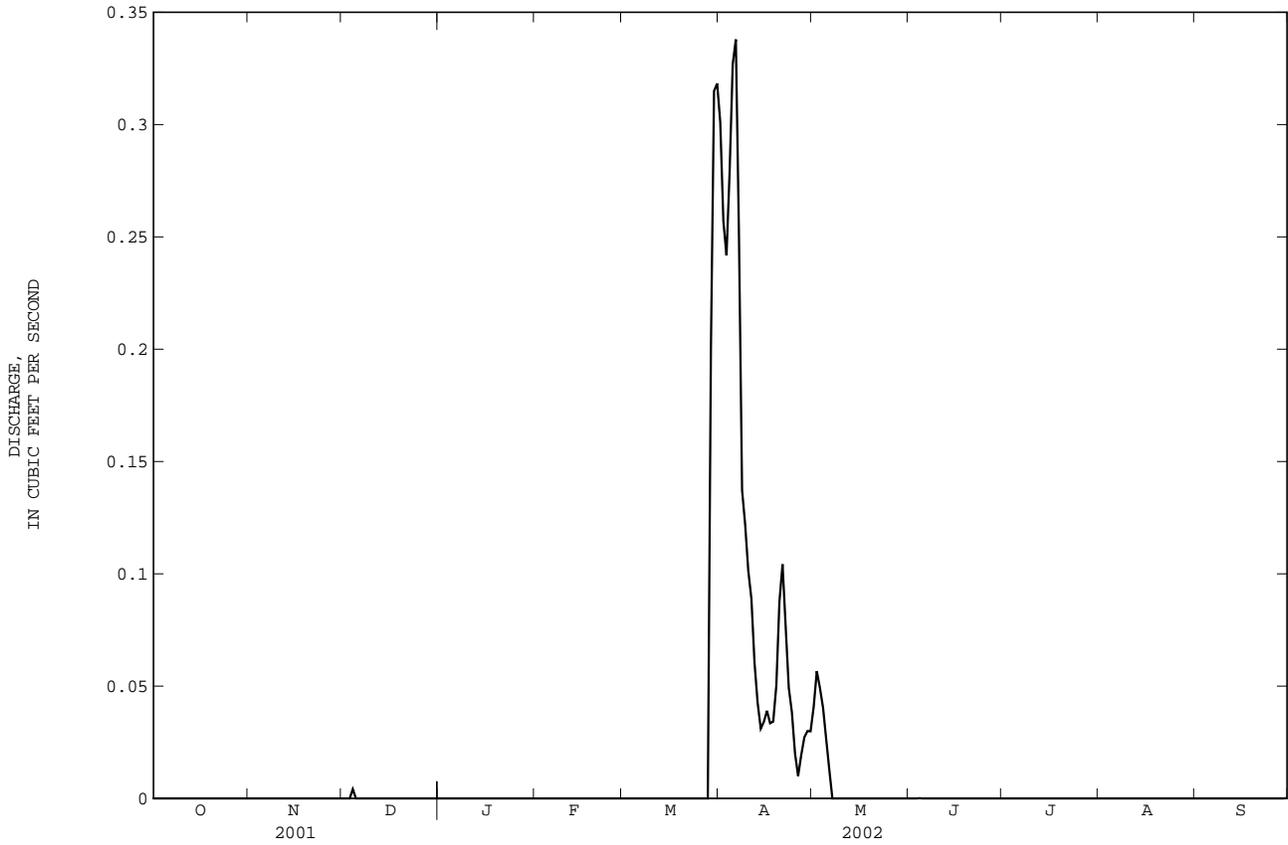
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

MEAN	0.000	0.000	0.000	0.012	0.000	0.298	0.112	0.017	0.000	0.000	0.000	0.000
MAX	0.000	0.000	0.000	0.025	0.001	0.57	0.12	0.026	0.001	0.000	0.000	0.000
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000	2000
MIN	0.000	0.000	0.000	0.000	0.000	0.027	0.11	0.007	0.000	0.000	0.000	0.000
(WY)	2001	2001	2001	2002	2002	2002	2002	2002	2000	2000	2000	2000

06317020 WILD HORSE CREEK NEAR ARVADA, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 2000 - 2002
ANNUAL TOTAL	22.73	4.32	--
ANNUAL MEAN	0.062	0.012	0.037
HIGHEST ANNUAL MEAN	--	--	0.062 2001
LOWEST ANNUAL MEAN	--	--	0.012 2002
HIGHEST DAILY MEAN	1.8 Mar 4	0.34 Apr 6	1.8 Mar 4 2001
LOWEST DAILY MEAN	0.00 Most days	0.00 Most days	0.00 Most days, each year
MAXIMUM PEAK FLOW	--	0.42 Mar 30	2.3 Mar 4 2001
MAXIMUM PEAK STAGE	--	1.02 Mar 30	1.90 Mar 4 2001
ANNUAL RUNOFF (AC-FT)	45	8.6	27
10 PERCENT EXCEEDS	0.15	0.02	0.07
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated.



YELLOWSTONE RIVER BASIN

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
------	------	---	--	-----------------------------------	--	--	---	----------------------------	------------------------------------	-----------------------------------	---	---	--

OCT	11...	1020	.0	--	--	--	--	--	--	--	--	--	--	
APR	10...	0815	.11	665	8.0	68	8.0	1140	5.5	3.0	160	29.5	21.7	4.46
MAY	08...	0820	.01	665	8.7	82	7.8	3600	7.5	6.5	880	146	125	10.2
JUL	09...	0930	.0	--	--	--	--	--	--	--	--	--	--	

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
------	-----------------------------------	---	--	--	---	---	--	---	---	---	---	---	---

OCT	11...	--	--	--	--	--	--	--	--	--	--	--	--	
APR	10...	7	199	350	5.29	.4	3.11	268	1.03	.22	756	742	<2	39.2
MAY	08...	8	561	581	19.5	.4	3.77	1570	3.97	.08	2920	2790	E2	64.2
JUL	09...	--	--	--	--	--	--	--	--	--	--	--	--	

Date	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
OCT	11...	--
APR	10...	70
MAY	08...	118
JUL	09...	--

E -- Estimated value



YELLOWSTONE RIVER BASIN

06320000 ROCK CREEK NEAR BUFFALO, WY--Continued

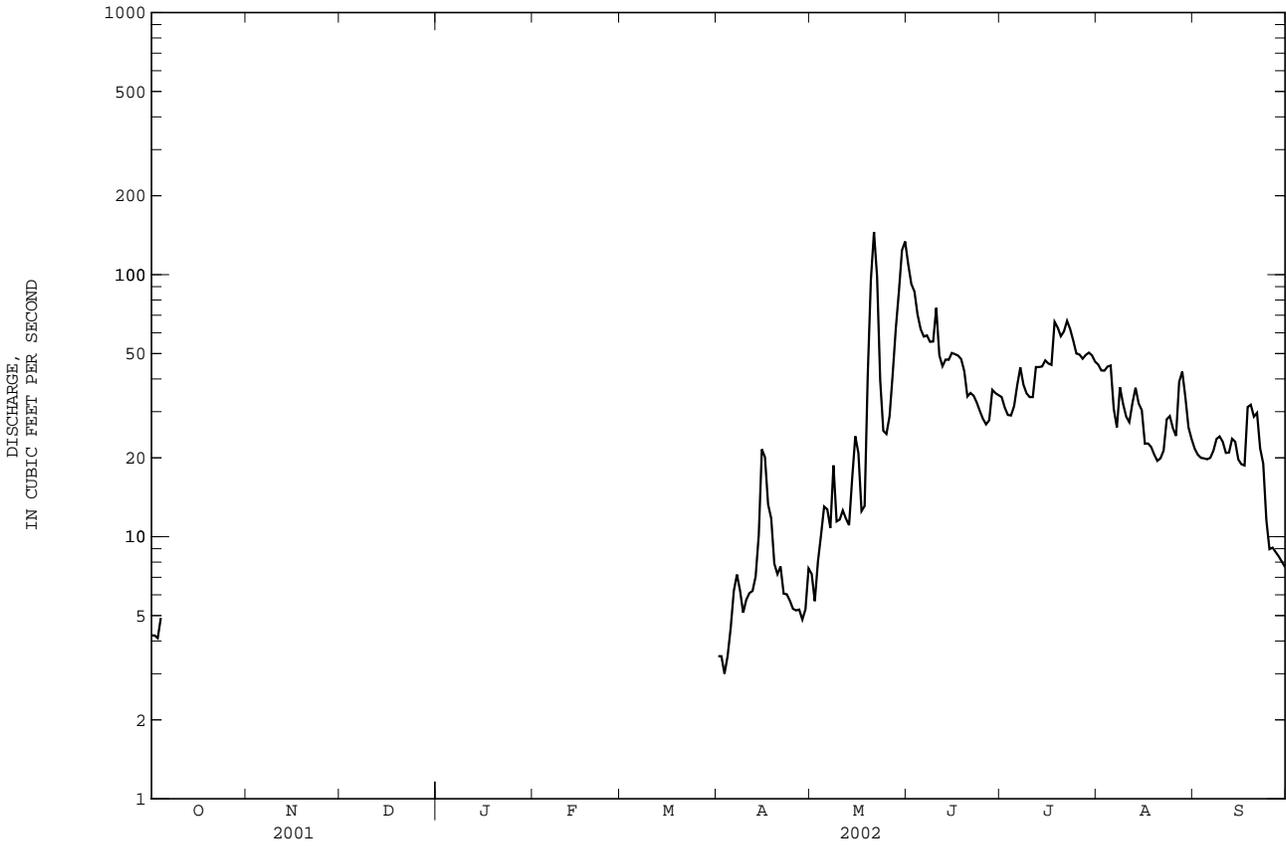
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1945 - 2002\*

ANNUAL MEAN	--		34.67	
HIGHEST ANNUAL MEAN	--		54.7	1963
LOWEST ANNUAL MEAN	--		16.1	1954
HIGHEST DAILY MEAN	146	May 21	1110	Jun 8 1997
LOWEST DAILY MEAN	3.0 <sup>e</sup>	Apr 3	0.50	Sep 19 1954
MAXIMUM PEAK FLOW	4.5	Apr 1	2080 <sup>a</sup>	Jun 8 1997
MAXIMUM PEAK STAGE	187	May 31	8.80	Jun 8 1997
ANNUAL RUNOFF (AC-FT)	5.03	May 31	25120	

\* For period of operation.  
 a From rating curve extended above 610 ft<sup>3</sup>/s.  
 e Estimated.



06320210 CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44°23'21", long 106°37'23", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
12...	1310	19	648	13.4	131	8.2	820	7.0	7.0	330	78.6	32.6	3.01
NOV													
20...	1020	24	651	12.3	99	7.8	751	11.0	.0	310	74.2	30.9	2.62
DEC													
11...	0910	29	640	11.9	97	7.7	713	-4.0	.0	300	73.4	28.3	2.20
JAN													
10...	1120	32	655	7.8	62	7.9	695	5.0	.0	300	71.8	28.4	2.29
FEB													
14...	1240	23	663	11.5	91	8.0	756	1.0	.0	320	77.0	30.0	2.24
MAR													
11...	0955	26	648	11.8	95	7.5	752	7.0	.0	310	74.1	29.6	2.55
APR													
11...	1020	43	652	12.0	115	8.4	802	13.0	6.5	350	83.6	33.9	2.83
MAY													
09...	1045	46	652	11.8	108	8.2	465	4.5	5.0	190	46.0	17.7	1.78
JUN													
12...	1100	60	655	10.5	110	8.0	306	16.0	10.5	110	26.9	11.5	1.33
JUL													
08...	1345	67	654	9.4	127	8.3	416	26.0	22.5	160	38.4	14.9	2.49
AUG													
15...	0855	24	653	7.4	88	8.0	555	16.0	16.0	210	52.4	20.3	2.21
SEP													
12...	0940	22	652	8.2	95	8.1	651	16.0	15.0	280	71.4	24.8	2.22
Date		SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT. DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT													
12...	1	44.2	171	5.46	.2	9.64	263	.81	30.7	598	539	--	--
NOV													
20...	1	41.5	158	4.72	.2	9.75	240	.75	35.5	548	499	--	--
DEC													
11...	.9	35.9	159	3.87	.2	11.3	217	.70	41.0	518	468	E.02	.10
JAN													
10...	1	38.4	156	3.74	.2	10.7	225	.68	43.2	500	474	--	--
FEB													
14...	1	40.7	175	4.14	.2	10.6	241	.75	34.2	550	511	--	--
MAR													
11...	1	41.1	170	6.95	.2	9.92	238	.73	37.5	534	506	.45	.18
APR													
11...	1	42.3	157	4.36	.2	6.37	275	.80	68.3	588	543	--	--
MAY													
09...	.8	26.1	101	3.54	.1	9.87	135	.42	38.4	309	301	<.04	<.05
JUN													
12...	.6	15.7	61	2.30	.1	7.09	84.3	.28	33.1	204	186	--	--
JUL													
08...	.7	20.8	73	2.19	.1	8.78	118	.38	50.4	279	250	--	--
AUG													
15...	.8	27.0	126	3.94	.2	6.87	152	.47	22.4	346	340	<.04	E.02
SEP													
12...	.8	30.4	128	3.22	.2	10.0	201	.63	27.7	466	420	--	--

## YELLOWSTONE RIVER BASIN

06320210 CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT								
12...	--	--	--	--	<2	29.6	38	39.6
NOV								
20...	--	--	--	--	<2	30.0	124	72.6
DEC								
11...	E.005	<.02	E15k	25	<2	34.5	25	56.0
JAN								
10...	--	--	--	--	<2	35.3	24	63.2
FEB								
14...	--	--	--	--	<2	35.9	29	61.1
MAR								
11...	<.008	.09	E18k	E9k	<2	35.6	20	69.5
APR								
11...	--	--	--	--	<2	35.0	50	161
MAY								
09...	<.008	E.01	20	E14k	<2	26.8	44	63.3
JUN								
12...	--	--	--	--	<2	19.1	59	47.6
JUL								
08...	--	--	--	--	<2	22.0	27	46.6
AUG								
15...	<.008	.04	230	210	<2	24.9	42	42.9
SEP								
12...	--	--	--	--	<2	26.1	46	56.1

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

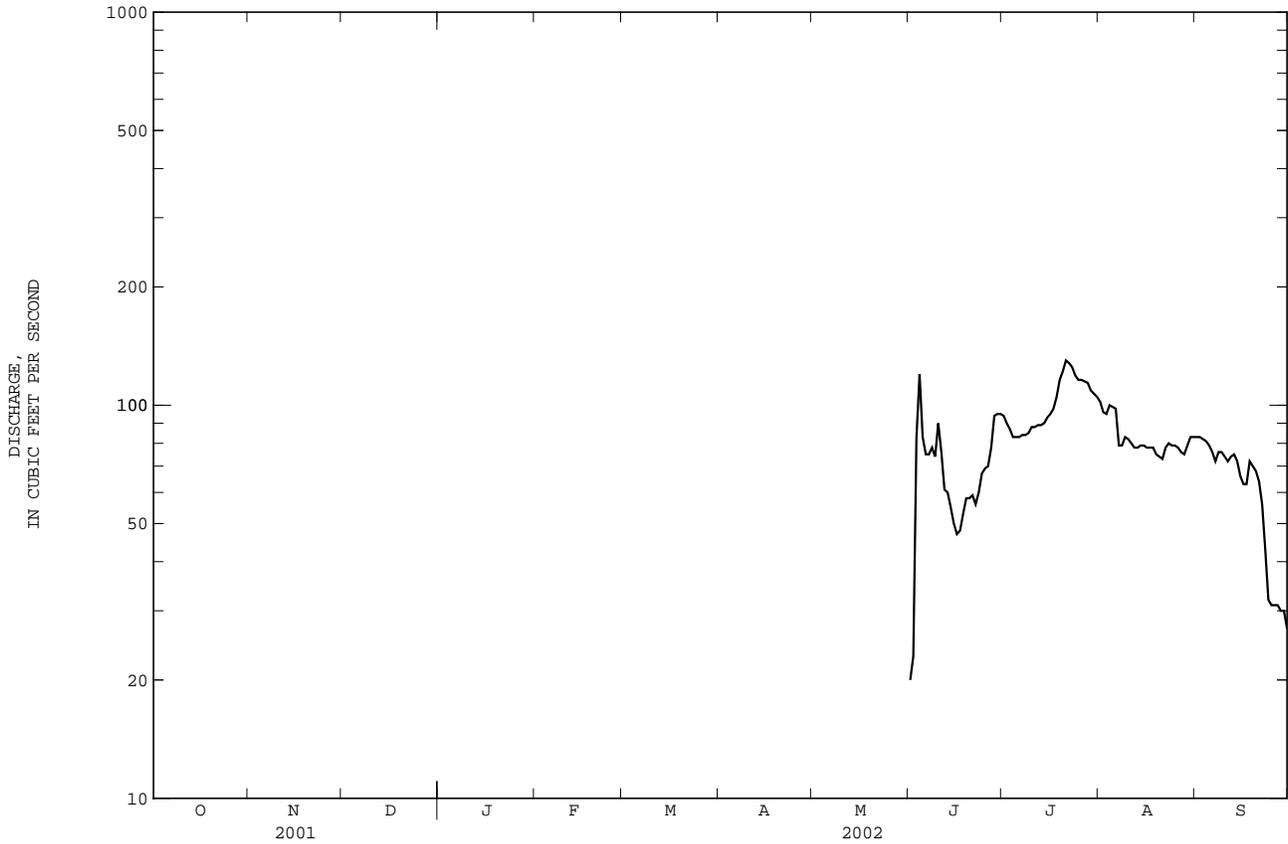


YELLOWSTONE RIVER BASIN

06320500 SOUTH PINEY CREEK AT WILLOW PARK, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*		WATER YEARS 1947 - 2002*	
ANNUAL MEAN	--		42.37 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		55.9	1963
LOWEST ANNUAL MEAN	--		27.5	1960
HIGHEST DAILY MEAN	120 <sup>e</sup>	Jun 4	1100	Jun 8 1997
LOWEST DAILY MEAN	20 <sup>e</sup>	Jun 1	0.13 <sup>b</sup>	May 1 1989
MAXIMUM PEAK FLOW	Unknown		1620 <sup>c</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	Unknown		5.68	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		30700	

- \* For period of operation.
- a Unadjusted for regulation by reservoirs.
- b Minimum daily, prior to construction of Willow Park Reservoir, 4.5 ft<sup>3</sup>/s, Mar. 1 to Apr. 5, 1955.
- c From rating curve extended above 360 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- e Estimated.



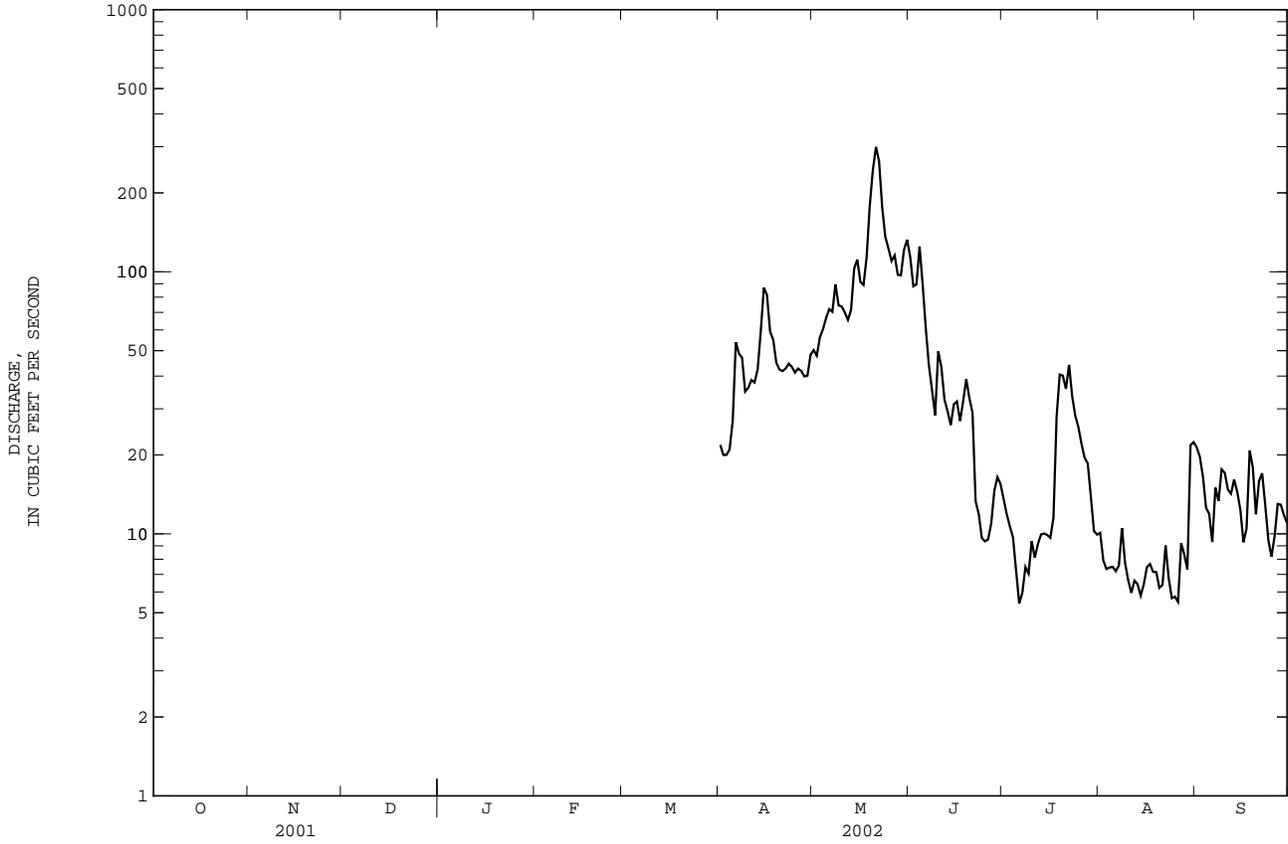


YELLOWSTONE RIVER BASIN

06323000 PINEY CREEK AT KEARNY, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1903 - 2002*	
ANNUAL MEAN	--	86.36	
HIGHEST ANNUAL MEAN	--	168	1944
LOWEST ANNUAL MEAN	--	27.8	1985
HIGHEST DAILY MEAN	300 May 21	1780	Jun 15 1963
LOWEST DAILY MEAN	5.4 Jul 6	1.9	Oct 3 1981
			Sep 14-18 1985
MAXIMUM PEAK FLOW	338 May 21	3410 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	2.86 May 21	6.05	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--	62560	

\* For period of operation.  
 a From rating curve extended above 1,800 ft<sup>3</sup>/s.  
 e Estimated.



06324000 CLEAR CREEK NEAR ARVADA, WY

LOCATION.--Lat 44°52'18", long 106°04'56", in SE<sup>1</sup>/<sub>4</sub> sec.36, T.57 N., R.77 W., Sheridan County, Hydrologic Unit 10090206, 600 ft downstream from Cabin Creek, 1.8 mi upstream from mouth, and 16 mi north of Arvada.

PERIOD OF RECORD.--Water years 1949-54, 1967-92, October 2000 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
11...	1400	47	662	10.6	103	8.1	1280	10.5	8.0	580	129	61.8	5.38
NOV													
20...	1250	70	672	15.2	120	7.6	1240	3.5	.5	560	130	57.9	4.60
DEC													
12...	0930	43	672	10.7	84	8.1	1280	-5.0	.0	590	139	59.9	4.91
JAN													
09...	0905	44	671	10.3	80	7.8	1260	-2.5	.0	560	131	56.3	4.02
FEB													
13...	1710	41	668	11.3	89	8.0	1150	6.5	.0	490	115	48.5	3.81
MAR													
13...	1230	67	--	--	--	8.0	1060	4.5	.0	480	114	48.1	3.78
APR													
10...	1415	94	671	10.3	108	8.2	748	13.5	11.5	310	70.4	31.6	6.65
MAY													
08...	1345	43	673	10.3	106	8.3	1150	2.0	11.0	490	108	52.1	4.72
JUN													
11...	1810	3.0	675	11.1	137	8.2	1120	20.0	19.5	480	113	47.3	4.70
JUL													
09...	0830	6.1	682	7.2	89	8.0	1730	19.0	20.0	780	170	84.8	8.34
AUG													
14...	1020	7.3	669	8.1	99	8.0	1580	31.5	18.5	720	156	78.4	7.48
SEP													
11...	1325	38	674	8.8	109	8.3	1480	26.0	19.5	650	143	70.2	6.20

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT. DIS-FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)
OCT													
11...	1	72.3	219	3.56	.3	8.10	527	1.34	125	984	941	3	92
NOV													
20...	1	70.5	247	3.62	.2	7.33	481	1.23	172	908	904	<1	98
DEC													
12...	1	72.0	268	5.05	.3	10.6	497	1.28	108	940	951	1	41
JAN													
09...	1	68.4	266	3.47	.3	9.40	472	1.32	115	968	906	1	32
FEB													
13...	1	60.1	244	3.82	.2	7.70	419	1.17	95.2	860	805	<1	43
MAR													
13...	1	59.4	214	5.36	.2	5.22	395	1.12	148	820	760	<1	68
APR													
10...	1	40.2	146	2.73	.2	6.12	250	.74	137	541	496	3	419
MAY													
08...	1	66.1	204	4.88	.15	1.07	434	1.13	96.8	834	795	2	212
JUN													
11...	1	67.3	231	2.57	.18	4.61	395	1.16	6.92	854	775	5	171
JUL													
09...	2	104	224	5.24	.25	9.56	776	1.96	23.7	1440	1290	1	206
AUG													
14...	2	93.9	218	3.53	.23	7.74	710	1.77	25.7	1300	1190	2	231
SEP													
11...	2	90.4	185	3.21	.21	7.59	627	1.60	121	1180	1060	3	631

## YELLOWSTONE RIVER BASIN

06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
OCT 11...	<.05	--	.5	26	26.9	<.06	118	E.03	<.8	.27	5.9	E7	<.08
NOV 20...	.06	--	<2	30	30.1	<.06	101	.05	<.8	.27	1.6	E10	<.08
DEC 12...	.05	--	.6	34	34.1	<.06	116	.04	<.8	.37	3.0	14	<.08
JAN 09...	<.05	--	.5	36	35.1	<.06	121	E.02	<.8	.29	2.1	E9	<.08
FEB 13...	E.05	--	.4	32	31.1	<.06	82	.05	<.8	.26	2.6	17	E.06
MAR 13...	.13	<.9	.4	30	29.2	<.06	98	.07	<.8	.31	2.2	30	E.06
APR 10...	.25	--	.7	26	33.0	<.06	69	1.31	<.8	.47	2.4	29	.09
MAY 08...	.11	--	.6	38	41.5	<.06	83	.64	<.8	.49	2.7	21	E.07
JUN 11...	.17	--	.7	54	58.3	<.06	87	E.03	<.8	.45	3.8	<10	E.05
JUL 09...	.23	--	1.3	72	72.4	<.06	179	E.02	<.8	.73	6.4	<10	<.08
AUG 14...	.21	--	1.0	43	46.2	<.06	150	.04	<.8	.50	3.5	<10	.08
SEP 11...	.17	--	1.1	40	47.8	<.06	132	.08	<.8	.47	3.0	<10	<.08

Date	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS-SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS-SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
OCT 11...	23.9	16.6	2.1	<.06	<.3	<1	1170	<.04	.6	5	13.3
NOV 20...	23.0	20.0	.8	<.06	E.3	<1	1140	<.04	1.2	2	11.7
DEC 12...	27.4	17.5	1.2	2.79	.9	<1	1260	E.03	1.9	2	11.9
JAN 09...	25.5	20.0	1.0	2.03	1.3	<1	1180	<.04	3.5	2	12.6
FEB 13...	17.4	19.2	1.0	.99	1.0	<1	1060	<.04	1.5	3	11.3
MAR 13...	19.7	22.6	1.1	1.46	.9	<1	1030	<.04	<.2	10	11.3
APR 10...	14.1	58.3	1.5	2.35	.8	<1	575	<.04	1.5	5	6.02
MAY 08...	20.7	36.5	1.3	3.44	.7	<1	1050	<.04	1.2	3	8.65
JUN 11...	23.1	71.4	1.6	1.43	.9	<1	848	<.04	1.7	4	9.29
JUL 09...	40.9	59.3	2.9	5.86	1.4	<1	1480	<.04	4.0	4	18.7
AUG 14...	33.7	53.4	2.5	1.21	1.1	<1	1290	<.04	1.2	2	14.6
SEP 11...	31.7	25.3	2.4	6.66	.9	<1	1200	<.04	1.6	4	13.9

E -- Estimated value



YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1930 - 2002*	
ANNUAL TOTAL	47966.03		60045.3		--	
ANNUAL MEAN	131.4		164.5		448.4	
HIGHEST ANNUAL MEAN	--		--		1091 1978	
LOWEST ANNUAL MEAN	--		--		109 1961	
HIGHEST DAILY MEAN	1260	Jul 13	2580	Aug 30	27500	May 20 1978
LOWEST DAILY MEAN	0.08	Aug 21	1.6	Aug 17	0.00	Jul 15 1931
ANNUAL SEVEN-DAY MINIMUM	0.14	Aug 19	3.2	Aug 14	0.00	Sep 4 1960
MAXIMUM PEAK FLOW	--		3660 <sup>a</sup>	Aug 29	33000 <sup>c</sup>	May 20 1978
MAXIMUM PEAK STAGE	--		7.57 <sup>b</sup>	Apr 7	17.70 <sup>d</sup>	Mar 21 1956
10 PERCENT EXCEEDS	266		300		1040	
50 PERCENT EXCEEDS	122		131		220	
90 PERCENT EXCEEDS	5.0		11		46	

\* For period of operation.

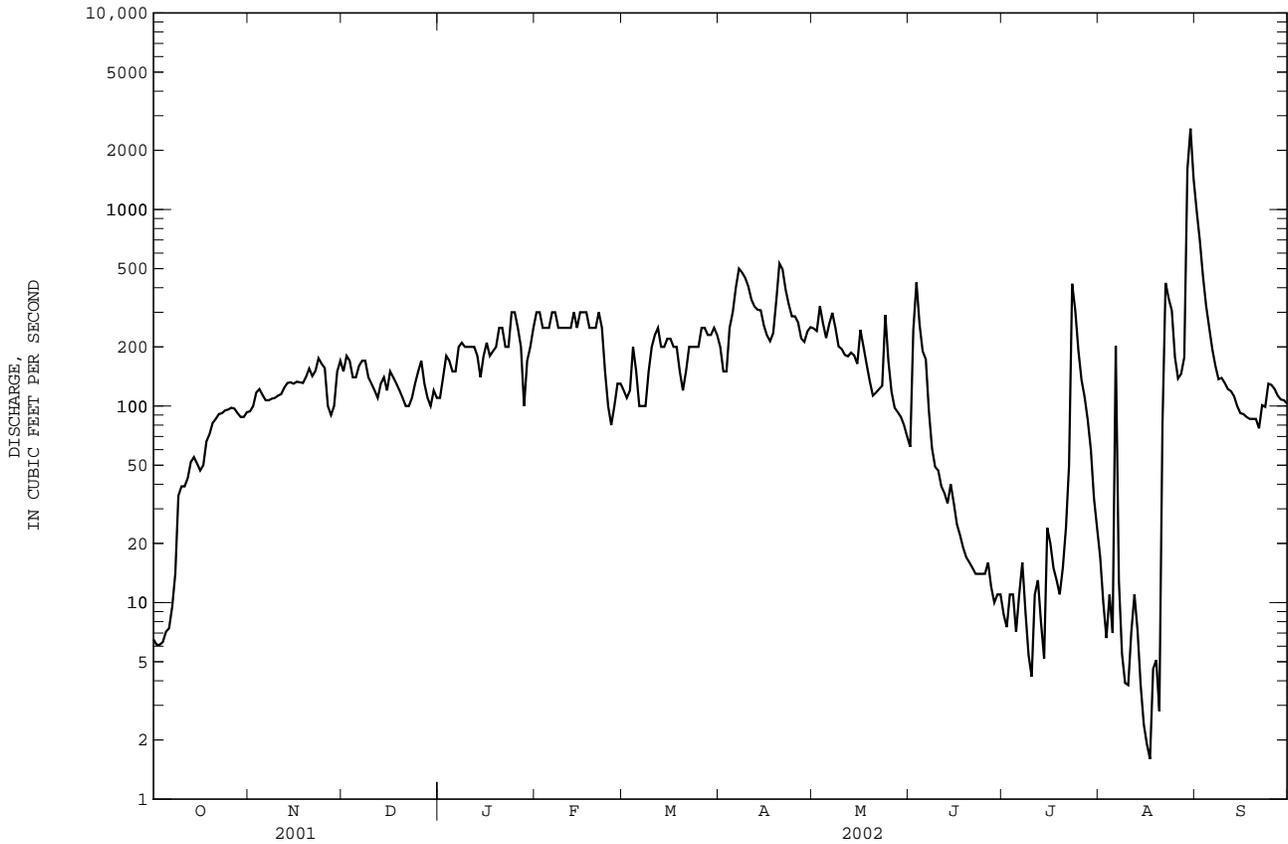
a Gage height, 6.38 ft.

b Backwater from ice.

c Gage height, 15.24 ft.

d Ice jam, site and datum then in use.

e Estimated.



06324500 POWDER RIVER AT MOORHEAD, MT--Continued

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. 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 29, 2001.

REMARKS.--Missing specific conductance data for August 22-24 and September 1-6 due to equipment problems. From November 23 to April 12 the probe was in ice conditions. Instantaneous values are shown during this period when available. Unpublished records of instantaneous water temperature and specific conductance are available in files in Montana District Office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 5,920, microsiemens/cm, July 16, 2002; minimum daily, 642, microsiemens/cm May 20, 1988. WATER TEMPERATURE: Maximum daily, 33 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 September 16-18, 1996.

SEDIMENT LOOD: Maximum daily, 2,230,000 tons May 20, 1978; minimum daily, 0.17 ton August 1, 1988 and September 16, 1996.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 5,920 microsiemens/cm, July 16; minimum daily mean, 741 microsiemens, August 7.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
02...	1315	5.9	677	8.9	102	8.3	2190	20.0	16.0	810	148	107	9.27
NOV													
21...	0845	158	670	10.2	80	8.5	1950	-2.0	.0	580	131	62.2	7.09
DEC													
12...	0915	E110	675	13.4	104	8.2	2260	-5.0	.0	730	171	73.9	7.84
JAN													
16...	1100	210	676	14.8	115	8.2	1740	-2.0	.0	590	140	58.6	6.45
FEB													
20...	1200	E250	674	10.1	78	8.5	1740	5.0	.0	490	117	47.3	5.51
MAR													
19...	0800	E150	677	13.3	103	8.2	1580	1.0	.0	450	106	44.6	5.78
APR													
08...	1235	523	676	7.8	75	8.2	1460	11.0	8.0	400	95.6	39.3	8.30
MAY													
14...	1200	184	668	6.2	77	8.5	1970	24.5	19.0	520	119	53.6	7.54
JUN													
06...	0900	199	673	7.5	92	8.5	1450	25.0	19.0	380	86.9	39.8	5.64
JUL													
10...	1810	3.8	682	7.6	112	8.5	2350	28.0	29.0	870	159	114	12.1
AUG													
20...	1115	2.9	668	8.5	109	8.2	2630	30.0	20.5	1000	200	120	12.3
SEP													
10...	1500	134	--	--	--	8.2	2180	26.0	23.0	680	187	50.7	8.97
Date		SODIUM AD-SORP-TION RATIO (00931)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CaCO3) (90410)	ALKA-LINITY WAT. DIS FET LAB (MG/L CaCO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT													
02...	3	213	--	144	25.7	.3	.6	1100	2.30	27.0	1690	<.04	.51
NOV													
21...	4	206	--	247	132	.5	7.5	663	1.85	580	1360	E.03	.68
DEC													
12...	4	223	--	294	132	.5	10.3	785	2.15	--	1580	<.04	.46
JAN													
16...	3	162	--	266	83.9	.5	10.1	575	1.63	680	1200	<.04	.32
FEB													
20...	4	190	--	234	148	.5	8.0	487	1.56	--	1150	<.04	.24
MAR													
19...	3	170	217	217	100	.4	6.5	478	1.42	--	1040	<.04	.25
APR													
08...	3	159	258	166	63.9	.4	6.8	516	1.35	1400	992	.11	2.4
MAY													
14...	5	255	247	213	127	E.1	6.5	666	1.86	678	1360	<.04	1.0
JUN													
06...	4	170	152	148	95.7	.3	6.7	466	1.31	516	961	<.04	.42
JUL													
10...	4	250	142	142	62.5	.4	4.0	1160	2.51	19.0	1850	<.04	.68
AUG													
20...	4	274	185	177	50.7	.4	5.4	1320	2.85	16.4	2090	<.04	.74
SEP													
10...	4	229	207	163	90.0	.8	7.9	902	2.15	571	1580	<.04	1.3

## YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)
OCT													
02...	<.013	<.002	<.007	.016	2	.15	.7	<2	40	36.8	<.06	163	208
NOV													
21...	.090	<.002	<.007	.116	--	.10	.9	3	30	71.5	<.06	223	237
DEC													
12...	.345	<.002	<.007	.045	<1	.11	.7	2	36	45.9	<.06	251	237
JAN													
16...	.411	E.002	<.007	.033	<1	.09	.8	<2	29	35.5	<.06	173	175
FEB													
20...	.321	.004	<.007	.022	2	.24	.6	E1	26	28.3	<.06	216	216
MAR													
19...	.347	.005	<.007	.019	1	.18	.7	<2	25	28.2	<.06	187	156
APR													
08...	.385	.007	<.007	1.40	2	.23	.8	11	29	321	<.06	132	145
MAY													
14...	.156	<.002	E.004	.47	2	.30	1.2	5	34	140	<.06	217	236
JUN													
06...	<.013	<.002	<.007	.085	2	.23	1.0	<2	32	42.9	<.06	160	166
JUL													
10...	<.013	<.002	<.007	.022	3	.31	1.5	<2	47	47.8	<.06	302	275
AUG													
20...	<.013	<.002	<.007	.066	4	.31	1.1	E1	63	69.9	<.10	228	267
SEP													
10...	.375	.003	E.005	.57	3	.35	.9	5	43	159	<.06	200	194
Date	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)
OCT													
02...	<.04	E.03	<.8	<.8	.32	4.2	9.3	120	E.07	<1	59.4	16.3	35.0
NOV													
21...	<.04	.15	E.5	2.5	.41	2.1	9.1	5260	E.05	5	85.1	9.2	118
DEC													
12...	<.04	.06	<.8	E.5	.41	3.8	5.5	1340	<.08	1	101	5.7	34.0
JAN													
16...	<.04	E.03	<.8	E.8	.35	2.2	4.1	750	<.08	<1	77.1	8.1	23.3
FEB													
20...	<.04	.05	<.8	E.7	.35	2.4	3.5	620	<.08	<1	71.6	10.2	23.5
MAR													
19...	<.04	E.03	<.8	<.8	.27	2.5	3.2	580	E.08	<1	62.4	7.0	18.9
APR													
08...	E.02	.90	<.8	16.2	.43	3.3	34.9	29700	<.08	29	57.2	7.8	863
MAY													
14...	E.03	.31	<.8	7.0	.36	4.2	16.0	11200	<.08	11	79.7	2.4	282
JUN													
06...	E.03	.04	<.8	1.0	.22	2.8	4.4	1160	.28	1	55.2	1.8	53.0
JUL													
10...	E.02	E.02	<.8	<.8	.51	6.8	12.6	50	E.05	<1	86.7	15.8	34.2
AUG													
20...	<.07	E.04	<1.6	E.4	.69	5.9	7.4	760	<.20	<2	70.9	14.5	72.2
SEP													
10...	E.02	.43	<.8	8.5	.46	5.1	20.8	12500	.13	10	70.9	4.1	280

YELLOWSTONE RIVER BASIN

271

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT 02...	--	3.4	3.00	7	1.1	1.4	<1	1850	<.04	.3	3	5	17.2
NOV 21...	--	2.2	2.30	9	2.4	2.0	<1	1740	<.04	.7	2	32	11.2
DEC 12...	--	2.4	3.31	5	2.9	3.0	<1	2070	<.04	1.4	3	8	12.9
JAN 16...	--	1.9	3.28	4	2.3	1.7	<1	1660	<.04	3.6	2	6	10.4
FEB 20...	--	1.6	3.24	5	1.6	1.8	<1	1360	<.04	.3	1	4	8.42
MAR 19...	--	1.8	1.02	6	2.4	2.4	<1	1250	<.04	<.2	2	4	7.50
APR 08...	--	3.1	3.24	38	3.0	2.8	<1	1110	<.04	3.0	2	124	8.15
MAY 14...	--	3.6	3.50	15	3.6	3.0	<1	1590	<.04	2.1	2	46	9.11
JUN 06...	E.01	2.6	2.59	5	1.5	1.5	<1	999	<.04	1.6	1	8	5.93
JUL 10...	--	4.6	4.03	6	1.7	1.5	<1	2110	<.04	1.0	3	8	14.6
AUG 20...	--	4.2	5.96	6	1.9	2.0	<2	2150	<.08	1.6	7	7	17.2
SEP 10...	--	8.6	8.53	27	3.2	4.2	<1	1810	<.04	1.6	3	62	12.7

Date	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 02...	7.0	.11
NOV 21...	337	144
DEC 12...	202	--
JAN 16...	106	60.1
FEB 20...	47	--
MAR 19...	82	--
APR 08...	2110	2980
MAY 14...	775	385
JUN 06...	72	38.7
JUL 10...	4.0	.04
AUG 20...	89	.70
SEP 10...	850	308

E -- Estimated value

## YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

SPECIFIC CONDUCTANCE (US/CM AT 25 DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2190	2090				*1960	*1680	1900	2640	3820	2590	---
2	2180	2110						1860	2390	3800	2810	---
3	2220	2010						1860	1050	4140	2920	---
4	2280	1990			*1930	*2350	*1660	1840	1130	4370	3010	---
5	2320	1970						1840	1320	4080	2590	---
6	2330	2040						1900	1470	3530	961	---
7	2350	2080			*1920			1960	1790	2800	741	1960
8	2340	2090				*2250	*1490	1920	2250	2390	1700	2080
9	2380	2090						1910	2670	2280	2220	2080
10	2130	2120						2080	2930	2350	2570	2150
11	1970	2120			*1990	*1190	*1900	2120	3190	2470	2470	2150
12	1590	2120	**2260				1970	2040	3310	2360	2290	2140
13	1420	2130					2020	2000	3480	2100	2800	2190
14	1360	2110			*1940	*1750	2040	1960	3560	1990	2350	2230
15	1330	2090					2070	1920	2780	2560	2300	2280
16	1320	2040		**1740			2060	1970	3020	5920	2340	2340
17	1280	2020					2050	1940	3400	5410	2450	2340
18	1460	2030			*1770	*1050	2040	2240	3540	4480	2550	2310
19	1790	2020				**1580	1940	2420	3580	4060	2630	2320
20	1950	1980			**1740		1950	2300	3710	3870	2650	2340
21	2020	1930		*2110	*2080	*1650	1870	2320	3800	3050	2560	2360
22	1980	1930					1620	2440	3830	2190	---	2300
23	2030	---					1510	2630	3830	2450	---	2200
24	1990	---		*2120			1530	2030	3900	2730	---	2340
25	1990	---					1600	1880	3760	2490	2020	2380
26	1970	---			*1680	*1540	1690	2040	3730	2270	1860	2250
27	1960	---					1810	2320	3680	2020	1560	2060
28	1990	---		*2090			1840	2490	3400	2440	1660	2080
29	2050	---				*1680	1900	2560	3480	2520	2110	2230
30	2050	---					1970	2600	3700	2390	1790	2200
31	2050	---		*2400			---	2590	---	2510	1910	---
MEAN	1940	---		---	---	---	---	2130	3010	3090	---	---
MAX	2540	---		---	---	---	---	2630	3900	5920	---	---
MIN	1260	---		---	---	---	---	1840	1050	1990	---	---

\*--Instantaneous values obtained from observer grab samples during winter ice period.

\*\*--Instantaneous values obtained from USGS cross-section samples during winter ice period.

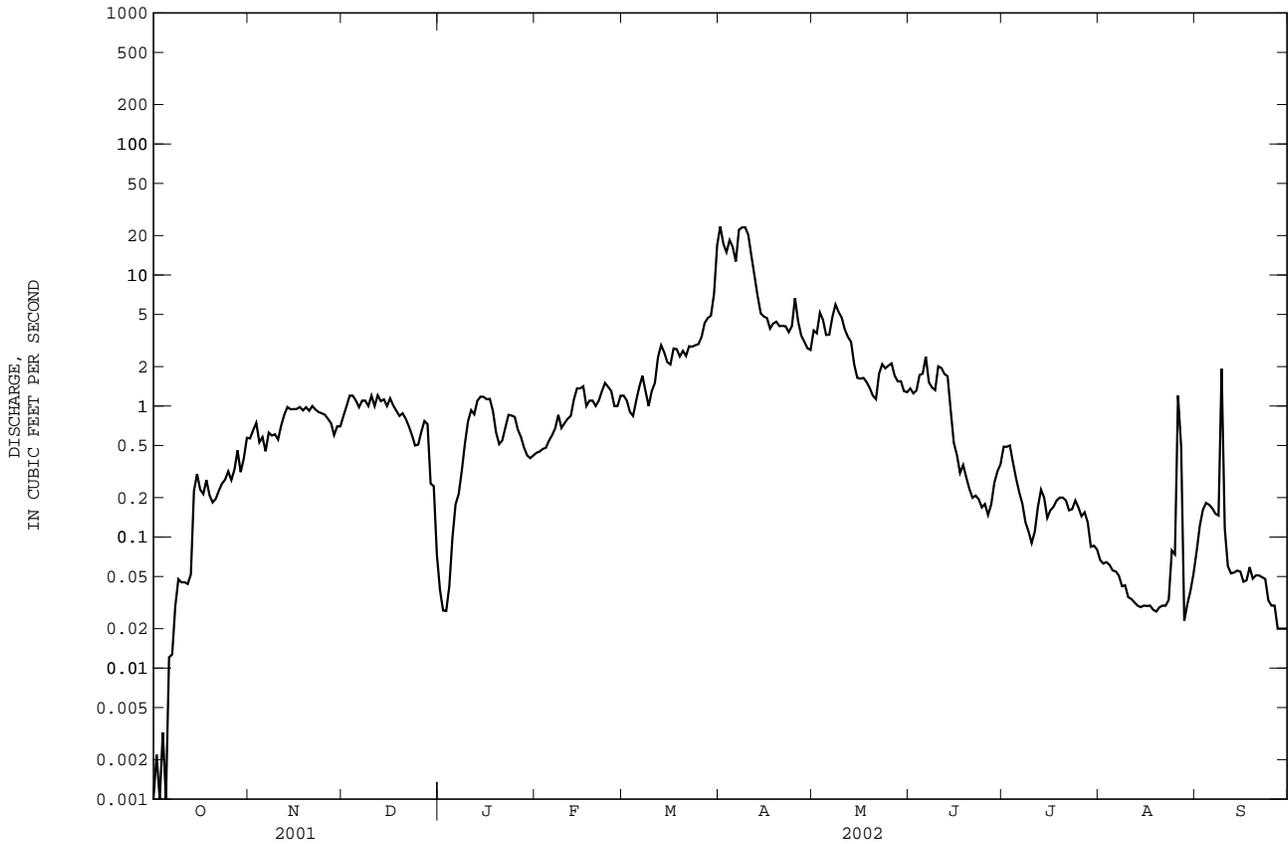


YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1973 - 2002	
ANNUAL TOTAL	2752.71		607.88		--	
ANNUAL MEAN	7.542		1.665		21.11	
HIGHEST ANNUAL MEAN	--		--		127 1978	
LOWEST ANNUAL MEAN	--		--		1.49 1992	
HIGHEST DAILY MEAN	252	Jul 25	23	Apr 1,8,9	5000	May 19 1978
LOWEST DAILY MEAN	0.00	Oct 1-5	0.00	Oct 1-5	0.00	Many days, some years
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 29	0.00	Oct 1	0.00	Many days, some years
MAXIMUM PEAK FLOW	--		32	Apr 7	5300 <sup>a</sup>	May 19 1978
MAXIMUM PEAK STAGE	--		2.91	Apr 7	11.63	Mar 20 1978
ANNUAL RUNOFF (AC-FT)	5460		1210		15300	
10 PERCENT EXCEEDS	14		3.8		34	
50 PERCENT EXCEEDS	1.6		0.70		2.9	
90 PERCENT EXCEEDS	0.03		0.04		0.03	

a Gage height, 11.62 ft.  
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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT													
11...	0815	.05	--	--	--	--	8.0	3770	10.0	6.0	1200	241	144
NOV													
14...	1400	.88	17	675	11.7	105	8.2	3470	15.0	5.0	820	151	107
DEC													
12...	1200	1.1	--	673	12.8	103	8.1	4340	1.0	.5	920	172	119
JAN													
16...	1400	1.0	17	673	12.3	97	7.9	4200	-2.0	.0	1200	240	146
FEB													
20...	1500	1.0	6.3	672	10.4	84	8.0	2950	8.0	1.0	780	160	91.4
MAR													
19...	1100	2.3	--	674	13.1	104	8.1	2790	3.0	.5	680	140	79.7
APR													
09...	1310	25	--	675	10.5	103	8.2	2050	17.0	9.0	490	92.9	61.1
MAY													
07...	1300	5.3	110	670	10.0	105	8.0	3460	11.0	11.0	860	164	110
JUN													
11...	0710	1.8	--	676	7.1	80	8.1	3850	16.0	14.5	880	153	121
JUL													
10...	1100	--	--	682	5.5	71	7.5	3270	--	21.9	--	--	--
16...	1415	.16	--	676	10.4	158	7.9	3720	33.5	30.0	1200	254	139
AUG													
13...	1210	.02	--	678	9.9	127	7.9	3730	24.0	21.0	1100	198	141
SEP													
10...	1650	.11	--	679	10.2	135	8.2	1840	25.5	23.0	500	101	58.7

Date	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)
OCT													
11...	17.2	6	479	--	440	420	512	--	118	.9	13.4	1600	4.13
NOV													
14...	19.1	8	502	--	376	324	395	--	32.1	.8	5.04	1580	3.80
DEC													
12...	23.4	10	684	--	514	520	634	--	120	.9	10.6	1860	4.75
JAN													
16...	25.9	8	637	--	547	504	615	--	85.8	.9	13.6	2010	4.97
FEB													
20...	15.3	7	425	--	392	360	420	10	34.6	.7	10.1	1290	3.21
MAR													
19...	14.2	7	399	352	351	356	434	--	45.6	.7	8.26	1130	2.89
APR													
09...	14.7	5	250	276	271	--	--	--	50.8	.5	8.44	774	2.07
MAY													
07...	19.0	7	483	389	388	379	456	--	85.0	.63	5.78	1480	3.71
JUN													
11...	22.6	9	603	357	354	--	--	--	77.9	.85	4.88	1770	4.29
JUL													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	26.1	6	449	--	375	411	493	--	234	.60	13.7	1480	4.17
AUG													
13...	20.9	7	505	339	327	--	--	--	189	.81	8.70	1580	4.26
SEP													
10...	13.2	4	214	229	229	222	264	--	77.5	.34	7.27	620	1.79

## YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)
OCT													
11...	.41	3040	2870	E.03	--	.65	E.03	<.008	--	<.02	.047	<2	275
NOV													
14...	6.63	2790	2590	<.04	--	.39	<.05	<.008	--	<.02	.021	<2	162
DEC													
12...	10.4	3500	3300	E.02	--	.43	<.05	<.008	--	<.02	.014	<2	158
JAN													
16...	9.97	3660	3470	E.03	--	.40	<.05	<.008	--	E.01	.020	<2	179
FEB													
20...	6.63	2360	2250	E.03	--	.24	<.05	<.008	--	<.02	.013	<2	77
MAR													
19...	13.3	2130	2030	<.04	--	.27	<.05	<.008	--	<.02	.013	<1	120
APR													
09...	103	1530	1420	--	--	--	--	--	--	--	--	3	12500
MAY													
07...	39.1	2730	2580	<.04	--	.68	<.05	<.008	--	<.02	.059	<2	703
JUN													
11...	15.3	3150	2970	--	--	--	--	--	--	--	--	<2	1180
JUL													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	1.32	3060	2840	<.04	--	.84	<.05	<.008	--	<.02	.054	1	126
AUG													
13...	.17	3130	2850	<.04	.39	.43	<.05	<.008	.010	<.02	.021	<2	39
SEP													
10...	.39	1320	1220	<.04	--	.73	<.05	<.008	--	<.02	.063	3	209
Date	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
OCT													
11...	<.10	.6	E1	65	58.2	<.10	194	192	.28	<.07	<.8	<.8	1.46
NOV													
14...	.20	.9	E2	38	41.9	<.10	213	214	.87	<.07	<4.0	<.8	.51
DEC													
12...	.14	.9	E2	37	35.8	<.10	383	291	<.07	E.04	<.8	<.8	.64
JAN													
16...	.14	1.1	E2	34	36.9	<.10	332	342	<.07	<.07	E.4	<.8	1.01
FEB													
20...	.14	.8	E1	22	20.8	<.10	154	174	<.07	E.02	E.6	<.8	.83
MAR													
19...	.36	.7	<2	21	19.6	<.06	190	163	<.04	<.04	<.8	<.8	.70
APR													
09...	.38	1.3	4	30	69.7	<.06	214	197	.30	.16	<.8	4.2	.88
MAY													
07...	.25	1.0	<2	38	45.2	<.10	263	307	.20	<.07	<.8	.9	1.01
JUN													
11...	.46	1.2	13	42	50.3	<.10	319	279	.50	E.04	<.8	1.1	.87
JUL													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
16...	.30	2.0	2	75	73.6	<.06	211	245	.08	<.07	<.8	<.8	1.21
AUG													
13...	.20	1.0	E2	38	34.1	<.10	215	240	<.07	<.07	<.8	<.8	.63
SEP													
10...	.30	1.3	E1	48	52.6	<.06	131	121	.04	E.02	<.8	<.8	.55

YELLOWSTONE RIVER BASIN

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
OCT 11...	17.2	5.3	<30	550	<.20	<2	48.3	684	653	2.1	<.10	6	E.4
NOV 14...	3.7	6.8	<30	240	<.20	<2	61.3	84.2	110	1.9	<.10	4	1.0
DEC 12...	6.6	7.0	<30	150	<.20	<2	167	77.7	78.9	2.4	3.85	5	1.8
JAN 16...	4.1	7.8	<30	300	<.20	<2	159	202	187	3.3	7.31	7	1.5
FEB 20...	4.0	5.5	198	160	<.20	<1	62.4	217	178	2.1	3.32	5	1.1
MAR 19...	3.5	4.4	11	190	<.08	<1	69.0	129	121	2.1	1.86	6	1.1
APR 09...	5.3	12.4	E9	5000	E.07	10	60.4	82.6	277	3.4	3.83	10	1.7
MAY 07...	5.1	9.0	<30	1090	<.20	<2	76.2	194	278	3.2	4.75	7	1.5
JUN 11...	9.9	10.1	<30	1380	<.20	3	86.6	127	197	3.2	1.96	7	1.8
JUL 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	7.8	6.5	<30	490	.11	<2	68.4	377	421	2.1	2.04	5	1.7
SEP 13...	7.7	6.6	E15	100	<.20	<2	64.8	41.0	46.6	2.3	4.72	6	1.5
SEP 10...	2.9	5.2	E10	370	<.08	<1	27.4	122	170	1.3	4.96	7	.6

Date	SELE- NIUM, TOTAL SOLVED (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 11...	1.5	<2	3280	<.08	.6	11	6	25.8	--	--
NOV 14...	E.7	<2	2090	<.08	.7	9	6	15.8	60	.14
DEC 12...	1.9	<2	2900	<.08	1.9	6	7	18.9	112	.33
JAN 16...	1.6	<2	3490	<.08	9.0	4	7	20.5	68	.19
FEB 20...	1.1	<2	1980	<.08	.7	3	5	15.5	22	.06
MAR 19...	.8	<1	1760	<.04	<.2	3	4	14.3	73	.46
APR 09...	1.2	<1	1340	<.04	2.3	3	35	14.2	--	--
MAY 07...	1.2	<2	2280	<.08	2.8	4	10	16.7	189	2.7
JUN 11...	2.9	<2	2320	<.08	2.9	6	14	16.7	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--
AUG 16...	1.2	<1	2730	<.04	.9	6	5	16.1	61	.03
SEP 13...	.9	<2	2720	<.08	2.5	6	4	14.9	--	--
SEP 10...	.9	<1	1090	<.04	1.7	3	4	5.82	36	.01

E -- Estimated value



## CHEYENNE RIVER BASIN

279

06364700 ANTELOPE CREEK NEAR TECKLA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 09...	--	--
NOV 13...	74	1150
DEC 05...	74	1850
JAN 07...	531	3220
FEB 11...	297	2710
MAR 11...	E8	2880
APR 08...	12	2050
MAY 06...	<30	1260
JUN 10...	<30	545
JUL 10...	--	--
AUG 12...	--	--
SEP 02...	--	--

E -- Estimated value

CHEYENNE RIVER BASIN

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY

LOCATION.--Lat 43°34'51", long 104°43'04", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.31, 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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
09...	1330	.0	--	--	--	--	--	--	--	--	--	--	--
NOV													
13...	1245	.0	--	--	--	--	--	--	--	--	--	--	--
DEC													
05...	1000	.60	655	13.2	106	8.1	2440	.0	.0	610	107	83.9	18.8
JAN													
07...	1205	.0	--	--	--	--	--	14.0	.0	--	--	--	--
FEB													
11...	1330	.0	--	--	--	--	--	--	--	--	--	--	--
MAR													
11...	1520	.06	--	--	--	8.1	4340	14.0	.0	1000	183	143	21.5
APR													
08...	1330	.62	658	9.2	94	8.1	1150	8.0	9.5	280	56.0	34.4	9.28
MAY													
06...	1330	.04	656	11.1	145	8.4	2510	16.0	20.5	600	113	77.0	14.1
JUN													
10...	1245	.01	654	11.7	168	8.4	4640	24.5	25.0	1100	175	162	21.1
JUL													
10...	1330	.0	--	--	--	--	--	--	--	--	--	--	--
AUG													
12...	1220	.12	663	5.7	66	7.8	629	10.5	15.5	160	39.4	14.8	9.08
SEP													
09...	1230	.22	663	6.1	74	7.8	469	16.0	18.0	130	32.0	13.2	8.84
Date		SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT. DIS-FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
OCT													
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
05...	6	328	440	29.2	1.2	3.43	935	2.51	2.99	1840	1770	<2	34.6
JAN													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR													
11...	9	665	553	60.9	1.1	5.14	1960	4.85	.58	3570	3370	E1	54.3
APR													
08...	4	139	208	10.5	.6	3.04	372	1.05	1.30	774	749	<2	43.1
MAY													
06...	6	329	327	29.7	.74	1.23	1040	2.59	.21	1910	1800	M	57.6
JUN													
10...	10	744	296	56.3	.86	E.28	2350	5.46	.11	4010	3690	E1	67.0
JUL													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
12...	2	65.6	121	4.82	.40	6.38	179	.58	.14	429	392	E1	95.2
SEP													
09...	1	37.5	88	3.84	.37	5.68	129	.44	.19	323	283	<2	154

06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 09...	--	--
NOV 13...	--	--
DEC 05...	11	18.4
JAN 07...	--	--
FEB 11...	--	--
MAR 11...	25	136
APR 08...	E8	44.2
MAY 06...	<10	69.2
JUN 10...	<30	27.9
JUL 10...	--	--
AUG 12...	17	37.9
SEP 09...	10	24.4

E -- Estimated value

M -- Presence verified, not quantified

## CHEYENNE RIVER BASIN

06386400 CHEYENNE RIVER AT RIVERVIEW, WY

LOCATION.--Lat 43°25'41", long 104°11'45", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW <sup>1</sup>/<sub>4</sub> 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<sup>2</sup>, approximately.

PERIOD OF RECORD.--Water years 1951-54, 1969-70, 1972-92, October 2001 to September 2002. 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL AS (MG/L CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT														
09...	1520	1.3	664	10.1	113	8.0	4340	12.5	13.5	1100	260	118	11.5	
NOV														
13...	1355	.89	666	12.3	118	8.0	4370	23.0	7.0	1200	281	119	10.8	
DEC														
05...	1140	1.4	665	12.7	101	7.6	4500	1.0	.0	1300	306	127	10.2	
JAN														
07...	1325	.18	671	7.3	58	7.2	6830	8.0	.0	1800	418	191	11.4	
FEB														
11...	1515	.63	673	9.5	75	7.4	4500	8.0	.0	1300	304	129	12.0	
MAR														
11...	1715	1.4	--	--	--	8.2	3740	13.5	.0	1100	259	99.8	8.07	
APR														
08...	1505	7.1	670	11.2	121	8.2	2900	4.0	12.5	580	135	59.1	9.33	
MAY														
06...	1450	3.9	667	9.9	134	8.2	3920	18.5	23.0	750	167	80.9	11.2	
JUN														
10...	1405	.48	665	10.9	154	8.2	4790	26.0	25.0	1200	258	124	14.4	
JUL														
10...	1225	.03	669	9.6	143	8.2	7880	24.0	27.5	1800	360	211	17.6	
AUG														
12...	1355	.03	676	10.7	125	8.4	6070	13.5	16.0	960	180	124	16.5	
SEP														
09...	1425	6.8	675	7.9	102	8.1	2430	15.5	21.5	620	155	57.6	8.95	
Date		SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
OCT														
09...	9	662	240	63.6	.5	7.72	2230	5.05	13.0	3710	3500	<2	36.0	
NOV														
13...	8	639	325	62.6	.6	9.53	2280	5.39	9.52	3960	3600	<4	27.8	
DEC														
05...	8	656	335	67.8	.7	11.4	2390	5.45	15.2	4010	3770	E1	26.3	
JAN														
07...	12	1170	484	127	.6	14.4	3840	8.62	3.08	6340	6060	E2	28.6	
FEB														
11...	8	664	319	61.0	.6	10.6	2390	5.47	6.84	4020	3770	E1	22.7	
MAR														
11...	7	512	270	53.0	.5	8.46	1890	4.41	12.2	3240	3000	<2	18.1	
APR														
08...	8	427	293	54.3	.6	6.96	1220	3.00	42.3	2200	2090	<2	26.1	
MAY														
06...	10	629	329	82.2	.8	5.37	1750	4.18	32.4	3070	2930	E1	27.0	
JUN														
10...	10	793	271	83.1	.7	7.19	2460	5.63	5.36	4140	3910	E1	36.6	
JUL														
10...	14	1390	193	149	.6	5.88	4550	9.71	.58	7140	6810	3	38.0	
AUG														
12...	17	1200	296	137	1.1	1.50	2980	6.92	.41	5080	4820	3	37.9	
SEP														
09...	5	310	189	31.8	.5	8.51	1100	2.67	36.0	1960	1790	<2	81.1	

06386400 CHEYENNE RIVER AT RIVERVIEW, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 09...	<30	226
NOV 13...	<30	259
DEC 05...	<30	382
JAN 07...	<50	1970
FEB 11...	<30	503
MAR 11...	<10	234
APR 08...	19	141
MAY 06...	<30	122
JUN 10...	<30	406
JUL 10...	<50	345
AUG 12...	<50	158
SEP 09...	<10	232

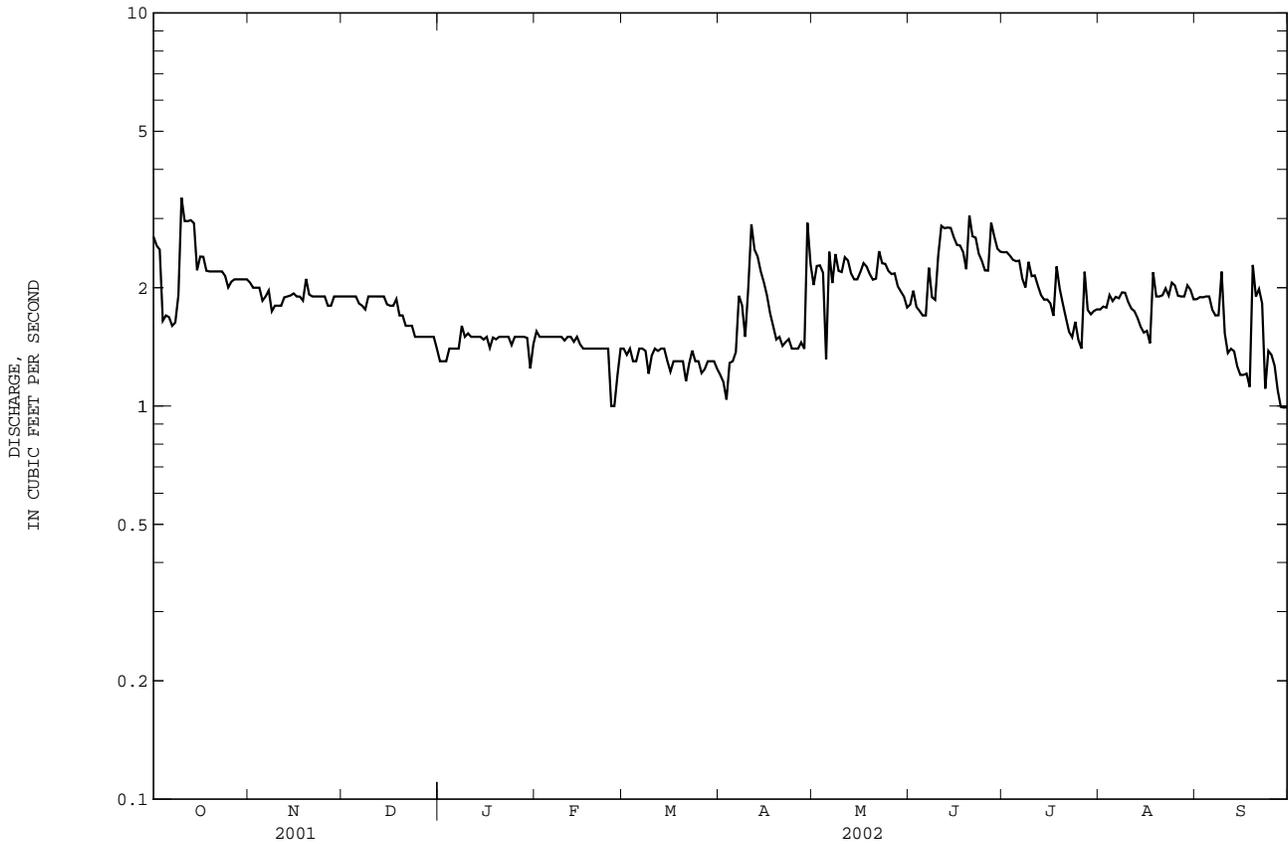
E -- Estimated value



06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1975 - 2002	
ANNUAL TOTAL	783.9		660.07		--	
ANNUAL MEAN	2.148		1.808		2.008	
HIGHEST ANNUAL MEAN	--		--		3.20 1999	
LOWEST ANNUAL MEAN	--		--		0.94 1977	
HIGHEST DAILY MEAN	3.8	Apr 23	3.4	Oct 10	34	Mar 26 1999
LOWEST DAILY MEAN	1.0	Sep 15	0.99	Sep 28-30	0.10	Jan 20 1993
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 15	1.2	Sep 24	0.12	Jan 17 1993
MAXIMUM PEAK FLOW	--		30 <sup>a</sup>	Oct 10	103 <sup>b</sup>	Apr 22 1994
MAXIMUM PEAK STAGE	--		2.28 <sup>c</sup>	Apr 9	2.88 <sup>c</sup>	Dec 25 1998
ANNUAL RUNOFF (AC-FT)	1550		1310		1450	
10 PERCENT EXCEEDS	2.8		2.4		2.9	
50 PERCENT EXCEEDS	2.0		1.8		1.9	
90 PERCENT EXCEEDS	1.6		1.3		1.2	

- a Gage height, 1.57 ft.
- b From rating curve extended above 85 ft<sup>3</sup>/s.
- c Backwater from ice.
- e Estimated.



CHEYENNE RIVER BASIN

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY

LOCATION.--Lat 43°51'32", long 104°06'24", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	16	15	e12	15	14	15	15	16	8.5	16	e18
2	14	16	15	e13	15	14	15	16	16	9.0	17	e17
3	14	15	15	13	15	15	15	16	18	8.5	17	e17
4	14	15	15	14	15	15	15	16	17	7.2	17	17
5	15	16	15	13	15	14	15	16	17	7.1	18	17
6	14	15	15	13	15	14	15	16	17	7.4	18	16
7	14	15	15	13	15	14	16	16	16	7.4	18	13
8	14	15	14	13	16	14	15	16	17	7.3	18	13
9	16	15	15	14	16	15	15	16	17	e8.0	18	19
10	17	15	15	14	15	15	15	16	17	e9.0	18	17
11	15	15	15	13	15	15	15	20	11	e10	18	17
12	14	15	15	14	15	15	15	17	9.7	e12	19	19
13	14	15	14	14	15	14	15	16	9.1	e13	19	19
14	15	15	14	14	16	13	15	16	10	e14	18	14
15	14	15	14	14	16	14	15	16	11	e14	18	12
16	14	15	14	14	16	14	16	18	11	e14	17	12
17	14	15	14	14	16	14	14	20	13	e14	17	12
18	15	15	14	14	16	14	13	17	11	e14	17	12
19	15	15	14	15	16	14	16	16	9.7	e14	17	12
20	15	15	14	14	16	14	15	16	8.7	e14	17	11
21	15	15	14	14	16	14	16	17	9.4	e14	18	13
22	15	15	13	15	16	14	15	20	8.5	e14	18	12
23	15	15	13	14	16	14	11	17	8.9	e14	18	12
24	15	15	13	15	16	14	10	17	10	e14	18	12
25	15	15	13	15	16	14	10	17	11	14	19	12
26	15	15	13	15	e15	15	11	16	11	14	18	12
27	15	15	13	15	e14	15	12	16	9.5	14	18	13
28	15	15	13	15	14	15	11	16	9.4	14	18	13
29	15	15	13	15	---	15	12	16	9.0	13	21	14
30	15	15	13	16	---	15	11	16	8.4	13	20	15
31	16	---	13	16	---	15	---	15	---	13	19	---
TOTAL	457	453	435	437	432	445	419	514	367.3	363.4	557	432
MEAN	14.74	15.10	14.03	14.10	15.43	14.35	13.97	16.58	12.24	11.72	17.97	14.40
MAX	17	16	15	16	16	15	16	20	18	14	21	19
MIN	14	15	13	12	14	13	10	15	8.4	7.1	16	11
AC-FT	906	899	863	867	857	883	831	1020	729	721	1100	857

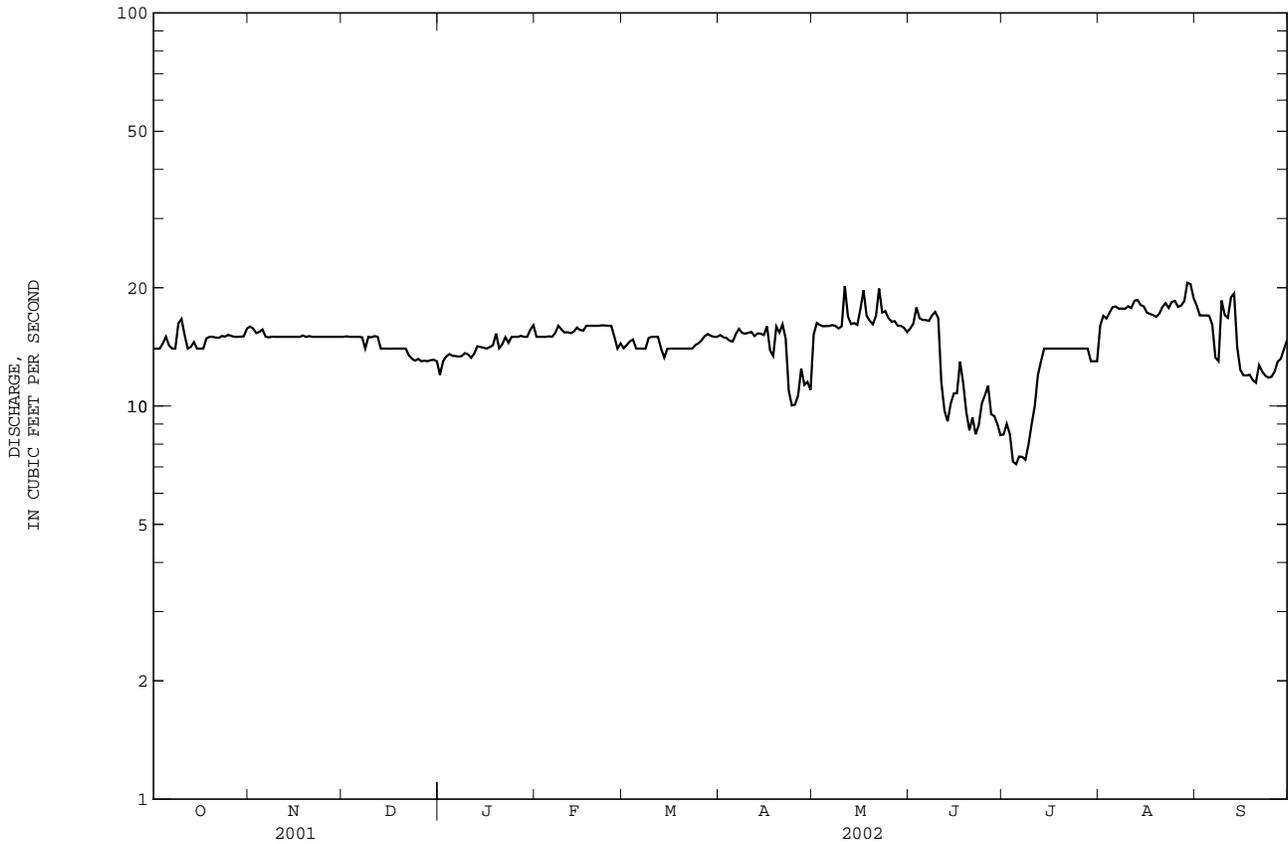
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002									
MEAN	13.41	13.58	13.37	13.09	13.47	14.73	13.85	11.70	11.73	11.74	12.39	12.93	13.41	13.58	13.37	13.09	13.47	14.73	13.85	11.70	11.73	11.74	12.39	12.93	13.41	13.58	13.37	13.09	13.47	14.73	13.85	11.70	11.73	11.74	12.39	12.93	
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	18.9	19.0	18.1	17.6	17.6	21.3	19.4	18.5	17.8	17.0	20.9	20.0	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	1999	2000	2001	2000	2000	1996	2000	2000	2000	1999	1999	1999	1999	2000	2001	2000	2000	1996	2000	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	9.40	9.74	10.2	9.52	10.6	10.8	9.53	6.45	5.92	8.24	6.33	8.89	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	1982	1994	1993	1980	1993	1993	1981	1992	1992	1981	1992	1991	1982	1994	1993	1980	1993	1993	1981	1992	1992	1981	1992	1991	

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1975 - 2002	
ANNUAL TOTAL	5724.6		5311.7		--	
ANNUAL MEAN	15.68		14.55		13.05	
HIGHEST ANNUAL MEAN	--		--		17.4	
LOWEST ANNUAL MEAN	--		--		9.80	
HIGHEST DAILY MEAN	21	Apr 7	21	Aug 29	143	Jul 16 1993
LOWEST DAILY MEAN	9.1	Jul 7	7.1	Jul 5	3.9	May 21 1992
ANNUAL SEVEN-DAY MINIMUM	9.6	Jun 27	7.6	Jul 3	4.6	Aug 2 1992
MAXIMUM PEAK FLOW	--		31 <sup>a</sup>		776 <sup>b</sup>	
MAXIMUM PEAK STAGE	--		7.26 <sup>c</sup>		12.44	
ANNUAL RUNOFF (AC-FT)	11350		10540		9450	
10 PERCENT EXCEEDS	19		17		17	
50 PERCENT EXCEEDS	16		15		13	
90 PERCENT EXCEEDS	13		11		9.1	

- a Gage height, 7.04 ft.
- b From rating curve extended above 18 ft<sup>3</sup>/s on basis of culvert backwater computation.
- c Backwater from ice.
- e Estimated.



## CHEYENNE RIVER BASIN

06395000 CHEYENNE RIVER AT EDMONT, SD

LOCATION.--Lat 43°18'20", long 103°49'14", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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. Datum 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 good 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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	9.0	e4.8	e4.0	e5.1	e10	e120	12	5.0	0.60	0.15	52
2	3.7	8.2	e7.0	e4.0	e5.1	e10	74	13	4.9	0.65	0.14	24
3	3.6	13	e13	e4.0	e5.2	e12	57	18	5.6	0.62	0.12	14
4	8.6	14	e13	e6.0	e5.2	e20	61	14	5.5	0.81	0.12	10
5	8.9	11	e13	e10	e5.3	e25	51	10	4.3	0.85	1.8	8.9
6	5.7	10	e14	e10	e5.3	e22	40	8.6	3.8	0.70	0.78	7.6
7	4.3	9.0	e11	e10	e7.0	e20	42	7.8	3.3	0.68	0.21	6.4
8	3.5	7.6	e10	e10	e9.5	e17	54	7.7	3.2	0.60	0.22	5.4
9	3.7	9.7	e10	e7.0	e9.5	e16	56	7.2	3.2	8.2	0.22	12
10	3.1	15	e10	e7.0	e9.5	e15	45	6.8	2.9	3.3	0.26	61
11	2.4	14	e10	e7.0	e11	e15	30	8.7	2.5	1.9	0.16	64
12	2.4	16	e9.5	e7.0	e9.9	e20	32	8.5	2.3	1.0	0.19	39
13	2.5	16	e7.0	e7.5	e7.5	e30	26	9.2	2.2	0.70	0.20	34
14	2.4	16	e7.0	e10	e7.0	e47	22	9.1	2.0	0.47	0.17	39
15	2.3	14	e5.0	e7.0	e7.0	e49	18	9.3	1.9	0.38	0.14	38
16	1.7	16	e7.0	e6.5	e7.5	e47	22	11	1.9	0.36	0.18	23
17	2.0	16	e10	e5.0	e11	e35	16	10	1.6	0.35	0.15	14
18	4.0	20	e10	e5.0	e16	e34	16	10	1.5	0.39	0.18	10
19	6.6	14	e5.0	e5.0	e20	e34	16	7.5	1.5	0.40	0.13	8.8
20	7.3	23	e5.0	e7.0	e24	e23	13	6.4	1.2	0.38	0.07	7.2
21	6.9	20	e5.0	e10	e27	e19	11	6.5	2.2	0.29	0.08	7.1
22	8.3	25	e5.0	e7.0	e31	e15	9.8	8.2	1.4	0.30	0.08	6.8
23	9.0	19	e5.0	e5.0	e30	e20	8.8	7.3	1.3	0.23	0.09	8.2
24	8.7	21	e4.0	e5.0	e26	e20	7.8	7.3	1.3	0.21	0.07	8.4
25	9.4	18	e7.0	e5.0	e20	e18	7.3	7.4	1.2	0.29	14	6.1
26	6.8	7.0	e10	e10	e17	e30	7.2	6.8	1.0	0.20	75	5.2
27	9.6	e6.0	e11	e10	e14	e45	10	6.9	1.1	0.17	18	4.4
28	10	e5.5	e9.0	e8.0	e12	e70	10	6.9	1.0	0.17	11	3.8
29	8.9	e5.0	e7.0	e5.0	---	e95	8.7	6.6	0.93	0.15	6.8	3.4
30	9.1	e5.0	e5.0	e5.0	---	e110	7.7	6.1	0.70	0.15	32	3.0
31	9.5	---	e4.5	e5.0	---	e120	---	5.4	---	0.15	181	---
TOTAL	178.4	403.0	253.8	214.0	364.6	1063	897.3	270.2	72.43	25.65	343.71	534.7
MEAN	5.755	13.43	8.187	6.903	13.02	34.29	29.91	8.716	2.414	0.827	11.09	17.82
MAX	10	25	14	10	31	120	118	18	5.6	8.2	181	64
MIN	1.7	5.0	4.0	4.0	5.1	10	7.2	5.4	0.70	0.15	0.07	3.0
AC-FT	354	799	503	424	723	2110	1780	536	144	51	682	1060

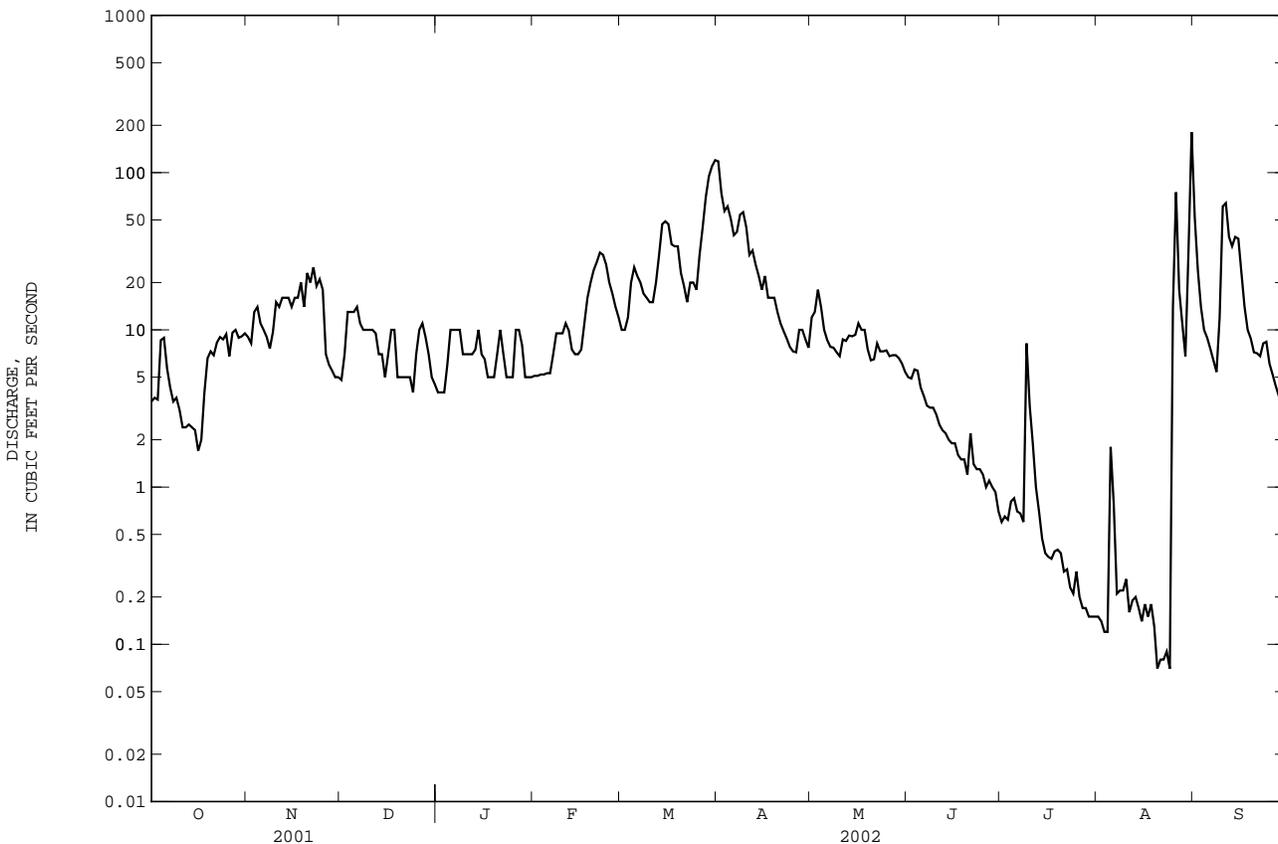
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)								
MEAN	21.77	16.66	8.978	8.884	41.55	121.7	67.57	209.8	247.4	122.6	65.62	26.28
MAX	291	266	50.5	37.3	302	506	558	2192	2084	806	388	275
(WY)	1999	1999	1999	1999	1997	1994	1955	1978	1962	1958	1955	1973
MIN	0.000	0.023	0.000	0.000	0.000	3.39	0.22	0.27	1.76	0.15	0.000	0.000
(WY)	1961	1962	1960	1950	1960	1961	1961	1960	1966	1985	1960	1956

06395000 CHEYENNE RIVER AT EDGEMONT, SD--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1929-1932, 1947-2002	
ANNUAL TOTAL	19651.81		4622.79		--	
ANNUAL MEAN	53.84		12.67		80.08 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		--		434 1962	
LOWEST ANNUAL MEAN	--		--		12.0 1988	
HIGHEST DAILY MEAN	877	Jul 12	181	Aug 31	24000	May 20 1978
LOWEST DAILY MEAN	0.75	Jul 6	0.07	Aug 20,24	0.00	Many days, most years
ANNUAL SEVEN-DAY MINIMUM	2.0	Jul 1	0.10	Aug 18	0.00 <sup>b</sup>	Many years
MAXIMUM PEAK FLOW	--		375 Aug 31		28000 May 20 1978	
MAXIMUM PEAK STAGE	--		3.10 Aug 31		13.65 May 20 1978	
ANNUAL RUNOFF (AC-FT)	38980		9170		58020	
10 PERCENT EXCEEDS	168		30		151 <sup>b</sup>	
50 PERCENT EXCEEDS	15		7.5		12 <sup>b</sup>	
90 PERCENT EXCEEDS	3.7		0.38		0.11 <sup>b</sup>	

a Median of annual mean discharge, 72 ft<sup>3</sup>/s.  
 b Reflects water years 1947-2001 only.  
 e Estimated.



## CHEYENNE RIVER BASIN

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY

LOCATION.--Lat 43°59'04", long 105°23'16", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

## 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 fair except those for estimated daily discharges, which are poor. No diversions upstream from station. Several small stockwater reservoirs upstream from station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.38	1.5	2.3	e0.70	2.0	e2.0	5.2	4.1	3.2	0.01	0.00	0.36
2	0.32	1.5	2.3	e0.80	1.9	e2.0	4.6	4.3	3.8	0.00	0.00	0.25
3	0.26	1.6	2.5	e0.90	2.2	e2.5	5.3	4.4	5.1	0.00	0.00	0.22
4	0.47	1.6	2.5	e1.0	2.7	e3.0	e6.0	4.3	10	0.02	0.00	0.18
5	0.57	1.6	2.6	e1.4	e3.0	e3.5	e5.5	4.0	12	0.00	0.00	0.18
6	0.64	1.6	2.4	e1.8	e2.5	e4.0	e5.1	4.0	8.5	0.00	0.00	0.11
7	0.68	1.6	2.9	2.1	2.5	e4.0	e5.1	3.8	6.6	0.00	5.7	0.07
8	0.71	1.6	2.4	2.5	2.7	e3.5	5.1	3.6	4.7	0.00	0.69	0.06
9	0.73	1.6	2.4	3.4	2.8	e3.0	5.0	3.4	3.8	0.00	0.00	0.05
10	0.73	1.8	2.4	4.1	2.6	e3.5	4.7	3.4	3.2	0.00	0.00	0.03
11	0.68	1.7	2.5	4.9	2.7	e4.0	4.7	3.2	2.3	0.00	0.00	0.03
12	0.63	1.8	2.7	4.8	e2.5	4.0	4.6	3.7	2.0	0.00	0.00	0.04
13	0.62	1.8	2.4	5.0	e3.0	4.4	4.3	3.7	1.8	0.00	0.00	0.08
14	0.69	1.8	2.6	5.2	3.1	4.1	3.7	3.9	1.6	0.00	0.00	0.09
15	0.66	1.9	2.7	5.4	e3.0	4.0	3.6	3.8	1.2	0.00	0.00	0.11
16	0.66	1.9	2.5	5.6	e3.0	4.5	3.4	3.8	1.1	0.00	0.00	0.09
17	0.67	1.9	2.3	e5.0	e3.0	5.4	3.5	4.3	1.0	0.00	0.00	0.09
18	0.67	2.0	2.5	e4.0	3.9	5.0	2.9	4.5	0.94	0.00	0.00	0.16
19	0.66	2.0	2.5	e5.0	4.0	4.5	3.0	4.5	0.83	0.00	0.00	0.14
20	0.66	2.0	2.4	e4.0	4.2	4.7	3.0	4.3	0.68	0.00	0.00	0.19
21	0.94	2.3	2.6	3.8	3.7	4.0	3.4	4.2	0.48	0.00	0.00	0.15
22	1.2	2.3	2.3	3.0	3.9	e3.5	3.8	4.4	0.43	0.00	0.00	0.47
23	1.2	2.3	2.2	2.8	3.8	e4.0	3.9	4.5	0.26	0.00	0.00	0.47
24	1.2	2.3	1.8	4.1	e2.5	5.2	3.7	4.5	0.16	0.00	0.00	0.40
25	1.2	2.3	2.4	3.8	e2.0	e5.0	3.6	4.4	0.07	0.00	0.00	0.45
26	1.2	2.3	2.3	3.0	e2.0	e4.0	3.6	4.2	0.03	0.00	0.00	0.45
27	1.4	2.4	1.9	2.4	e1.5	e5.0	3.7	4.0	0.02	0.00	0.00	0.43
28	1.4	2.0	1.5	2.3	e2.0	5.8	3.9	3.8	0.02	0.00	0.42	0.37
29	1.4	2.3	1.1	e2.7	---	6.4	4.0	3.6	0.02	0.00	0.59	0.31
30	1.4	2.3	1.1	2.7	---	6.0	3.9	3.5	0.01	0.00	0.54	0.28
31	1.5	---	e1.0	2.5	---	5.5	---	3.3	---	0.00	0.60	---
TOTAL	26.13	57.6	70.0	100.70	78.7	130.0	125.8	123.4	75.85	0.03	8.54	6.31
MEAN	0.843	1.920	2.258	3.248	2.811	4.194	4.193	3.981	2.528	0.001	0.275	0.210
MAX	1.5	2.4	2.9	5.6	4.2	6.4	6.0	4.5	12	0.02	5.7	0.47
MIN	0.26	1.5	1.0	0.70	1.5	2.0	2.9	3.2	0.01	0.00	0.00	0.03
AC-FT	52	114	139	200	156	258	250	245	150	0.06	17	13

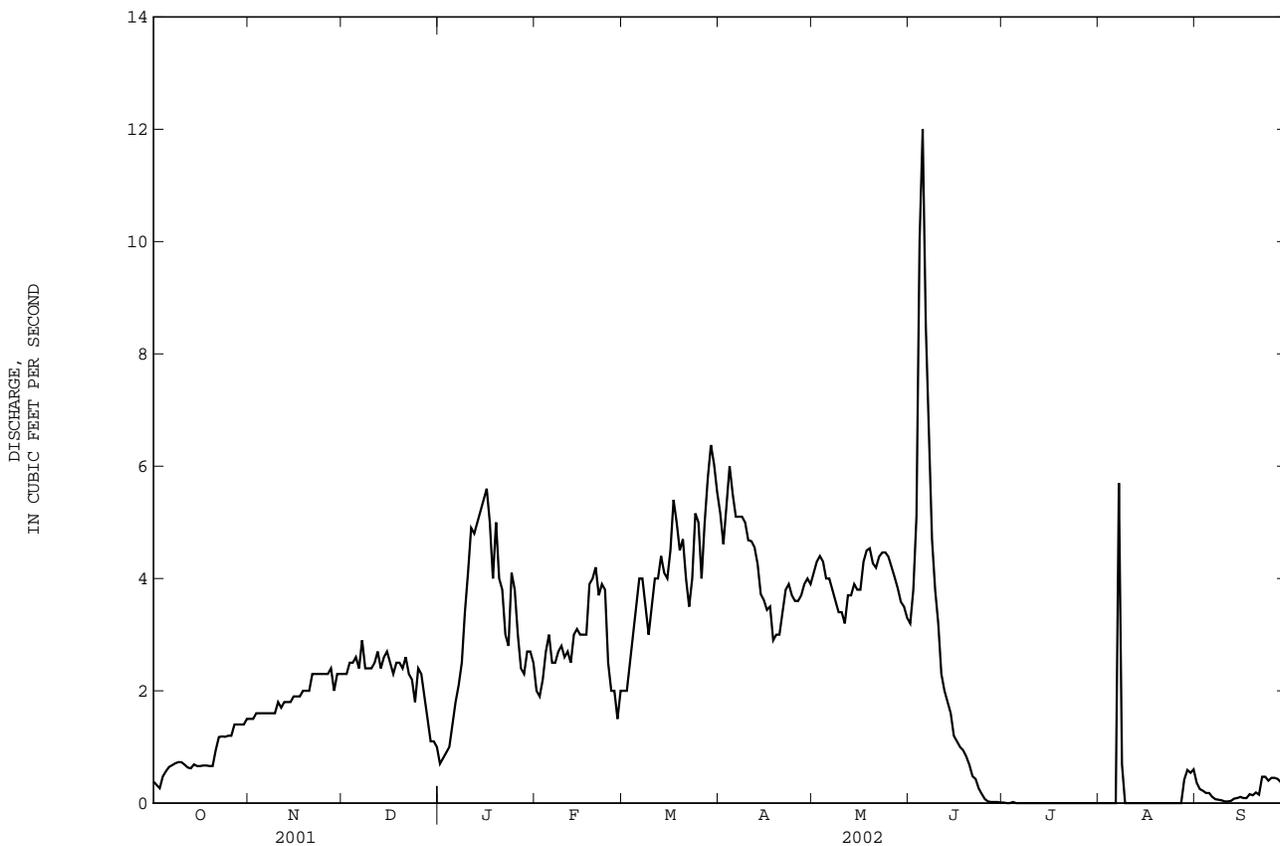
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2002, BY WATER YEAR (WY)

	1976	1976	1982	1977	1978	1981	1981	1981	1981	1981	1976	1976
MEAN	0.198	0.314	0.445	0.747	1.735	4.432	1.983	10.94	4.254	1.675	2.229	0.445
MAX	0.94	1.92	2.26	3.25	7.36	15.8	5.62	88.3	15.6	6.22	15.8	2.71
(WY)	1983	2002	2002	2002	1982	1978	2001	1978	1979	1982	1982	1982
MIN	0.000	0.000	0.000	0.000	0.000	0.051	0.010	0.000	0.000	0.000	0.000	0.000
(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 2002 WATER YEAR		WATER YEARS 1976 - 2002	
ANNUAL TOTAL	803.06		--	
ANNUAL MEAN	2.200		2.480	
HIGHEST ANNUAL MEAN	--		9.76	1978
LOWEST ANNUAL MEAN	--		0.19	1976
HIGHEST DAILY MEAN	12	Jun 5	1060	May 19 1978
LOWEST DAILY MEAN	0.00	Many days	0.00	Many days, most years
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 5	0.00	Most years
MAXIMUM PEAK FLOW	13	Jun 4	4100 <sup>a</sup>	May 18 1978
MAXIMUM PEAK STAGE	1.54	Jun 4	11.33 <sup>b</sup>	May 18 1978
ANNUAL RUNOFF (AC-FT)	1590		1800	
10 PERCENT EXCEEDS	4.6		3.7	
50 PERCENT EXCEEDS	2.1		0.02	
90 PERCENT EXCEEDS	0.00		0.00	

a From rating curve extended above 1,200 ft<sup>3</sup>/s on basis of flow over road and culvert computations.  
 b From floodmarks.  
 e Estimated.



CHEYENNE RIVER BASIN

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
------	------	---	--	-----------------------------------	--	--	---	-----------------------------	------------------------------------	-----------------------------------	---	---	--

OCT	09...	1110	.74	644	7.4	76	8.1	2640	9.0	9.0	570	73.1	93.7	15.9
FEB	11...	1120	2.8	650	8.8	71	7.9	2090	7.0	.0	640	120	82.9	9.61
MAY	06...	1130	4.0	645	7.1	78	8.1	2570	6.0	11.5	910	167	119	12.1
SEP	09...	1020	.04	652	4.4	52	7.8	3500	13.0	15.0	890	134	134	19.3

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
------	-----------------------------------	---	--	--	---	---	--	---	---	---	---	---	---

OCT	09...	7	372	425	26.5	1.0	.73	1030	2.65	3.90	1950	1870	--	27.3
FEB	11...	4	240	432	16.0	1.0	3.39	791	2.19	12.2	1610	1520	--	83.3
MAY	06...	4	267	376	17.1	.9	2.42	1150	2.92	23.2	2150	1960	--	81.8
SEP	09...	7	505	392	31.9	1.1	.68	1620	4.00	.32	2940	2680	E2	54.8

Date	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
------	---------------------------------------	---

OCT	09...	E8	89.6
FEB	11...	17	40.2
MAY	06...	E22	212
SEP	09...	172	1080

E -- Estimated value

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY

LOCATION.--Lat 44°04'48", long 105°15'59", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
10...	1330	3.0	653	10.2	101	8.2	1380	10.5	8.0	230	39.6	32.7	10.3
NOV													
14...	1205	3.0	651	11.2	97	8.3	1440	17.0	2.5	300	53.9	39.2	10.1
DEC													
06...	1035	2.2	648	11.5	93	8.3	1670	1.0	.0	380	69.1	50.4	10.3
JAN													
08...	1125	3.2	649	9.9	80	8.1	1940	13.5	.0	410	78.2	52.6	15.2
FEB													
12...	1350	2.6	669	10.1	79	8.3	1320	1.0	.0	260	50.8	32.5	8.72
MAR													
13...	0930	3.4	--	--	--	8.1	1170	-2.0	.0	270	51.1	33.7	7.42
APR													
09...	1050	3.9	652	9.2	88	8.1	1300	11.5	6.5	310	55.8	40.8	7.90
MAY													
07...	1030	3.0	648	8.6	86	8.2	1760	8.5	8.0	400	68.7	55.5	10.7
JUN													
11...	0935	2.2	653	7.3	81	8.2	1900	12.0	12.5	500	84.7	71.1	13.0
JUL													
09...	1810	.20	660	5.2	72	8.3	968	29.0	24.0	180	31.2	25.9	12.1
AUG													
13...	1025	.0	--	--	--	--	--	--	--	--	--	--	--
SEP													
10...	1205	.11	658	6.8	83	8.1	3270	26.0	17.5	780	120	117	24.2

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
OCT													
10...	6	214	402	15.1	1.0	1.68	320	1.18	7.00	864	876	<2	67.1
NOV													
14...	6	218	411	14.6	1.0	1.25	399	1.35	8.07	996	984	<4	72.0
DEC													
06...	5	231	419	17.9	.9	1.68	521	1.55	6.77	1140	1150	E1	92.2
JAN													
08...	6	297	550	21.3	1.2	6.25	520	1.88	11.9	1380	1320	M	117
FEB													
12...	5	198	393	12.4	.9	5.61	325	1.22	6.29	896	869	<2	105
MAR													
13...	4	165	306	11.1	.7	3.66	336	1.16	7.82	852	792	<2	75.5
APR													
09...	4	170	285	13.1	.7	2.07	392	1.14	8.85	840	853	<2	80.8
MAY													
07...	5	232	383	19.3	.83	2.30	570	1.69	10.0	1240	1190	E1	106
JUN													
11...	5	257	355	36.7	1.09	3.93	660	1.90	8.31	1400	1340	E1	124
JUL													
09...	4	122	136	23.7	.65	3.48	298	.87	.34	637	598	E1	171
AUG													
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
10...	7	453	355	47.2	1.09	.48	1440	3.62	.79	2660	2410	E1	112

## CHEYENNE RIVER BASIN

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 10...	10	11.7
NOV 14...	<10	17.6
DEC 06...	<10	43.0
JAN 08...	12	103
FEB 12...	<10	44.8
MAR 13...	E6	56.8
APR 09...	12	169
MAY 07...	<10	112
JUN 11...	E7	66.7
JUL 09...	15	17.6
AUG 13...	--	--
SEP 10...	<30	252

E -- Estimated value  
M -- Presence verified, not quantified

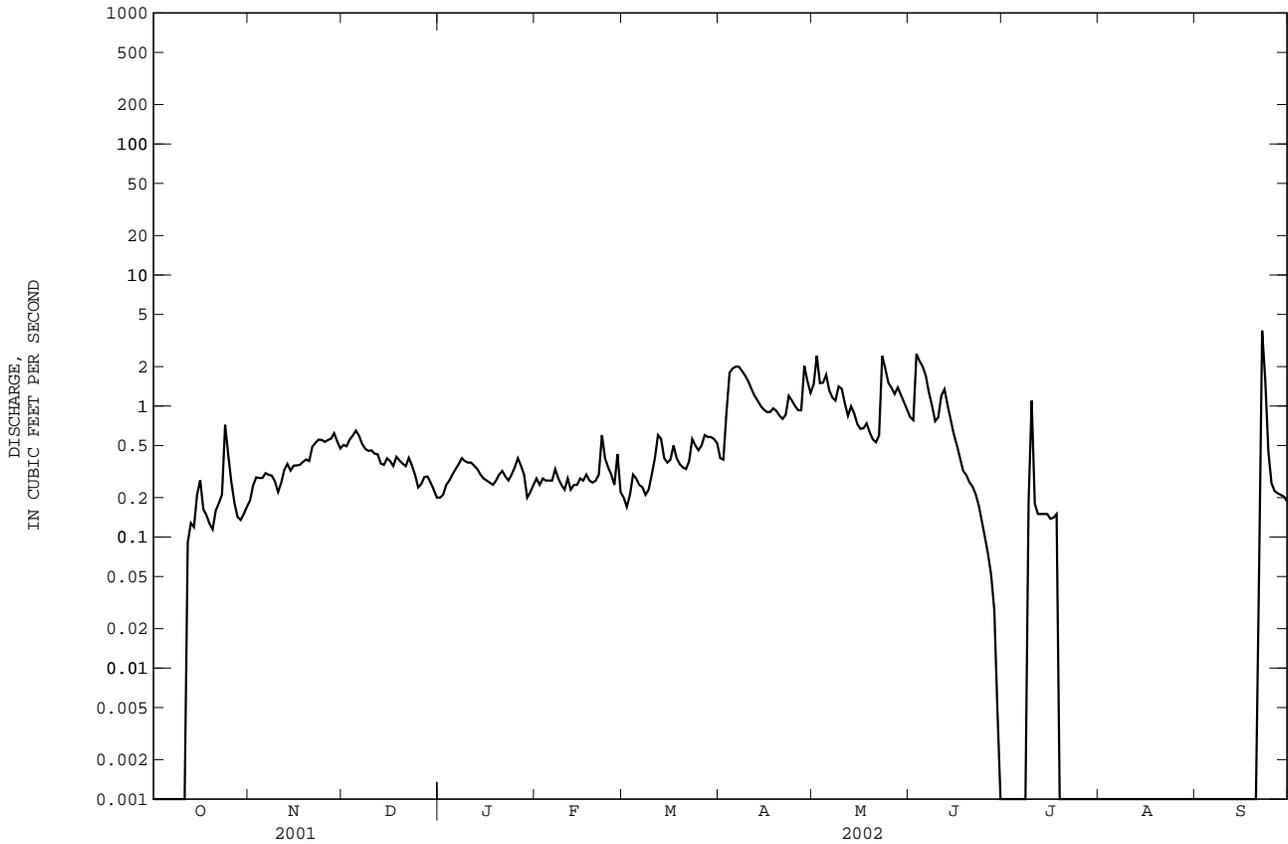


CHEYENNE RIVER BASIN

06426130 DONKEY CREEK NEAR GILLETTE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL TOTAL	974.81		162.05		--	
ANNUAL MEAN	2.671		0.444		1.570	
HIGHEST ANNUAL MEAN	--		--		2.70 2001	
LOWEST ANNUAL MEAN	--		--		0.44 2002	
HIGHEST DAILY MEAN	442	May 29	3.8	Sep 22	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 17	0.00	Oct 1	0.00	Most years
MAXIMUM PEAK FLOW	--		6.1 Sep 22		3400 <sup>a</sup> May 28 2001	
MAXIMUM PEAK STAGE	--		2.12 Sep 22		10.89 <sup>b</sup> May 28 2001	
ANNUAL RUNOFF (AC-FT)	1930		321		1140	
10 PERCENT EXCEEDS	3.4		1.2		1.7	
50 PERCENT EXCEEDS	0.38		0.29		0.33	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

- a From rating curve extended above 150 ft<sup>3</sup>/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 NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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.--14.5 mi<sup>2</sup>.

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 fair except those for October 1 to November 21 and those for estimated daily discharges, which are poor. Natural flow of stream affected by City of Gillette Wastewater Treatment Facility.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.8	3.5	3.0	e2.6	3.3	e3.8	7.2	2.9	2.7	3.3	3.1
2	2.2	2.9	3.2	2.8	e2.5	3.2	e3.4	4.2	4.0	2.6	3.2	3.5
3	1.8	2.6	2.8	3.0	e2.6	3.5	e3.7	2.9	8.3	2.4	3.0	3.6
4	3.4	2.6	3.3	3.2	e2.6	3.3	e4.7	4.7	3.9	2.0	3.1	3.4
5	4.0	2.8	3.2	2.7	e2.5	3.4	e4.3	3.1	3.3	2.3	3.5	3.4
6	2.5	2.7	3.1	3.3	e2.4	3.5	e4.0	3.0	3.6	1.9	3.4	2.9
7	2.5	2.8	2.8	2.8	e2.6	3.9	4.6	2.8	3.2	2.4	3.7	2.9
8	2.4	2.8	2.8	3.1	e2.9	3.3	3.5	4.5	2.6	12	6.1	3.6
9	2.3	2.7	3.1	2.9	e3.4	1.9	3.6	3.0	2.9	2.9	4.0	3.5
10	2.4	2.7	2.8	2.9	e3.0	e2.2	2.7	3.0	5.2	1.9	3.2	3.6
11	2.4	3.0	3.5	3.0	e2.7	e2.5	3.3	2.9	3.1	3.7	4.2	2.6
12	3.7	3.1	3.4	2.9	e2.9	e3.0	3.0	3.3	3.0	6.5	4.0	2.4
13	2.7	3.0	2.7	3.2	e2.8	e3.6	3.4	2.9	2.9	5.6	4.7	2.9
14	2.8	3.2	2.6	2.8	e2.7	e4.5	3.3	2.8	2.8	6.4	4.5	2.4
15	2.3	3.5	2.8	2.9	e2.8	e3.9	3.4	2.8	2.6	6.2	4.7	3.4
16	2.1	3.3	2.8	3.0	e2.8	e3.3	3.3	3.4	2.3	6.0	3.5	2.9
17	2.2	2.8	2.9	3.0	e2.9	e3.3	3.6	3.5	2.8	6.8	3.7	2.5
18	3.2	3.0	2.9	2.8	e2.7	e3.4	3.8	3.0	2.4	6.3	3.8	4.9
19	2.9	3.5	3.1	3.0	e2.9	e3.2	3.3	2.9	2.5	7.7	4.0	5.1
20	2.6	3.3	2.8	3.1	e2.9	e3.4	3.6	3.1	2.3	e6.2	3.8	2.9
21	2.6	3.0	2.8	2.9	e2.7	e3.2	5.1	2.9	3.5	e5.0	3.7	14
22	2.7	2.8	3.1	2.9	e2.8	e3.0	4.2	8.7	2.7	e5.6	2.4	5.1
23	2.6	3.0	2.9	3.1	e3.0	e3.3	3.5	4.9	3.4	e4.5	3.5	3.1
24	2.8	2.4	2.7	2.6	e2.8	e3.5	3.1	3.1	2.5	e4.2	4.9	3.4
25	3.0	3.0	2.2	2.9	e3.0	e3.3	3.0	2.9	2.4	e4.7	5.2	2.9
26	2.7	2.7	2.6	2.4	e3.1	e3.3	2.9	2.3	2.2	3.6	4.6	2.3
27	2.5	2.8	2.8	2.8	3.8	e3.4	7.1	4.4	2.4	2.6	13	2.3
28	2.9	2.7	2.7	3.0	3.2	e3.6	4.0	3.4	2.3	2.7	7.4	2.5
29	2.7	2.4	2.9	2.7	---	e3.5	3.5	3.2	2.4	3.0	4.3	2.1
30	3.0	2.7	2.8	2.0	---	e3.4	2.8	2.8	2.2	2.6	4.7	2.4
31	2.4	---	2.9	e2.4	---	e3.7	---	3.1	---	3.1	3.4	---
TOTAL	82.7	86.6	90.5	89.1	79.6	102.8	111.5	110.7	92.6	136.1	134.5	105.6
MEAN	2.668	2.887	2.919	2.874	2.843	3.316	3.717	3.571	3.087	4.390	4.339	3.520
MAX	4.0	3.5	3.5	3.3	3.8	4.5	7.1	8.7	8.3	12	13	14
MIN	1.8	2.4	2.2	2.0	2.4	1.9	2.7	2.3	2.2	1.9	2.4	2.1
AC-FT	164	172	180	177	158	204	221	220	184	270	267	209

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

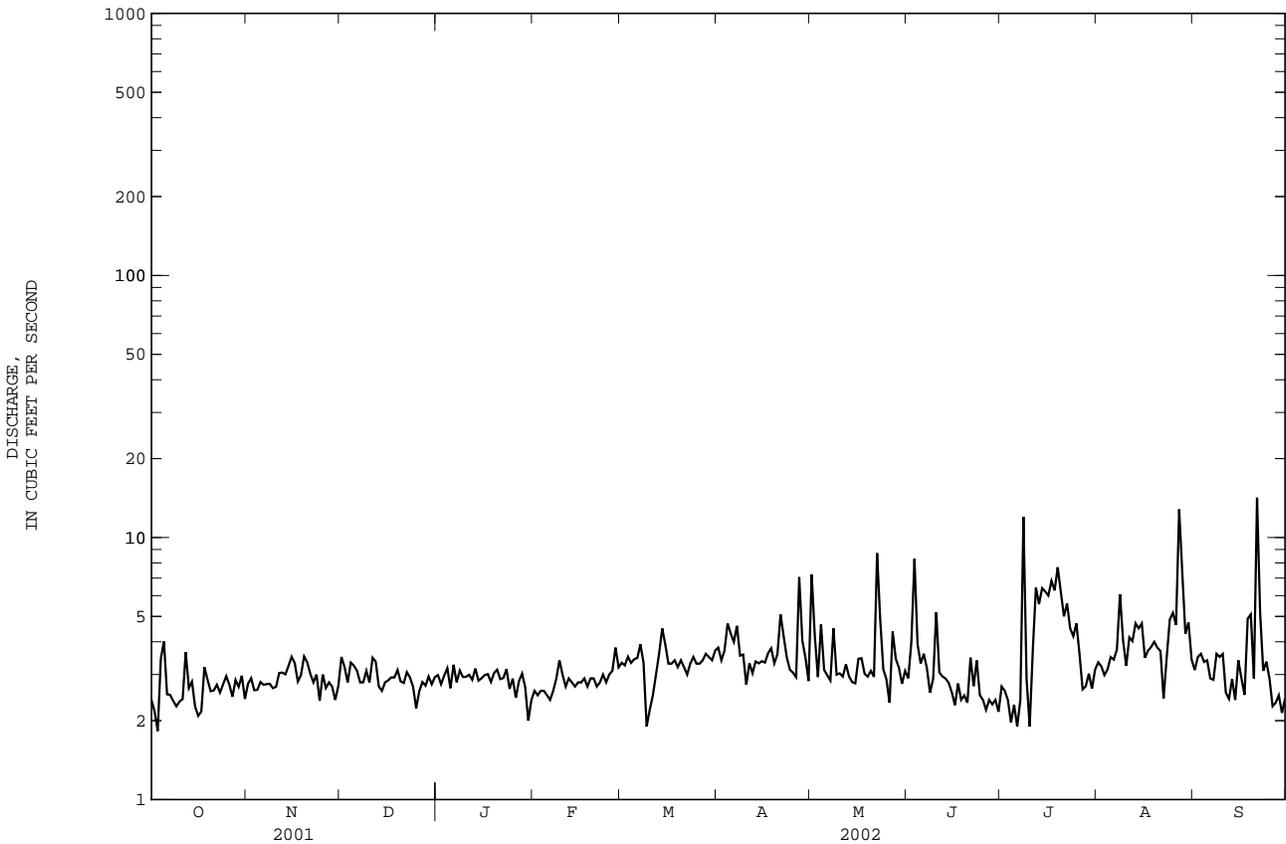
	2000	2001	2002
MEAN	2.768	3.078	3.124
MAX	2.96	3.29	3.33
(WY)	2001	2001	2001
MIN	2.57	2.86	2.92
(WY)	2002	2002	2002

CHEYENNE RIVER BASIN

06426160 STONEPILE CREEK AT MOUTH NEAR GILLETTE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL TOTAL	1518.4		1222.3		--	
ANNUAL MEAN	4.160		3.349		3.796	
HIGHEST ANNUAL MEAN	--		--		4.25 2001	
LOWEST ANNUAL MEAN	--		--		3.34 2002	
HIGHEST DAILY MEAN	192	May 29	14	Sep 21	192	May 29 2001
LOWEST DAILY MEAN	1.2	Sep 14	1.8	Oct 3	1.2	Sep 14 2001
ANNUAL SEVEN-DAY MINIMUM	1.7	Sep 10	2.3	Jun 30	1.7	Sep 10 2001
MAXIMUM PEAK FLOW	--		43	Jul 8	800 <sup>a</sup>	May 28 2001
MAXIMUM PEAK STAGE	--		2.50	Jul 8	9.14 <sup>b</sup>	May 28 2001
ANNUAL RUNOFF (AC-FT)	3010		2420		2750	
10 PERCENT EXCEEDS	5.0		4.5		4.8	
50 PERCENT EXCEEDS	3.0		3.0		3.1	
90 PERCENT EXCEEDS	2.4		2.4		2.4	

a From rating curve extended above 39 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.  
 b From floodmarks.  
 e Estimated.



CHEYENNE RIVER BASIN

299

06426400 DONKEY CREEK NEAR MOORCROFT, WY

LOCATION.--Lat 44°16'58", long 105°03'48", in SE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
10...	1130	1.6	659	10.2	99	8.1	2500	8.5	7.5	650	109	91.4	14.7
NOV													
14...	1025	2.3	656	12.6	102	8.2	2540	14.5	.5	760	122	109	13.3
DEC													
06...	0925	3.7	655	13.4	108	8.2	2810	4.0	.0	870	141	125	16.5
JAN													
08...	0950	1.4	653	7.2	58	7.7	2840	7.5	.0	780	140	104	17.2
FEB													
12...	1240	2.7	663	5.6	44	7.5	2600	1.0	.0	660	116	90.0	15.0
MAR													
12...	1305	3.2	--	--	--	7.7	2880	11.0	.0	930	165	125	14.8
APR													
09...	0945	8.2	656	11.9	98	8.2	2130	7.0	1.0	670	119	91.7	10.7
MAY													
07...	0930	.97	652	14.8	150	9.0	2930	2.0	8.5	1000	141	167	13.2
JUN													
10...	2010	3.2	653	7.3	96	8.2	2820	18.0	20.5	1100	177	155	15.2
JUL													
10...	0720	3.8	667	3.3	40	7.9	2410	21.0	18.0	700	106	105	14.1
AUG													
13...	0940	1.4	660	7.5	86	8.3	4540	21.5	14.0	880	108	147	17.1
SEP													
10...	1105	1.7	662	9.5	112	8.2	2010	22.0	16.0	550	105	69.8	14.2
Date		SODIUM AD-SORPTION RATIO (00931)	ALKA-LINITY WAT. DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
OCT													
10...	5	276	286	246	1.2	1.28	711	2.40	7.64	1770	1620	E2	30.8
NOV													
14...	5	306	324	220	1.4	.39	815	2.63	12.0	1940	1780	2	23.7
DEC													
06...	5	316	383	209	1.5	5.59	917	2.98	21.9	2190	1960	3	30.3
JAN													
08...	5	337	462	233	1.4	12.9	767	2.77	7.71	2040	1890	3	32.8
FEB													
12...	5	309	414	228	1.8	12.1	645	2.44	13.1	1790	1670	3	28.8
MAR													
12...	4	301	318	270	1.1	10.6	934	3.08	19.6	2260	2010	E2	33.9
APR													
09...	4	219	249	163	.9	6.26	692	2.08	33.9	1530	1450	E2	32.5
MAY													
07...	4	286	252	115	1.1	5.95	1310	3.35	6.44	2460	2190	4	35.8
JUN													
10...	4	271	392	129	1.2	5.51	1090	3.22	20.5	2370	2080	4	58.5
JUL													
10...	5	281	310	187	1.1	1.40	752	2.34	17.7	1720	1630	5	41.8
AUG													
13...	12	798	626	91.7	1.5	5.48	1940	5.04	14.0	3710	3490	8	47.8
SEP													
10...	4	225	265	176	1.1	1.12	529	1.94	6.56	1430	1280	E1	45.1

## CHEYENNE RIVER BASIN

06426400 DONKEY CREEK NEAR MOORCROFT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT		
10...	E7	216
NOV		
14...	11	108
DEC		
06...	E17	127
JAN		
08...	30	232
FEB		
12...	E29	196
MAR		
12...	41	344
APR		
09...	14	420
MAY		
07...	E23	233
JUN		
10...	<30	355
JUL		
10...	<30	200
AUG		
13...	178	297
SEP		
10...	10	274

E -- Estimated value

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY

LOCATION.--Lat 44°19'19", long 104°56'24", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	8.0	e5.6	e1.5	e2.6	e5.8	e90	16	38	9.5	0.64	42
2	2.7	7.5	e6.5	e1.0	e2.8	e5.8	e110	17	39	8.4	0.36	23
3	1.8	7.4	e7.5	e1.0	e3.0	e5.2	e90	22	60	7.4	0.35	11
4	1.7	8.0	e9.0	e1.1	e3.2	e5.0	e85	17	90	6.4	0.20	5.8
5	2.3	7.8	e8.5	e1.2	e3.6	e5.0	e80	17	36	5.9	0.18	3.7
6	1.4	7.3	e8.0	e1.4	e3.9	e5.4	e90	14	22	5.6	0.25	2.7
7	1.3	7.2	e7.5	e1.6	e4.2	e6.4	e100	11	18	4.5	0.52	2.7
8	1.5	7.3	e7.0	e1.9	e4.5	e6.8	e70	9.9	17	2.4	1.3	2.3
9	1.9	7.0	e7.5	e2.4	e4.0	e6.6	e50	17	18	0.95	72	2.5
10	3.0	6.6	e8.0	e2.7	e3.8	e5.0	e40	14	25	0.03	112	2.4
11	4.1	7.1	e7.2	e3.0	e3.9	e5.3	e30	12	20	2.6	22	2.4
12	4.3	6.3	e6.5	e3.2	e4.0	e5.6	26	13	30	6.9	8.6	2.1
13	4.9	6.3	e8.0	e3.4	e4.6	e8.0	25	13	19	4.1	5.0	2.0
14	5.5	6.3	e7.0	e3.5	e5.0	e7.0	25	15	14	3.2	3.0	1.9
15	6.0	6.4	e7.0	e3.4	e5.2	e6.5	24	22	15	4.9	1.9	1.8
16	5.9	6.0	e8.0	e3.2	e5.0	e6.0	20	26	15	6.0	3.0	2.3
17	5.3	5.9	e7.0	e3.0	e4.8	e6.0	19	29	15	3.9	2.2	2.4
18	5.4	5.8	e6.5	e2.8	e4.8	e7.0	19	31	15	2.9	1.6	2.3
19	5.3	5.3	e6.5	e2.5	e5.0	e7.0	19	29	15	2.9	0.91	2.3
20	5.5	5.8	e6.0	e2.3	e5.4	e8.0	16	27	14	2.7	0.82	2.3
21	5.6	5.6	e6.0	e2.3	e6.0	e10	16	27	14	2.9	0.73	2.6
22	5.8	e5.4	e6.0	e2.7	e6.6	e20	16	29	14	2.8	0.73	2.8
23	6.1	e5.2	e5.0	e2.9	e6.8	e17	15	35	15	2.9	1.4	3.6
24	7.2	e5.0	e4.0	e3.0	e6.6	e15	14	35	15	3.0	2.4	12
25	8.6	e4.8	e4.5	e2.8	e6.0	e17	14	32	13	3.5	16	6.3
26	8.6	e4.6	e5.0	e2.6	e5.6	e20	14	31	12	3.7	6.1	7.2
27	8.8	e4.4	e6.0	e2.5	e5.2	e25	15	37	11	2.4	3.6	6.4
28	8.2	e4.0	e5.0	e2.4	e5.4	e30	15	37	11	1.4	3.4	5.8
29	8.3	e4.5	e4.0	e2.4	---	e40	14	34	11	1.1	7.7	6.3
30	8.1	e5.0	e3.0	e2.4	---	e50	15	36	11	1.1	81	6.6
31	8.2	---	e2.0	e2.5	---	e70	---	37	---	0.91	126	---
TOTAL	155.5	183.8	195.3	74.6	131.5	437.4	1176	741.9	662	116.89	485.89	179.5
MEAN	5.016	6.127	6.300	2.406	4.696	14.11	39.20	23.93	22.07	3.771	15.67	5.983
MAX	8.8	8.0	9.0	3.5	6.8	70	110	37	90	9.5	126	42
MIN	1.3	4.0	2.0	1.0	2.6	5.0	14	9.9	11	0.03	0.18	1.8
AC-FT	308	365	387	148	261	868	2330	1470	1310	232	964	356

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2002, BY WATER YEAR (WY)

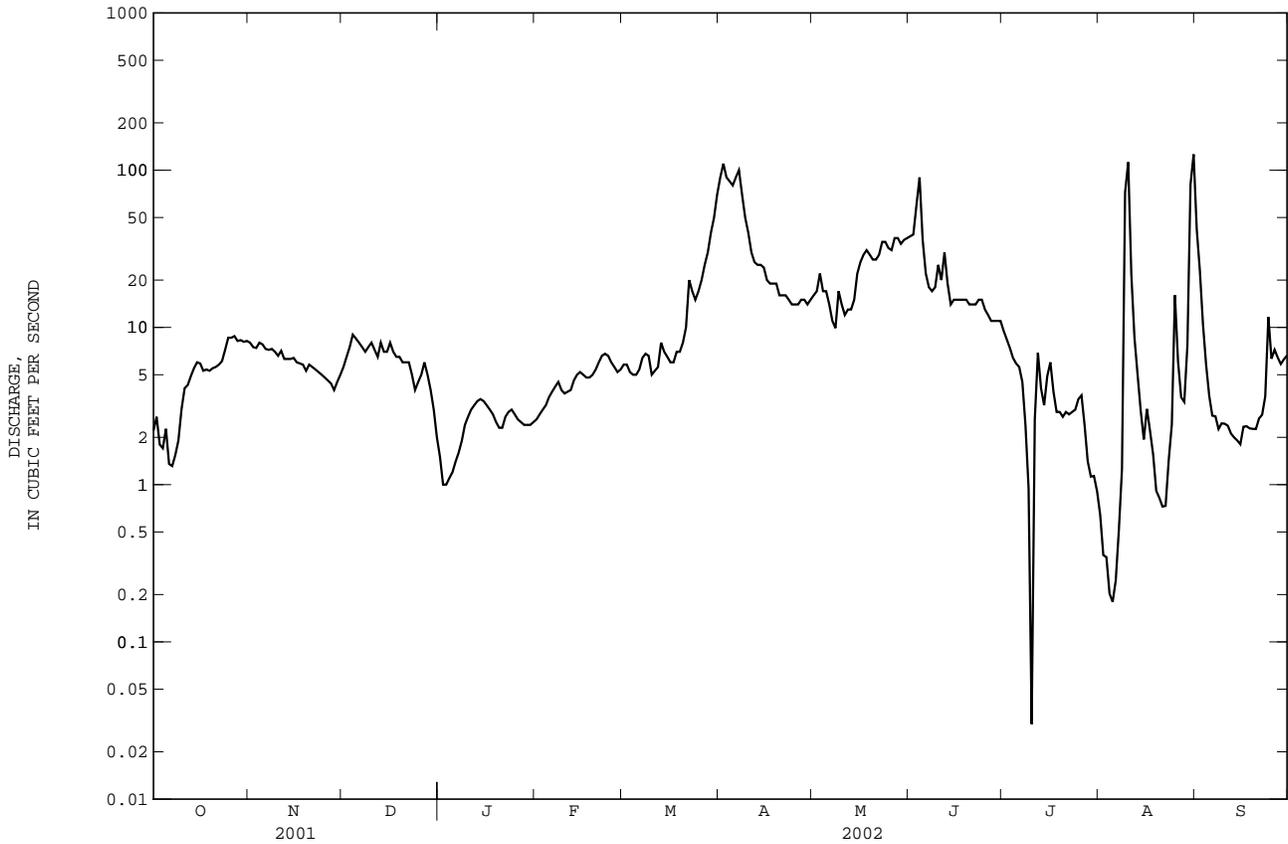
	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944	1944
MEAN	5.701	2.394	2.391	3.535	17.87	58.33	27.48	67.20	61.26	19.23	10.52	5.323
MAX	68.0	23.1	22.3	53.5	260	374	190	1057	509	72.5	57.3	63.5
(WY)	1995	1999	1956	1997	1962	1978	1944	1978	1964	1948	1993	1951
MIN	0.000	0.000	0.000	0.000	0.000	0.10	0.000	0.045	0.097	0.000	0.000	0.000
(WY)	1944	1944	1944	1944	1944	1951	1961	1958	1966	1954	1944	1944

CHEYENNE RIVER BASIN

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1944 - 2002	
ANNUAL TOTAL	4516.1		4540.28		--	
ANNUAL MEAN	12.37		12.44		23.47	
HIGHEST ANNUAL MEAN	--		--		136 1978	
LOWEST ANNUAL MEAN	--		--		1.14 1961	
HIGHEST DAILY MEAN	141	Apr 8	126	Aug 31	10300	May 19 1978
LOWEST DAILY MEAN	1.3	Sep 29, Oct 7	0.03	Jul 10	0.00 Several days, most years	
ANNUAL SEVEN-DAY MINIMUM	1.7	Oct 3	0.36	Aug 1	0.00 Most years	
MAXIMUM PEAK FLOW	--		223 Aug 31		15300 <sup>a</sup> May 19 1978	
MAXIMUM PEAK STAGE	--		5.92 Aug 31		14.60 <sup>b</sup> May 19 1978	
ANNUAL RUNOFF (AC-FT)	8960		9010		17000	
10 PERCENT EXCEEDS	28		29		35	
50 PERCENT EXCEEDS	5.8		6.0		1.7	
90 PERCENT EXCEEDS	2.4		1.9		0.00	

a From rating curve extended above 11,000 ft<sup>3</sup>/s, site and datum then in use.  
 b 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE AIR (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT														
10...	1000	3.0	661	7.8	75	8.4	2120	10.5	7.0	350	49.0	54.0	12.8	
NOV														
14...	0810	5.8	656	10.4	83	8.3	2340	-3.0	.0	570	91.1	83.3	12.2	
DEC														
06...	0750	8.0	655	13.4	108	8.2	2680	-9.0	.0	750	126	106	14.7	
JAN														
08...	0850	1.9	654	8.9	72	7.7	3720	-3.0	.0	1000	178	138	19.3	
FEB														
12...	1055	4.0	665	7.2	57	7.9	2320	2.5	.0	590	108	78.1	12.9	
MAR														
12...	1110	5.6	--	--	--	7.8	2130	9.0	.0	590	107	79.1	12.5	
APR														
09...	0820	13	658	10.5	84	8.3	1380	4.0	.0	400	71.1	52.9	7.36	
MAY														
07...	0800	12	655	11.0	113	8.8	2150	1.5	9.5	610	80.9	98.3	12.3	
JUN														
10...	1920	28	654	8.1	103	8.1	2250	18.0	19.0	690	120	95.4	13.2	
JUL														
11...	0740	.21	666	3.9	47	8.2	2950	19.0	17.0	660	87.5	107	15.1	
AUG														
13...	0800	5.6	662	6.5	72	7.8	594	10.5	13.5	180	40.8	18.9	10.2	
SEP														
10...	1005	2.5	665	7.5	87	8.4	1490	17.5	15.5	370	70.9	46.7	12.3	
Date		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT														
10...	8	348	404	114	1.0	.18	565	1.90	11.3	1400	1390	--	--	
NOV														
14...	6	318	365	122	1.0	.21	793	2.40	27.6	1760	1650	E.02	--	
DEC														
06...	5	341	419	112	1.2	1.92	978	2.82	44.8	2070	1930	--	--	
JAN														
08...	7	527	714	167	1.5	6.81	1250	3.90	14.7	2860	2720	--	--	
FEB														
12...	5	302	469	103	1.3	7.07	688	2.27	18.1	1670	1600	.74	--	
MAR														
12...	5	265	382	93.8	1.0	6.03	694	2.13	23.7	1570	1490	--	--	
APR														
09...	3	146	199	60.7	.6	3.35	442	1.26	32.6	929	903	--	--	
MAY														
07...	4	246	199	79.3	.8	1.86	877	2.25	53.6	1650	1520	<.04	--	
JUN														
10...	4	244	326	72.3	1.0	3.66	841	2.37	132	1750	1590	--	--	
JUL														
11...	7	442	340	103	.9	.85	1140	2.98	1.24	2190	2100	--	--	
AUG														
13...	2	50.2	125	14.8	.5	5.02	160	.52	5.78	382	376	.14	.70	
SEP														
10...	4	183	239	76.1	.7	2.49	439	1.43	7.08	1050	974	--	--	

## CHEYENNE RIVER BASIN

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT												
10...	--	--	--	--	--	--	--	--	E1	46.4	<10	E3.1
NOV												
14...	--	1.21	.022	--	.06	--	300	340	<4	47.2	<10	31.4
DEC												
06...	--	--	--	--	--	--	--	--	2	49.3	<30	43.3
JAN												
08...	--	--	--	--	--	--	--	--	3	65.2	<30	82.5
FEB												
12...	--	3.40	.018	--	.56	--	E17k	E14k	<2	49.5	12	43.7
MAR												
12...	--	--	--	--	--	--	--	--	E1	46.0	12	41.9
APR												
09...	--	--	--	--	--	--	--	--	<2	32.6	E10	129
MAY												
07...	--	<.05	E.005	--	<.02	--	170	120	2	31.7	E15	28.6
JUN												
10...	--	--	--	--	--	--	--	--	E2	138	<30	96.0
JUL												
11...	--	--	--	--	--	--	--	--	2	115	<30	164
AUG												
13...	2.2	.16	.023	.019	<.02	.57	E1000k	800	E1	167	12	6.6
SEP												
10...	--	--	--	--	--	--	--	--	<2	105	E6	5.0

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

06428050 BELLE FOURCHE RIVER BELOW HULETT, WY

LOCATION.--Lat 44°42'04", long 104°35'07", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT													
10...	0750	9.3	668	9.3	89	7.8	2080	5.5	7.5	1100	303	77.8	8.87
NOV													
13...	1640	13	664	12.7	118	8.0	1900	6.0	6.0	970	270	71.3	7.32
DEC													
05...	1545	20	661	14.8	118	7.9	1970	-4.0	.0	980	276	70.4	6.93
JAN													
07...	1635	8.6	666	11.2	88	7.5	2290	8.5	.0	1200	343	84.0	8.56
FEB													
12...	0810	15	675	9.0	70	7.6	1930	-6.0	.0	1000	293	68.3	6.61
MAR													
12...	0845	12	--	--	--	7.6	1840	4.0	.0	920	263	62.9	6.29
APR													
08...	1745	39	666	12.6	130	8.1	1470	8.0	10.5	690	191	50.4	5.98
MAY													
06...	1755	18	666	13.1	148	8.2	1920	14.0	14.5	970	267	74.1	8.08
JUN													
10...	1655	123	662	10.4	133	8.3	1590	24.0	20.0	440	89.5	53.5	10.9
JUL													
10...	0905	173	678	7.3	91	8.2	1650	20.0	20.0	470	89.5	60.4	11.4
AUG													
12...	1725	150	671	9.2	117	8.2	1680	20.0	20.5	450	88.0	55.7	13.5
SEP													
10...	0815	129	675	7.8	90	8.3	1640	16.5	16.0	450	90.5	55.4	11.8

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT. DIS-FET LAB CAC03 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT													
10...	1	80.0	190	20.7	.5	9.92	1050	2.39	44.1	1760	1660	--	--
NOV													
13...	1	87.6	204	15.4	.4	10.1	942	2.25	58.1	1660	1530	.06	.09
DEC													
05...	1	89.9	220	23.3	.5	11.4	970	2.33	92.7	1720	1580	--	--
JAN													
07...	1	89.0	276	23.5	.5	15.0	1140	2.83	48.4	2080	1870	--	--
FEB													
12...	1	76.7	244	17.5	.6	13.2	925	2.29	68.2	1680	1550	.20	.25
MAR													
12...	1	77.0	230	13.7	.4	11.1	905	2.21	52.6	1620	1480	--	--
APR													
08...	1	62.2	143	10.1	.3	5.96	666	1.62	125	1190	1080	--	--
MAY													
06...	1	79.1	160	12.0	.3	5.92	978	2.26	80.8	1660	1520	.04	<.05
JUN													
10...	4	172	203	39.2	.7	1.88	596	1.59	389	1170	1090	--	--
JUL													
10...	4	196	208	41.1	.7	.99	596	1.61	552	1180	1120	--	--
AUG													
12...	4	188	207	42.8	.7	1.74	627	1.65	490	1210	1140	<.04	<.05
SEP													
10...	4	179	193	41.7	.7	.92	613	1.67	427	1230	1110	--	--

## CHEYENNE RIVER BASIN

06428050 BELLE FOURCHE RIVER BELOW HULETT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	E COLI, MTEC MF (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT								
10...	--	--	--	--	<2	30.8	E8	13.6
NOV								
13...	<.008	<.02	E5k	E8k	<4	22.5	E10	11.1
DEC								
05...	--	--	--	--	<2	20.1	E6	14.1
JAN								
07...	--	--	--	--	<2	21.8	<10	30.6
FEB								
12...	<.008	.03	20	E15k	<2	18.3	E9	26.5
MAR								
12...	--	--	--	--	<2	16.5	E6	20.3
APR								
08...	--	--	--	--	<2	18.4	15	36.6
MAY								
06...	<.008	<.02	E18k	E21k	E2	28.2	10	36.9
JUN								
10...	--	--	--	--	<2	63.2	<10	12.0
JUL								
10...	--	--	--	--	<2	76.1	<10	5.9
AUG								
12...	<.008	<.02	1000	1900	E1	74.0	<10	6.3
SEP								
10...	--	--	--	--	<2	68.5	<10	3.7

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

06428200 BELLE FOURCHE RIVER NEAR ALVA, WY

LOCATION.--Lat 44°47'22", long 104°28'51" in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.1, T.55 N., R.64 W., Crook County, Hydrologic Unit 10120201, on right bank 0.3 mi downstream from Beaver Creek and 6.7 miles north of Alva.

DRAINAGE AREA.--2,948 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to 1998, and 2001 (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 3,600 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Major regulation by Keyhole Reservoir. Streamflow also affected by diversions for irrigation and return flow from irrigated areas. Results of discharge measurements, in cubic feet per second, made during period when station was not in operation, are given below:

Oct. 23 . . . 14.8  
Apr. 9 . . . 66.0

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	36	16	155	128	103
2	---	---	---	---	---	---	---	36	16	156	128	100
3	---	---	---	---	---	---	---	32	17	158	129	100
4	---	---	---	---	---	---	---	34	65	160	131	100
5	---	---	---	---	---	---	---	34	116	160	136	99
6	---	---	---	---	---	---	---	31	119	162	137	97
7	---	---	---	---	---	---	---	31	118	173	147	96
8	---	---	---	---	---	---	---	31	120	172	199	96
9	---	---	---	---	---	---	---	29	123	174	170	104
10	---	---	---	---	---	---	---	28	133	173	140	105
11	---	---	---	---	---	---	---	28	128	172	143	99
12	---	---	---	---	---	---	---	28	122	192	135	106
13	---	---	---	---	---	---	---	27	131	194	132	100
14	---	---	---	---	---	---	---	26	134	197	111	90
15	---	---	---	---	---	---	---	24	135	197	106	87
16	---	---	---	---	---	---	---	23	136	196	105	87
17	---	---	---	---	---	---	---	21	136	194	106	85
18	---	---	---	---	---	---	---	20	136	193	108	73
19	---	---	---	---	---	---	---	19	136	200	106	66
20	---	---	---	---	---	---	---	19	135	193	106	54
21	---	---	---	---	---	---	---	18	138	190	108	40
22	---	---	---	---	---	---	---	18	142	195	112	35
23	---	---	---	---	---	---	---	18	138	182	124	36
24	---	---	---	---	---	---	---	20	136	179	111	32
25	---	---	---	---	---	---	---	22	137	175	110	29
26	---	---	---	---	---	---	---	21	136	176	107	27
27	---	---	---	---	---	---	---	21	135	179	107	25
28	---	---	---	---	---	---	---	22	153	166	109	25
29	---	---	---	---	---	---	---	21	155	166	105	23
30	---	---	---	---	---	---	---	19	156	160	103	23
31	---	---	---	---	---	---	---	18	---	157	103	---
TOTAL	---	---	---	---	---	---	---	775	3598	5496	3802	2142
MEAN	---	---	---	---	---	---	---	25.00	119.9	177.3	122.6	71.40
MAX	---	---	---	---	---	---	---	36	156	200	199	106
MIN	---	---	---	---	---	---	---	18	16	155	103	23
AC-FT	---	---	---	---	---	---	---	1540	7140	10900	7540	4250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)\*

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	12.37	---	---	---	---	---	113.8	123.1	101.8	81.87	65.79	31.20	---	---
MAX	14.4	---	---	---	---	---	360	404	204	177	123	71.4	---	---
(WY)	1989	---	---	---	---	---	1997	1995	1993	2002	2002	2002	---	---
MIN	10.3	---	---	---	---	---	8.82	25.0	32.8	40.4	22.2	14.6	---	---
(WY)	1990	---	---	---	---	---	1992	2002	1992	1998	1996	2001	---	---

CHEYENNE RIVER BASIN

06428200 BELLE FOURCHE RIVER NEAR ALVA, WY--Continued

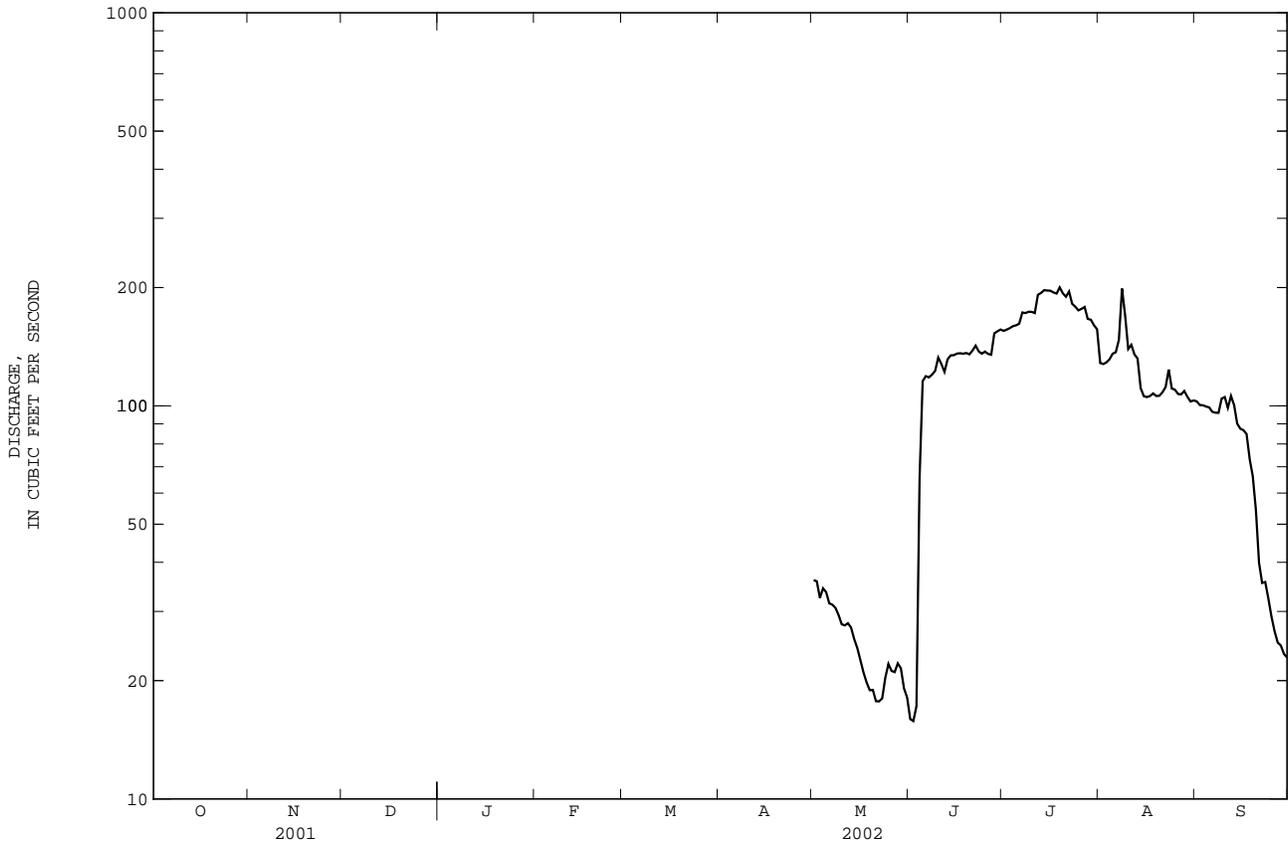
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1989 - 2002\*

HIGHEST DAILY MEAN	200	Jul 19	2000	May 9 1995
LOWEST DAILY MEAN	16	Jun 1,2	3.1	Jun 11 1992
MAXIMUM PEAK FLOW	287	Aug 8	2690 <sup>a</sup>	May 8 1995
MAXIMUM PEAK STAGE	3.23	Aug 8	8.15 <sup>b</sup>	Mar 20 1996

\* For period of operation.  
 a From floodmarks, gage height, 6.76 ft.  
 b From floodmarks, backwater from ice.



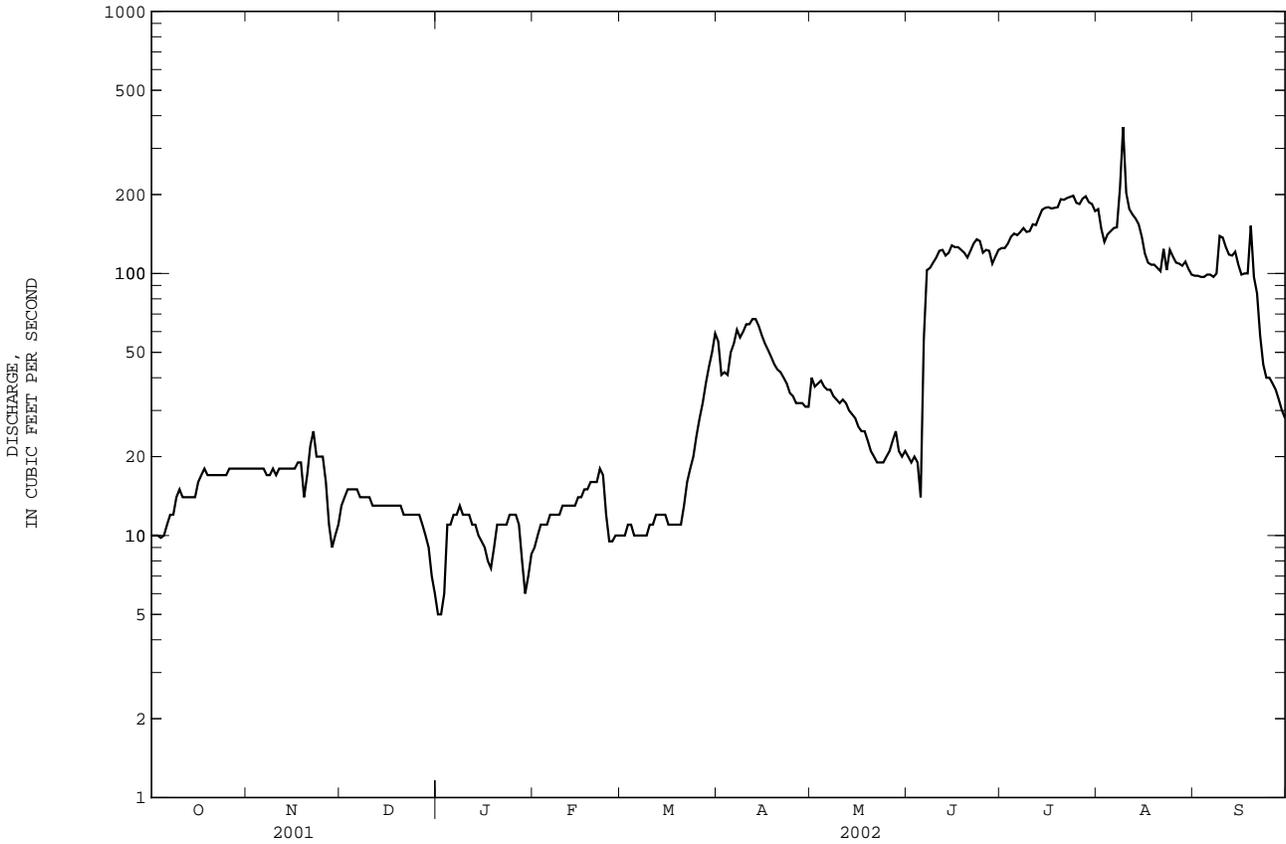


CHEYENNE RIVER BASIN

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1954 - 2002*	
ANNUAL TOTAL	26202.5	20117.3	--	
ANNUAL MEAN	71.79	55.12	88.89	
HIGHEST ANNUAL MEAN	--	--	229	1978
LOWEST ANNUAL MEAN	--	--	7.69	1961
HIGHEST DAILY MEAN	646 Apr 7	362 Aug 9	4760	May 9 1995
LOWEST DAILY MEAN	6.0 <sup>e</sup> Dec 31	5.0 <sup>e</sup> Jan 1,2	0.00 <sup>a</sup>	Jul 30 1954
ANNUAL SEVEN-DAY MINIMUM	9.6 Dec 25	6.9 Dec 28	0.00	Jul 30 1954
MAXIMUM PEAK FLOW	--	708 Aug 9	6320 <sup>b</sup>	May 10 1995
MAXIMUM PEAK STAGE	--	7.72 Aug 9	16.33	May 10 1995
ANNUAL RUNOFF (AC-FT)	51970	39900	64390	
10 PERCENT EXCEEDS	172	144	196	
50 PERCENT EXCEEDS	21	20	37	
90 PERCENT EXCEEDS	12	10	5.0	

\* Regulated period only (1954-2002). 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 NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.3	e5.0	e4.6	e4.8	4.4	4.3	5.1	4.5	4.3	4.3	3.4
2	5.6	5.3	e5.0	e4.9	e4.8	4.5	3.9	4.9	4.5	4.3	4.4	3.4
3	5.5	5.3	e5.0	e4.9	e4.8	4.7	3.9	4.8	4.6	4.3	4.4	3.4
4	5.6	5.3	e5.2	e5.2	e4.8	4.7	4.3	4.8	4.4	4.3	4.5	3.4
5	5.5	5.3	e5.0	e5.0	e4.8	4.7	4.5	4.7	4.4	4.3	4.5	3.4
6	5.5	5.3	e5.0	e4.9	e4.9	4.6	e5.0	4.7	4.3	4.3	4.5	3.4
7	5.4	5.4	e5.0	e4.9	e4.9	4.6	e5.5	4.7	4.5	4.3	4.3	3.5
8	5.3	5.4	e5.0	e4.9	e5.1	4.5	e5.5	4.7	4.6	4.3	4.4	3.6
9	5.4	5.3	e5.2	e5.0	e4.9	4.0	e6.0	4.7	4.6	4.3	4.4	e4.2
10	5.4	5.4	e5.0	e4.9	e4.8	4.7	e6.3	4.7	4.6	4.2	4.3	e3.7
11	5.4	5.3	e5.0	e4.9	e4.9	4.7	e6.5	5.0	4.7	4.3	4.4	e3.4
12	5.5	5.2	e4.8	e4.9	e4.9	4.7	e6.3	4.9	4.7	4.2	4.5	e3.4
13	5.5	5.2	e5.0	e4.9	e4.9	4.7	e6.1	4.9	4.7	4.2	4.4	e3.9
14	5.5	5.2	e5.0	e4.8	4.8	4.6	e6.0	4.8	4.5	4.4	4.4	e3.4
15	5.5	5.1	e5.0	e4.8	4.8	4.5	e6.0	4.9	4.5	4.4	4.4	e3.2
16	5.4	5.1	e5.0	e4.6	4.8	4.5	5.8	5.0	4.5	4.4	4.4	e3.3
17	5.5	5.1	e5.0	e4.7	4.7	4.7	5.6	5.0	4.5	4.4	4.3	e3.1
18	5.5	e5.0	e5.0	e4.7	4.7	4.6	5.5	4.9	4.4	4.4	4.3	e4.8
19	5.5	e4.7	e5.0	e4.8	4.7	4.6	5.4	4.9	4.4	4.5	4.3	e4.0
20	5.5	e4.8	e5.0	e4.8	4.7	4.6	5.4	4.9	4.5	4.5	4.3	e3.9
21	5.5	e5.2	e4.9	e4.9	4.7	4.5	5.3	4.8	4.5	4.9	4.5	3.8
22	5.5	e5.2	e4.9	e4.9	4.7	4.6	5.2	5.0	4.4	4.5	4.0	3.7
23	5.5	e5.1	e4.9	e4.9	4.7	4.6	5.1	4.8	4.3	4.5	3.9	3.7
24	5.5	e5.1	e4.9	e4.6	4.7	4.6	5.1	4.8	4.3	4.5	3.7	3.8
25	5.3	e5.0	e4.9	e4.8	3.6	4.6	5.1	4.7	4.3	4.4	3.6	4.0
26	5.3	e5.0	e4.9	e4.9	e6.0	4.5	5.1	4.7	4.2	4.4	3.6	3.9
27	5.3	e5.0	e5.0	e5.2	5.2	4.4	5.2	4.7	4.4	4.4	3.6	4.0
28	5.3	e4.5	e4.9	e4.9	4.8	4.3	5.1	4.6	4.3	4.4	3.5	4.0
29	5.3	e5.0	e4.9	e4.7	---	4.3	4.9	4.6	4.3	4.4	3.5	4.0
30	5.3	e5.0	e4.8	e4.7	---	4.3	5.0	4.5	4.3	4.2	3.4	3.9
31	5.4	---	e4.6	e4.8	---	4.3	---	4.5	---	4.2	3.4	---
TOTAL	168.8	154.1	153.8	150.4	134.9	140.6	158.9	148.7	133.7	135.4	128.4	110.6
MEAN	5.445	5.137	4.961	4.852	4.818	4.535	5.297	4.797	4.457	4.368	4.142	3.687
MAX	5.6	5.4	5.2	5.2	6.0	4.7	6.5	5.1	4.7	4.9	4.5	4.8
MIN	5.3	4.5	4.6	4.6	3.6	4.0	3.9	4.5	4.2	4.2	3.4	3.1
AC-FT	335	306	305	298	268	279	315	295	265	269	255	219

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

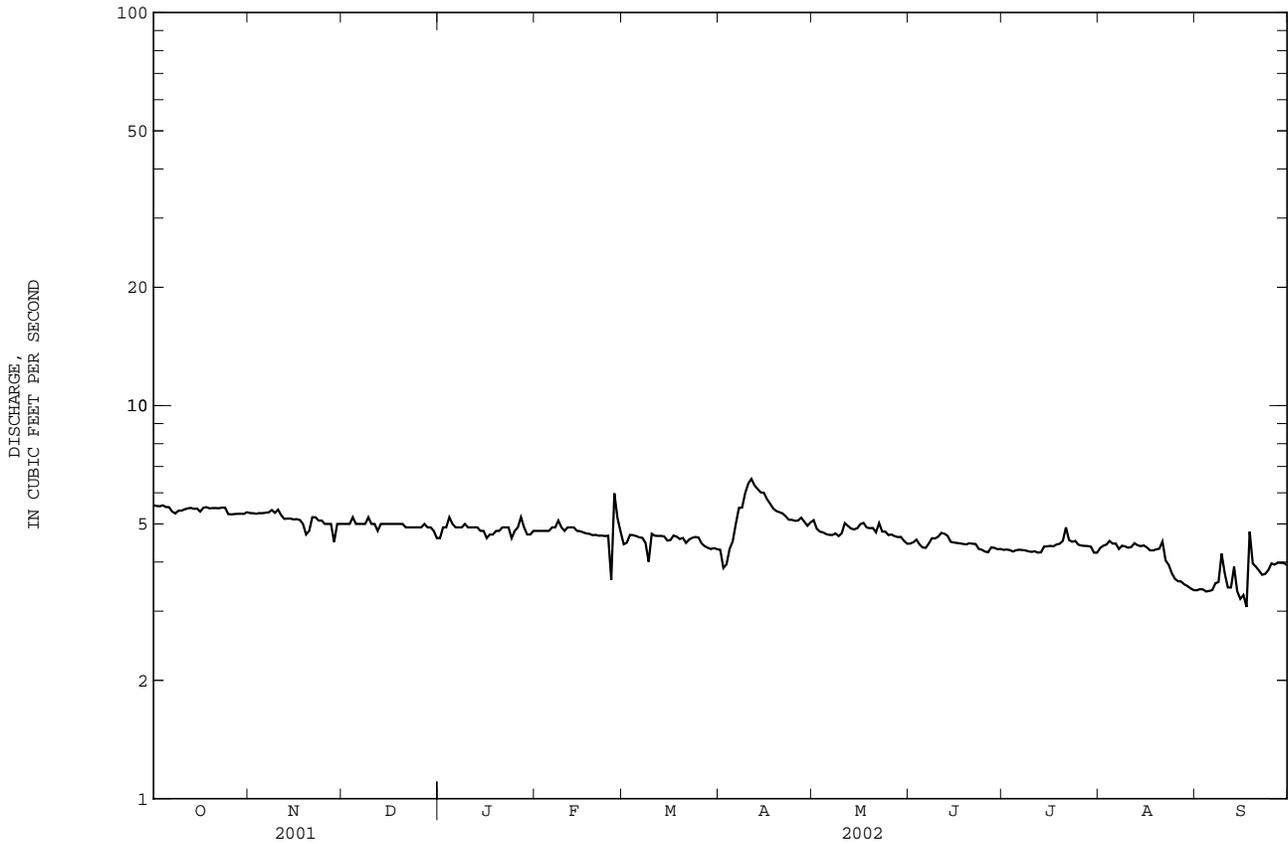
	1975	1993	1993	1994	1993	1993	1993	1993	1994	1995	1995	1994
MEAN	4.607	4.399	4.274	4.231	4.412	4.762	5.093	4.878	4.927	4.764	4.819	4.752
MAX	7.00	7.15	7.04	7.01	6.75	8.03	7.43	7.29	7.77	7.58	7.28	7.14
(WY)	2000	2000	2000	2000	2000	1999	1999	1999	1999	1999	1999	1999
MIN	2.53	2.09	2.06	2.50	2.61	2.91	3.07	3.10	3.19	2.62	2.71	2.92
(WY)	1975	1993	1993	1994	1993	1993	1993	1993	1994	1995	1995	1994

CHEYENNE RIVER BASIN

06429500 COLD SPRINGS CREEK AT BUCKHORN, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1975 - 2002	
ANNUAL TOTAL	2006.9	1718.3	--	
ANNUAL MEAN	5.498	4.708	4.686	
HIGHEST ANNUAL MEAN	--	--	7.06 1999	
LOWEST ANNUAL MEAN	--	--	2.92 1993	
HIGHEST DAILY MEAN	6.8 Apr 6	6.5 Apr 11	22 Mar 26 1999	
LOWEST DAILY MEAN	3.7 <sup>e</sup> Jan 1,7	3.1 <sup>e</sup> Sep 17	0.30 Dec 20 1996	
ANNUAL SEVEN-DAY MINIMUM	3.9 Jan 6	3.4 Sep 11	0.75 Dec 18 1996	
MAXIMUM PEAK FLOW	--	7.4 <sup>a</sup> Mar 3	42 <sup>b</sup> Mar 26 1999	
MAXIMUM PEAK STAGE	--	3.87 <sup>c</sup> Apr 10	8.61 <sup>d</sup> Jan 12 1978	
ANNUAL RUNOFF (AC-FT)	3980	3410	3390	
10 PERCENT EXCEEDS	6.0	5.4	6.6	
50 PERCENT EXCEEDS	5.7	4.7	4.6	
90 PERCENT EXCEEDS	4.8	4.0	3.0	

- a Gage height, 2.37 ft, may have been greater during periods of estimated daily discharges.
- 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 SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	23	23	21	20	21	23	22	19	20	19	20
2	23	23	23	21	21	21	24	21	20	20	20	20
3	23	23	23	21	21	21	24	20	20	20	20	20
4	23	23	23	21	20	21	23	20	20	20	20	20
5	23	23	23	21	20	22	23	20	20	20	20	21
6	23	23	23	21	20	22	23	20	20	20	20	21
7	23	23	22	21	20	22	24	20	19	20	20	21
8	23	23	22	21	20	22	23	20	20	19	21	21
9	25	23	22	20	21	22	21	20	20	19	20	24
10	24	23	22	20	20	22	21	20	20	20	20	23
11	24	23	23	20	20	22	21	21	20	20	20	22
12	24	23	22	20	20	23	20	20	20	21	20	22
13	24	24	22	21	20	22	20	20	20	20	20	23
14	24	23	23	20	20	23	20	20	20	18	20	23
15	23	23	22	21	20	22	20	20	20	18	20	22
16	23	23	22	20	20	22	21	19	20	18	20	22
17	23	23	22	21	20	22	21	19	20	18	20	22
18	23	23	22	21	20	22	21	20	20	19	20	25
19	23	23	22	21	20	22	21	20	20	19	20	23
20	23	23	22	21	20	22	21	20	20	19	20	23
21	23	24	22	20	20	22	21	20	20	20	20	23
22	24	24	22	21	20	22	21	20	20	20	20	23
23	24	24	22	20	20	22	21	20	20	20	20	23
24	24	23	21	20	20	23	20	20	20	19	20	23
25	23	23	21	20	20	23	20	20	20	19	20	23
26	23	23	21	20	20	23	21	19	20	19	20	23
27	23	23	21	20	20	23	21	19	20	19	20	23
28	23	23	21	20	20	23	20	19	19	19	21	23
29	23	23	21	20	---	23	20	19	19	19	21	23
30	23	23	21	20	---	23	21	19	19	19	21	23
31	23	---	21	20	---	23	---	19	---	19	20	---
TOTAL	722	694	682	635	563	688	641	616	595	600	623	668
MEAN	23.29	23.13	22.00	20.48	20.11	22.19	21.37	19.87	19.83	19.35	20.10	22.27
MAX	25	24	23	21	21	23	24	22	20	21	21	25
MIN	22	23	21	20	20	21	20	19	19	18	19	20
AC-FT	1430	1380	1350	1260	1120	1360	1270	1220	1180	1190	1240	1320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002, BY WATER YEAR (WY)

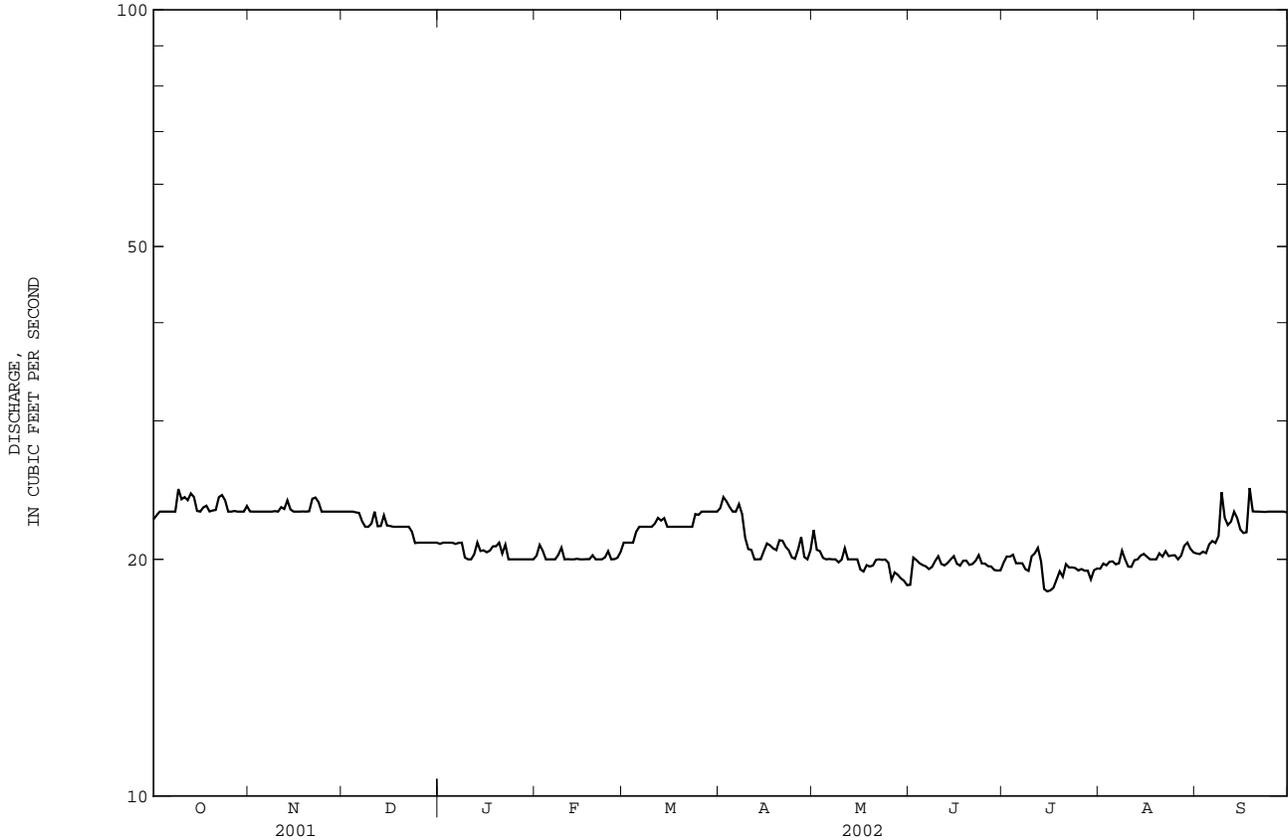
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	21.97	22.02	21.44	20.76	20.06	20.87	22.13	30.62	27.06	25.35	23.02	22.05					
MAX	29.5	28.2	27.1	26.4	25.0	29.7	30.8	64.8	40.5	39.8	34.5	30.8					
(WY)	2000	1978	1999	1999	1977	1996	1978	1995	1999	1999	1999	1999					
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					

CHEYENNE RIVER BASIN

06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1977 - 2002	
ANNUAL TOTAL	9113		7727		--	
ANNUAL MEAN	24.97		21.17		23.35	
HIGHEST ANNUAL MEAN	--		--		30.5	
LOWEST ANNUAL MEAN	--		--		15.7	
HIGHEST DAILY MEAN	32	Jun 4	25	Oct 9, Sep 18	455	May 9 1995
LOWEST DAILY MEAN	21	Dec 24-31	18	Jul 14-17	12	Mar 10 1992
ANNUAL SEVEN-DAY MINIMUM	21	Dec 24	18	Jul 14	13	Mar 8 1992
MAXIMUM PEAK FLOW	--		29		1230	May 8 1995
MAXIMUM PEAK STAGE	--		1.64		3.80 <sup>a</sup>	May 8 1995
ANNUAL RUNOFF (AC-FT)	18080		15330		16920	
10 PERCENT EXCEEDS	29		23		30	
50 PERCENT EXCEEDS	24		21		22	
90 PERCENT EXCEEDS	23		20		16	

a From floodmarks.



06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'35", long 104°03'20", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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 except those for estimated daily discharges, which are poor, 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e19	4.3	12	11
2	7.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e25	0.23	19	11
3	7.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e23	0.00	20	5.9
4	7.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e25	0.00	19	7.1
5	7.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e17	0.00	17	7.7
6	8.5	0.00	0.00	0.00	0.00	0.00	0.00	5.7	18	0.00	8.0	15
7	8.3	0.00	0.00	0.00	0.00	0.00	0.00	6.6	20	2.4	7.0	16
8	7.3	0.00	0.00	0.00	0.00	0.00	0.00	4.8	19	7.4	12	16
9	8.4	0.00	0.00	0.00	0.00	0.00	0.00	3.9	21	9.1	13	15
10	8.9	0.00	0.00	0.00	0.00	0.00	0.00	2.0	18	9.3	13	15
11	9.9	0.00	0.00	0.00	0.00	0.00	0.00	2.7	14	11	12	14
12	12	0.00	0.00	0.00	0.00	0.00	0.00	3.4	8.0	12	8.7	10
13	13	0.00	0.00	0.00	0.00	0.00	0.00	3.4	9.4	13	7.8	1.4
14	14	0.00	0.00	0.00	0.00	0.00	0.00	7.2	9.4	14	6.9	0.71
15	8.2	0.00	0.00	0.00	0.00	0.00	0.00	10	3.7	13	8.2	0.68
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.8	3.3	11	13	3.5
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.9	e12	12	9.2	1.3
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.7	e11	11	8.8	1.1
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	11	9.6	9.2	9.0
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.0	11	10	8.7	19
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.1	12	16	7.8	9.2
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.8	14	9.2	6.7	9.2
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	14	4.7	11	7.6
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	14	6.6	8.3	3.8
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.5	15	6.5	5.9	2.3
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.7	16	6.5	5.9	1.2
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e7.0	12	7.6	5.7	3.9
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e9.0	6.7	9.2	5.5	7.3
29	0.00	0.00	0.00	0.00	---	0.00	0.00	17	6.1	9.9	5.2	5.9
30	0.00	0.00	0.00	0.00	---	0.00	0.00	e17	5.6	7.8	5.9	3.2
31	0.00	---	0.00	0.00	---	0.00	---	e17	---	8.6	7.3	---
TOTAL	129.90	0.00	0.00	0.00	0.00	0.00	0.00	184.90	413.2	241.93	307.7	233.99
MEAN	4.190	0.000	0.000	0.000	0.000	0.000	0.000	5.965	13.77	7.804	9.926	7.800
MAX	14	0.00	0.00	0.00	0.00	0.00	0.00	17	25	16	20	19
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.3	0.00	5.2	0.68
AC-FT	258	0.00	0.00	0.00	0.00	0.00	0.00	367	820	480	610	464

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2002, BY WATER YEAR (WY)

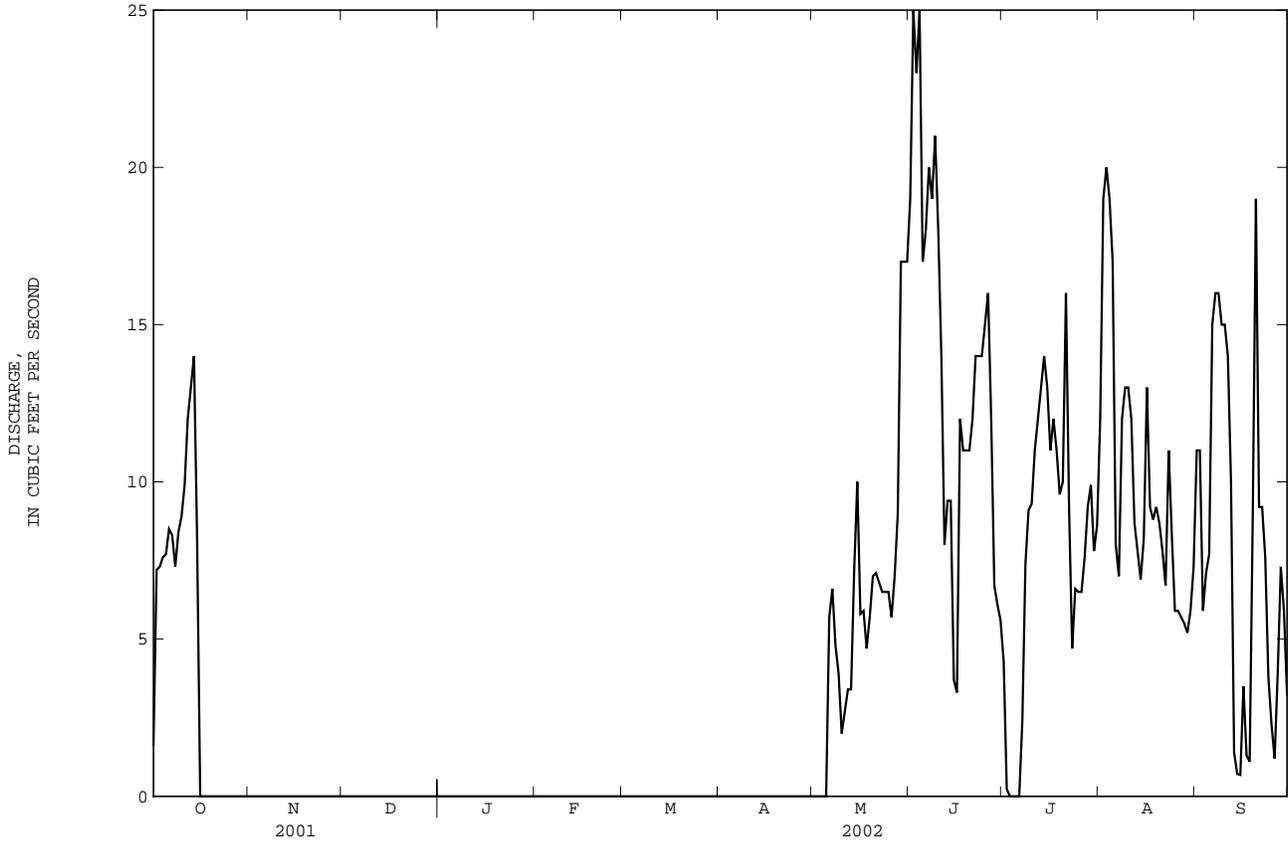
	1988	1988	1988	1988	1988	1988	1988	1990	1991	1993	1998	1993
MEAN	5.387	0.268	0.000	0.000	0.000	0.000	0.009	1.781	5.152	9.719	8.484	8.260
MAX	20.6	2.01	0.000	0.000	0.000	0.000	0.085	6.30	13.9	16.4	18.2	18.8
(WY)	1991	2000	1988	1988	1988	1988	1997	1992	1988	1991	1991	1994
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.84	2.24	0.80
(WY)	1988	1988	1988	1988	1988	1988	1988	1990	1991	1993	1998	1993

CHEYENNE RIVER BASIN

06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1988 - 2002	
ANNUAL TOTAL	1111.95	1511.62	--	
ANNUAL MEAN	3.046	4.141	3.278	
HIGHEST ANNUAL MEAN	--	--	5.32 1994	
LOWEST ANNUAL MEAN	--	--	0.92 1993	
HIGHEST DAILY MEAN	34 Aug 15	25 <sup>e</sup> Jun 2	46 Oct 8 1990	
LOWEST DAILY MEAN	0.00 Many days	0.00 Many days	0.00 <sup>a</sup> Many days, each year	
ANNUAL RUNOFF (AC-FT)	2210	3000	2370	
10 PERCENT EXCEEDS	11	13	12	
50 PERCENT EXCEEDS	0.00	0.00	0.00	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

a No flow for many days in each year.  
e Estimated.



06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'26", long 104°02'54", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	41	42	e34	39	38	40	38	21	15	6.8	20
2	28	42	42	e37	39	e37	39	33	14	32	7.1	23
3	28	42	42	e40	38	e37	38	35	16	31	7.0	27
4	29	42	42	40	38	39	38	35	14	32	7.9	27
5	28	43	42	40	38	39	37	35	21	33	12	26
6	29	43	42	40	38	39	37	30	18	33	25	18
7	29	43	42	40	38	39	38	32	17	28	25	17
8	28	42	42	40	38	39	39	32	17	12	19	18
9	29	43	42	40	39	39	38	32	15	5.9	15	27
10	28	43	42	40	38	38	38	32	13	6.0	14	24
11	28	43	43	40	38	39	38	35	e17	6.6	15	25
12	30	43	42	40	38	39	38	37	e23	6.3	20	27
13	29	43	42	40	38	40	38	36	e21	6.8	21	34
14	29	43	43	39	38	40	37	35	21	7.3	23	35
15	34	43	42	39	38	39	38	32	27	6.2	20	34
16	38	43	42	39	37	39	37	35	28	6.4	14	33
17	38	42	42	39	38	39	37	35	19	6.4	19	41
18	39	43	42	40	39	39	38	34	20	7.7	14	45
19	38	42	42	39	39	39	37	30	20	8.8	17	30
20	39	43	41	39	38	38	37	31	21	7.8	19	18
21	39	43	41	39	38	38	37	34	19	7.8	18	28
22	40	43	41	39	38	38	38	34	17	19	24	28
23	39	43	40	39	38	39	37	33	16	32	9.6	28
24	39	43	40	40	38	40	36	33	16	21	18	34
25	39	43	40	39	38	39	37	33	14	20	26	36
26	39	43	41	40	33	40	37	34	9.1	20	26	38
27	39	42	41	40	39	40	38	33	9.5	22	27	31
28	40	42	41	39	39	41	37	32	11	22	27	26
29	40	43	40	e38	---	40	36	24	13	21	26	29
30	40	43	40	e34	---	40	36	24	14	14	22	33
31	40	---	e38	e38	---	39	---	23	---	13	23	---
TOTAL	1068	1280	1284	1210	1065	1209	1126	1011	521.6	510.0	567.4	860
MEAN	34.45	42.67	41.42	39.03	38.04	39.00	37.53	32.61	17.39	16.45	18.30	28.67
MAX	40	43	43	40	39	41	40	38	28	33	27	45
MIN	28	41	38	34	33	37	36	23	9.1	5.9	6.8	17
AC-FT	2120	2540	2550	2400	2110	2400	2230	2010	1030	1010	1130	1710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2002, BY WATER YEAR (WY)\*

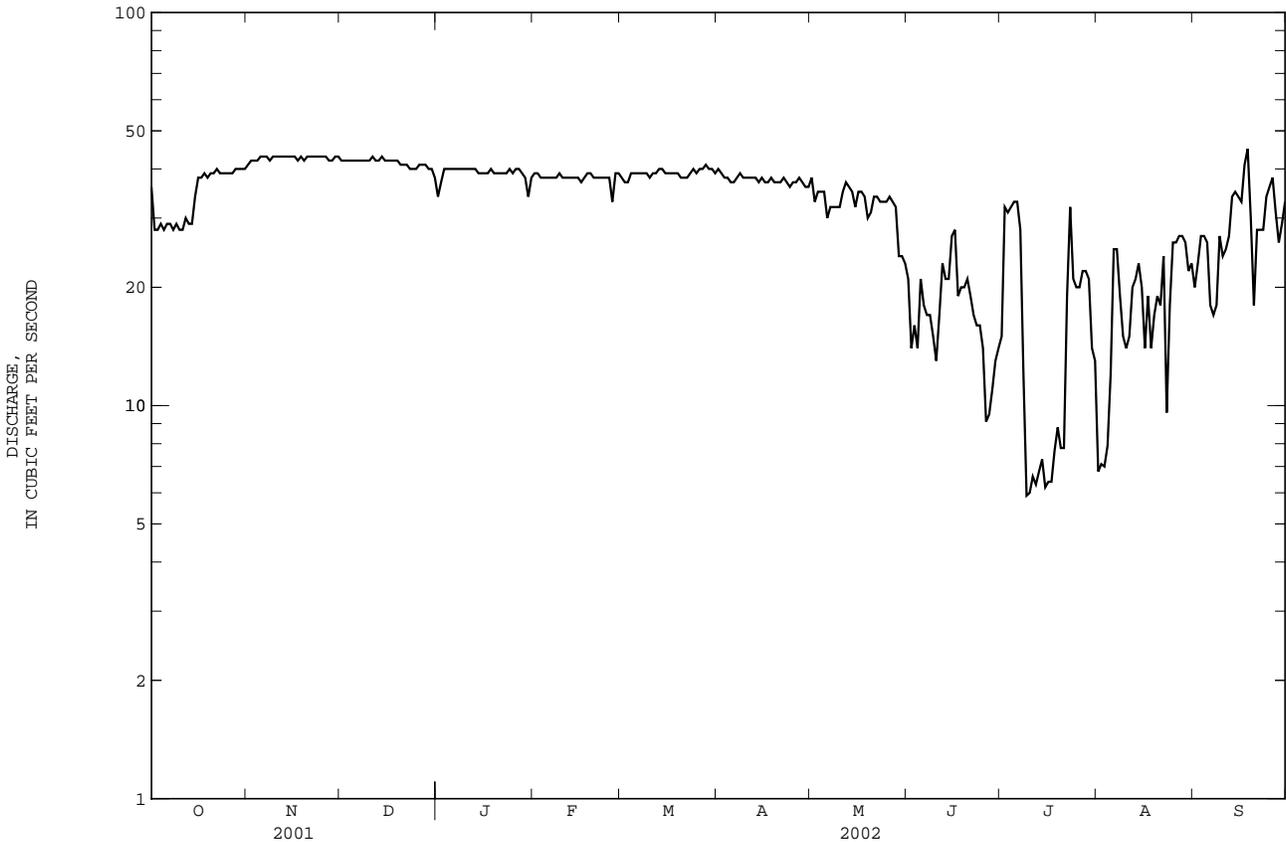
MEAN	28.96	33.12	32.84	32.17	33.33	34.91	38.05	53.47	46.09	23.67	23.49	25.67
MAX	45.0	47.9	48.0	48.5	57.8	66.0	65.4	168	128	54.9	58.9	50.4
(WY)	1973	1974	1999	1999	1971	1996	1999	1995	1976	1976	1973	1973
MIN	14.2	20.8	21.5	20.7	21.2	22.1	18.8	7.44	6.29	7.62	6.78	11.8
(WY)	1991	1961	1993	1993	1993	1962	1981	1985	1961	1990	1985	1985

CHEYENNE RIVER BASIN

06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1955 - 2002*	
ANNUAL TOTAL	14383	11712.0	--	
ANNUAL MEAN	39.41	32.09	33.80	
HIGHEST ANNUAL MEAN	--	--	56.0 1973	
LOWEST ANNUAL MEAN	--	--	17.9 1961	
HIGHEST DAILY MEAN	78 Apr 8	45 Sep 18	1330	May 9 1995
LOWEST DAILY MEAN	22 Sep 12-14	5.9 Jul 9	1.3 <sup>a</sup>	May 22 1985
ANNUAL SEVEN-DAY MINIMUM	23 Sep 11	6.4 Jul 9	1.9	May 21 1985
MAXIMUM PEAK FLOW	--	52 <sup>b</sup> Sep 18	2440 <sup>c</sup>	Aug 22 1973
MAXIMUM PEAK STAGE	--	4.41 <sup>d</sup> Jan 2	12.19	Aug 22 1973
ANNUAL RUNOFF (AC-FT)	28530	23230	24480	
10 PERCENT EXCEEDS	47	42	48	
50 PERCENT EXCEEDS	40	37	31	
90 PERCENT EXCEEDS	29	15	16	

\* Period using present site and datum only. See GAGE.  
 a No flow Aug. 13-15, 1929, during partial year.  
 b Gage height, 3.57 ft.  
 c From rating curve extended above 1,000 ft<sup>3</sup>/s on basis of slope-area measurement.  
 d Backwater from ice.  
 e Estimated.



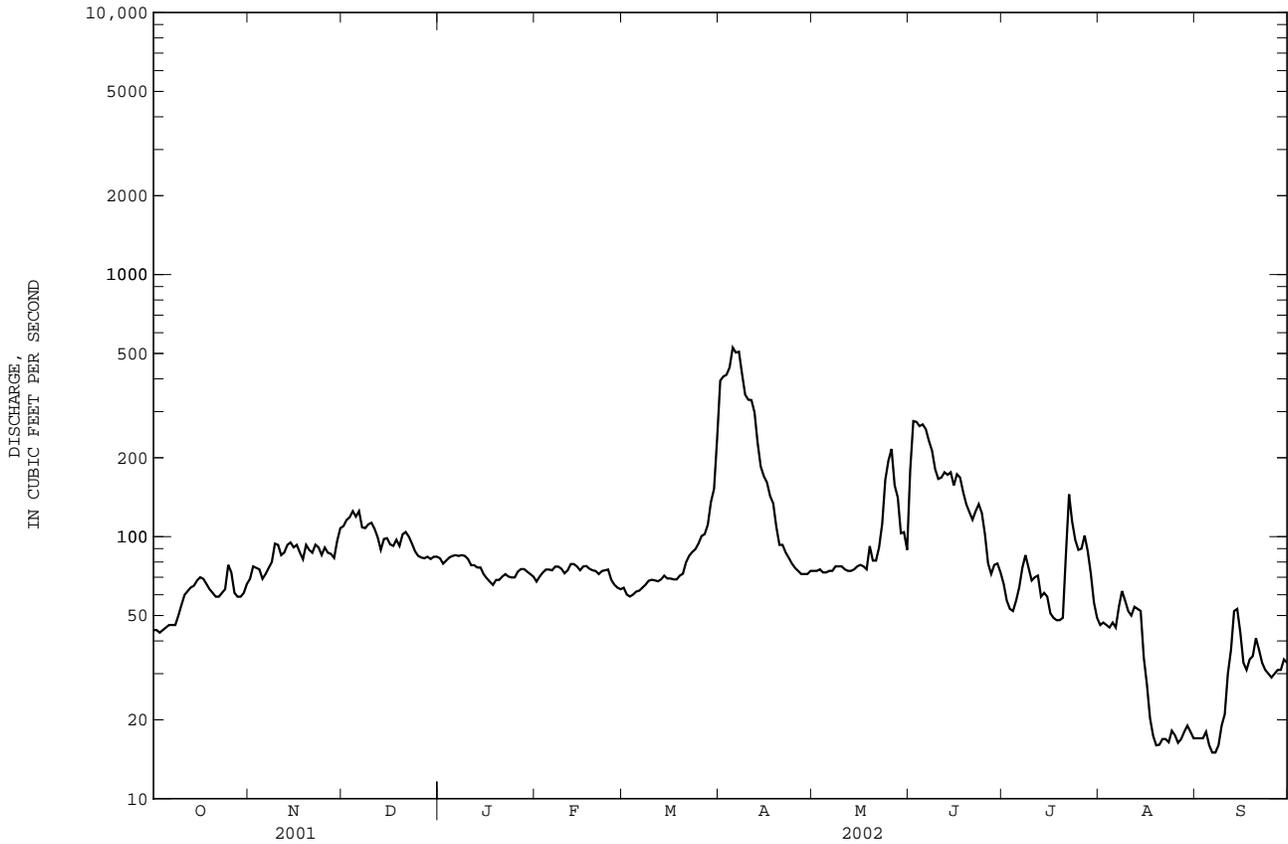


PLATTE RIVER BASIN

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1904 - 2002	
ANNUAL TOTAL	75840		33389		--	
ANNUAL MEAN	207.8		91.48		429.4	
HIGHEST ANNUAL MEAN	--		--		878 1917	
LOWEST ANNUAL MEAN	--		--		91.5 2002	
HIGHEST DAILY MEAN	1060	May 19, 20	526 <sup>e</sup>	Apr 5	6450	Jun 10 1923
LOWEST DAILY MEAN	43	Oct 3	15	Sep 6, 7	15	Sep 6, 7 2002
ANNUAL SEVEN-DAY MINIMUM	44	Sep 29	16	Sep 2	16	Sep 2 2002
MAXIMUM PEAK FLOW	--	--	Unknown <sup>a</sup>	Apr 5	6720 <sup>b</sup>	Jun 11 1923
MAXIMUM PEAK STAGE	--	--	4.17 <sup>a</sup>	Apr 2	9.65 <sup>c</sup>	Apr 25 1980
ANNUAL RUNOFF (AC-FT)	150400		66230		311100	
10 PERCENT EXCEEDS	572		159		1200	
50 PERCENT EXCEEDS	104		75		160	
90 PERCENT EXCEEDS	61		33		68	

a Occurred during ice jam.  
 b Gage height, 6.34 ft, site and datum then in use.  
 c Backwater from ice jam, site and datum then in use.  
 e Estimated.



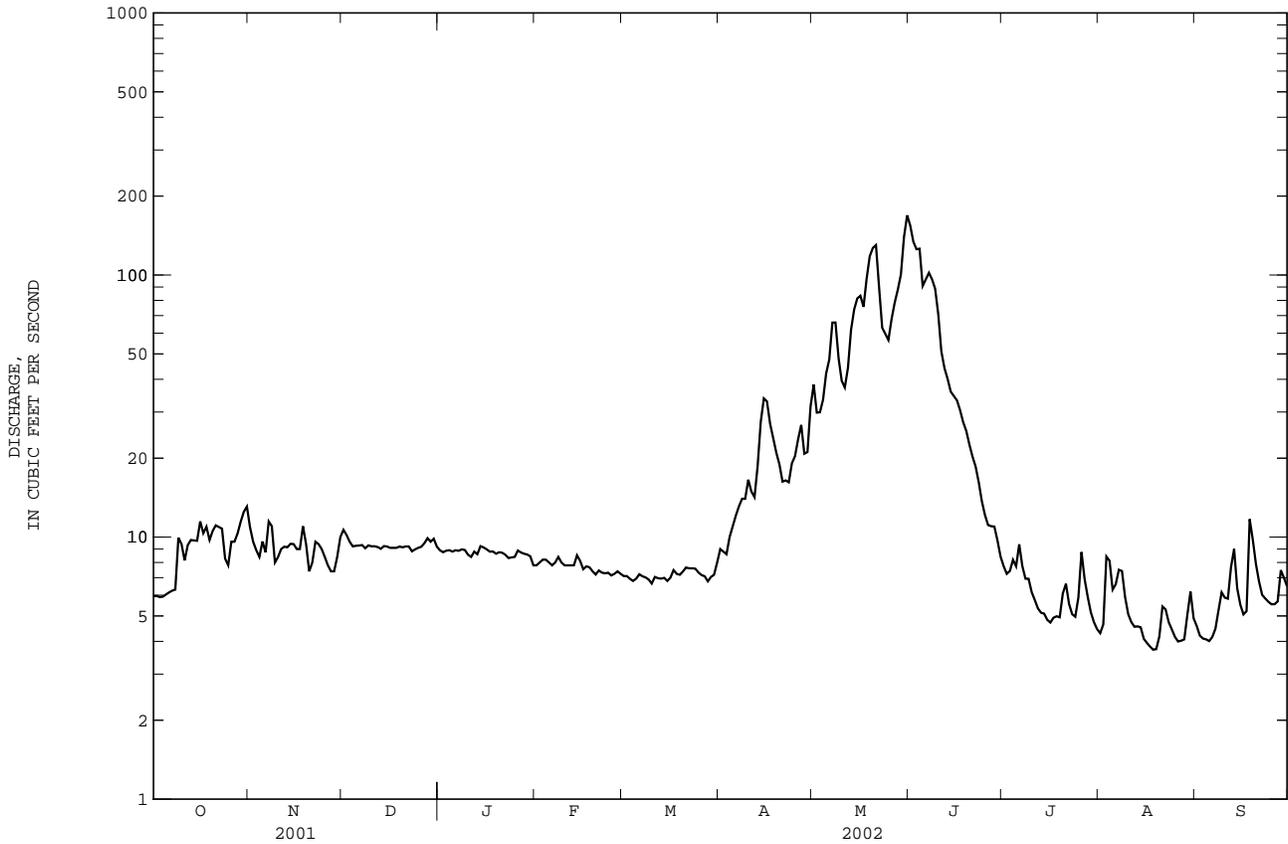


PLATTE RIVER BASIN

06622700 NORTH BRUSH CREEK NEAR SARATOGA, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1961 - 2002	
ANNUAL TOTAL	11982.8		6488.5		--	
ANNUAL MEAN	32.83		17.78		49.12	
HIGHEST ANNUAL MEAN	--		--		82.0 1983	
LOWEST ANNUAL MEAN	--		--		17.8 2002	
HIGHEST DAILY MEAN	500	May 16	169	May 31	955	Jun 25 1983
LOWEST DAILY MEAN	5.7	Aug 28	3.7	Aug 18,19	3.7	Aug 18,19 2002
ANNUAL SEVEN-DAY MINIMUM	6.0	Sep 28	4.0	Aug 14	4.0	Aug 14 2002
MAXIMUM PEAK FLOW	--	--	239	May 30	1360 <sup>a</sup>	Jun 25 1983
MAXIMUM PEAK STAGE	--	--	3.18	May 30	5.75 <sup>b</sup>	Jun 7 1964
ANNUAL RUNOFF (AC-FT)	23770		12870		35590	
10 PERCENT EXCEEDS	86		43		155	
50 PERCENT EXCEEDS	9.2		8.7		12	
90 PERCENT EXCEEDS	6.8		5.1		8.0	

a Gage height, 4.23 ft, site and datum then in use.  
 b Site and datum then in use.  
 e Estimated.





PLATTE RIVER BASIN

06622900 SOUTH BRUSH CREEK NEAR SARATOGA, WY--Continued

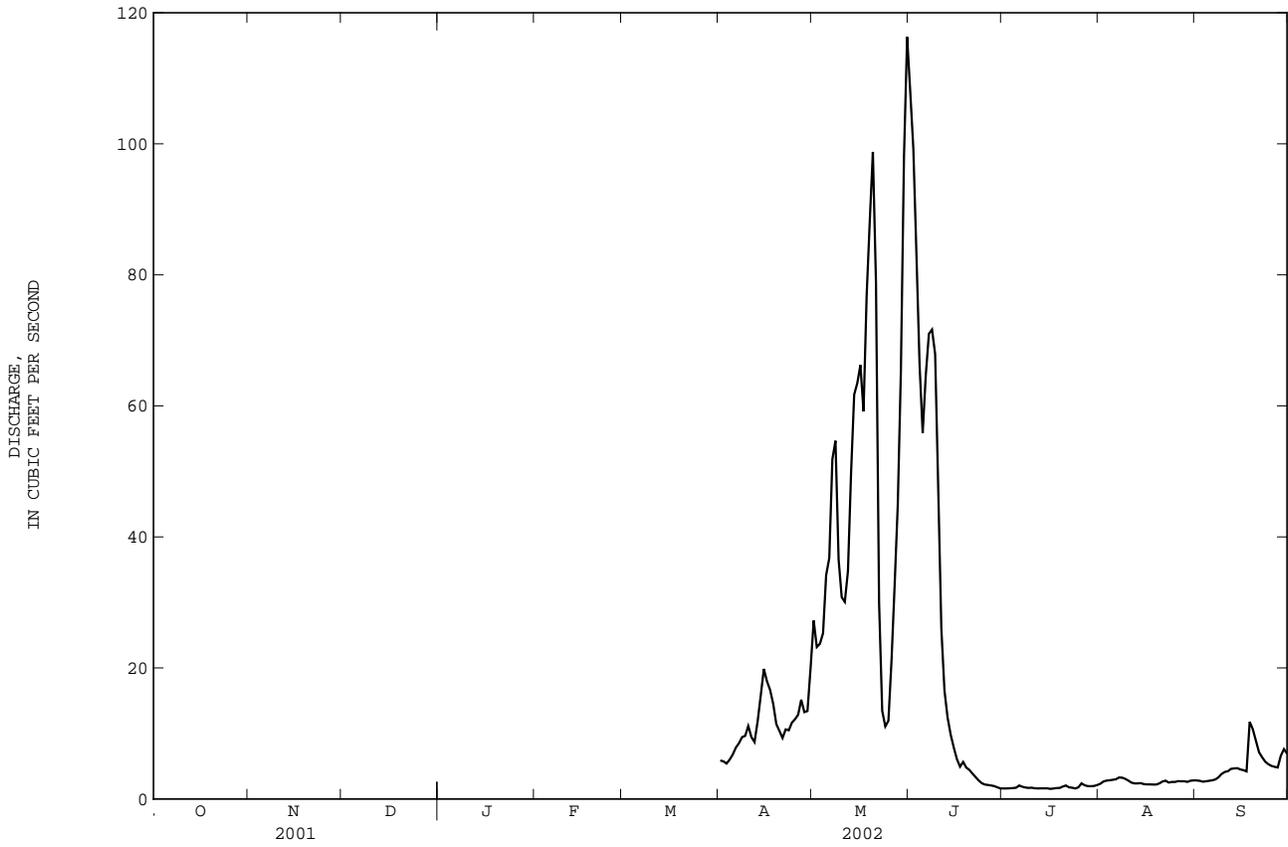
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1961 - 2002\*

HIGHEST DAILY MEAN	116	May 31	501	Jun 10 1965
LOWEST DAILY MEAN	1.5 <sup>e</sup>	Jul 16	0.43	Aug 5 2001
MAXIMUM PEAK FLOW	156	May 30	559	Jun 10 1965
MAXIMUM PEAK STAGE	2.84	May 30	4.09	Jun 10 1965

\* For period of operation.  
e Estimated.



PLATTE RIVER BASIN

325

06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY  
(Hydrologic Benchmark Station)

LOCATION.--Lat 41°01'25", long 106°49'27", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	27	e15	16	14	15	e21	94	364	46	18	13
2	15	22	e16	15	14	15	e21	79	357	44	19	12
3	15	20	e17	16	14	15	e20	78	332	42	24	12
4	14	19	e17	16	14	15	e22	87	311	41	21	12
5	14	22	e16	16	14	15	e24	101	258	41	20	11
6	15	21	e15	16	14	15	e27	114	256	40	22	11
7	15	23	e15	16	13	16	32	148	258	37	20	12
8	16	23	e15	16	14	15	37	150	262	35	19	15
9	24	15	e16	16	14	15	41	107	255	34	17	19
10	21	20	e15	15	14	15	46	100	222	31	15	17
11	19	23	e15	15	14	16	48	100	183	29	15	19
12	20	21	e15	16	14	16	46	102	162	28	14	38
13	22	20	e17	16	14	16	49	113	150	27	14	27
14	23	18	e18	16	14	15	67	142	139	26	14	20
15	22	16	e18	15	14	15	90	160	133	25	13	17
16	21	16	18	15	14	15	83	171	125	25	13	15
17	24	17	17	15	14	16	59	150	116	26	12	17
18	26	e17	17	15	14	16	55	183	109	28	12	31
19	23	e15	17	14	14	16	52	224	103	26	12	28
20	23	e14	17	14	14	16	53	269	97	26	13	22
21	24	e15	17	14	13	16	40	289	89	28	17	19
22	23	e18	17	14	14	17	38	222	86	25	16	17
23	23	e17	17	15	15	17	43	175	78	23	15	16
24	18	e16	16	15	15	17	56	169	72	21	14	15
25	22	e16	16	15	14	16	58	157	68	22	13	15
26	21	e15	16	15	14	16	72	185	63	32	12	15
27	21	e14	16	15	15	16	74	206	61	24	12	15
28	23	e13	16	15	15	16	56	231	58	24	12	17
29	25	e14	16	14	---	17	61	267	54	21	14	17
30	27	e15	16	14	---	e17	88	332	49	20	17	19
31	30	---	17	14	---	e18	---	372	---	19	14	---
TOTAL	645	542	506	469	394	491	1479	5277	4870	916	483	533
MEAN	20.81	18.07	16.32	15.13	14.07	15.84	49.30	170.2	162.3	29.55	15.58	17.77
MAX	30	27	18	16	15	18	90	372	364	46	24	38
MIN	14	13	15	14	13	15	20	78	49	19	12	11
AC-FT	1280	1080	1000	930	781	974	2930	10470	9660	1820	958	1060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

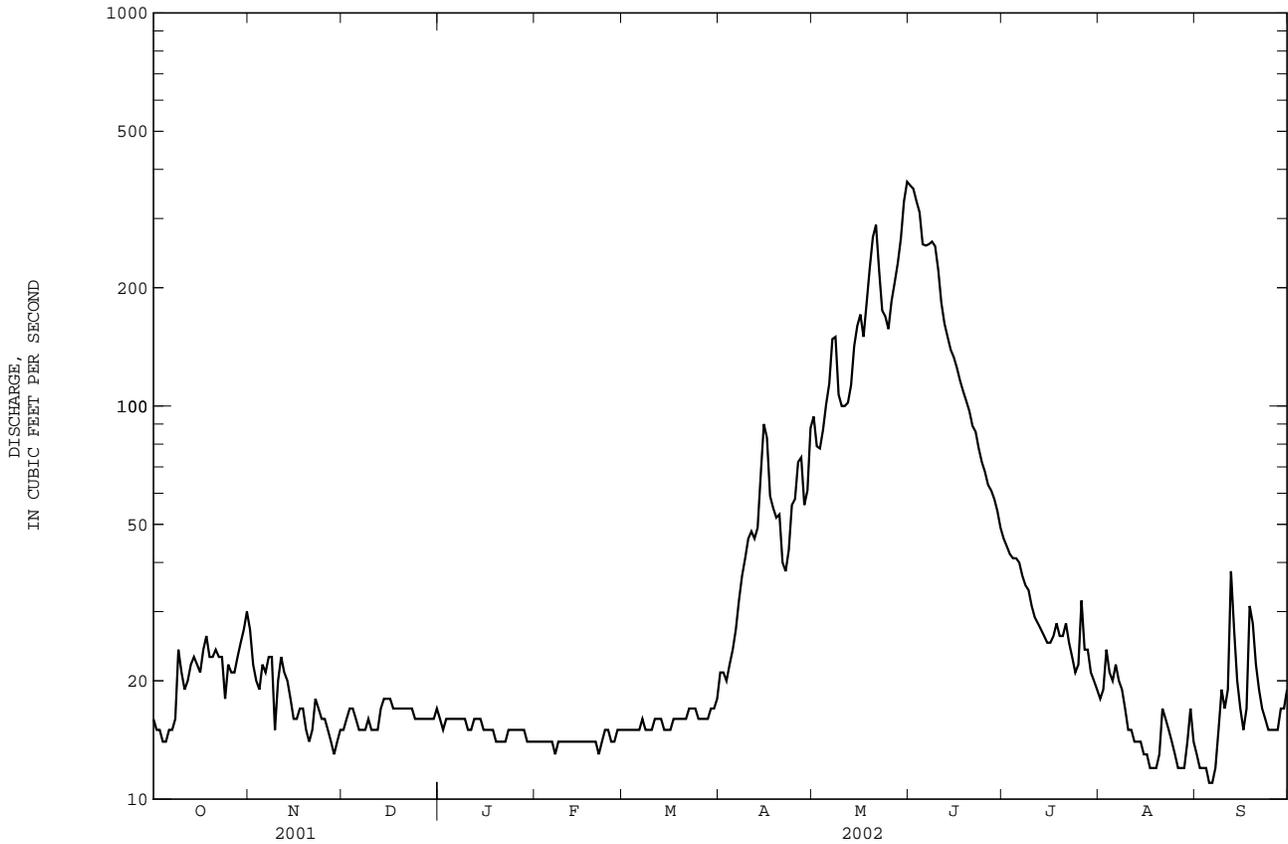
	30.89	24.94	22.31	19.87	18.76	19.88	41.03	281.3	591.1	200.3	46.37	32.49
MEAN	71.5	45.2	33.9	28.9	28.1	31.4	76.5	471	919	581	83.3	82.2
MAX (WY)	1998	1998	1998	1971	1971	1997	1989	2000	1997	1995	1995	1997
MIN	17.5	15.6	11.7	10.9	10.8	10.9	19.3	120	162	29.5	15.6	17.8
(WY)	1992	1978	1969	1969	1969	1969	1975	1995	2002	2002	2002	2002

PLATTE RIVER BASIN

06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY--Continued  
(Hydrologic Benchmark Station)

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1965 - 2002	
ANNUAL TOTAL	29382		16605		--	
ANNUAL MEAN	80.50		45.49		110.8	
HIGHEST ANNUAL MEAN	--		--		159	
LOWEST ANNUAL MEAN	--		--		45.5	
HIGHEST DAILY MEAN	655	May 16	372	May 31	1360	Jun 25 1983
LOWEST DAILY MEAN	13 <sup>e</sup>	Nov 28	11	Sep 5,6	9.5	Dec 31 1968
ANNUAL SEVEN-DAY MINIMUM	15	Nov 25	12	Sep 1	10	Mar 8 1969
MAXIMUM PEAK FLOW	--		482	May 30	1680 <sup>a</sup>	Jun 13 1965
MAXIMUM PEAK STAGE	--		3.44	May 30	5.01 <sup>b</sup>	Jun 25 1970
ANNUAL RUNOFF (AC-FT)	58280		32940		80260	
10 PERCENT EXCEEDS	263		120		370	
50 PERCENT EXCEEDS	21		17		28	
90 PERCENT EXCEEDS	15		14		16	

a About June 13, 1965; from slope-area measurement 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 NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 good 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	96	e73	e54	e51	e71	90	207	473	20	22	15
2	68	83	e74	e52	e53	e71	92	156	467	19	22	14
3	66	78	e73	e54	e55	e72	90	136	429	20	25	13
4	65	74	e76	e55	e55	e77	91	127	423	23	27	12
5	66	74	e77	e55	e55	e77	97	144	320	25	26	12
6	68	79	e70	e54	e54	e79	105	134	294	25	25	12
7	67	79	e65	e55	e56	e84	107	164	287	24	29	12
8	67	91	e66	e56	e59	e86	110	208	279	24	27	16
9	81	77	e61	e56	e59	e81	116	140	264	24	22	19
10	89	69	e62	e55	e58	e82	130	136	241	21	23	16
11	80	79	e61	e55	e59	e87	150	110	199	20	20	17
12	83	81	e61	e55	e60	e89	146	115	161	20	17	36
13	85	78	e65	e54	e59	e89	162	112	144	19	16	39
14	86	77	e69	e52	e60	e89	186	154	132	19	18	31
15	86	73	e70	e49	e60	e87	218	164	114	19	19	29
16	80	70	e68	e47	e62	e82	249	200	106	19	17	27
17	84	69	e66	e45	e64	e83	188	182	90	19	16	30
18	87	75	e67	e45	e66	e87	184	219	61	21	16	51
19	84	70	e68	e45	e66	e90	144	241	48	23	16	67
20	80	66	e68	e45	e65	e92	155	308	50	24	16	53
21	81	62	e69	e44	e65	e96	132	370	45	25	19	44
22	82	77	e68	e45	e67	e96	113	306	41	25	20	41
23	81	78	e66	e45	e73	102	118	237	35	22	17	39
24	78	74	e64	e48	e74	91	137	219	28	23	17	36
25	68	74	e60	e48	e72	83	147	194	24	25	17	20
26	77	76	e59	e48	e72	80	154	199	21	32	16	31
27	76	e70	e57	e48	e71	81	191	225	20	31	16	38
28	78	e65	e57	e48	e71	77	163	241	22	27	17	42
29	80	e65	e57	e49	---	79	144	283	23	26	17	42
30	83	e71	e58	e51	---	82	172	355	22	25	18	43
31	87	---	e57	e51	---	81	---	489	---	27	17	---
TOTAL	2411	2250	2032	1563	1741	2603	4281	6475	4863	716	610	897
MEAN	77.77	75.00	65.55	50.42	62.18	83.97	142.7	208.9	162.1	23.10	19.68	29.90
MAX	89	96	77	56	74	102	249	489	473	32	29	67
MIN	65	62	57	44	51	71	90	110	20	19	16	12
AC-FT	4780	4460	4030	3100	3450	5160	8490	12840	9650	1420	1210	1780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2002, BY WATER YEAR (WY)

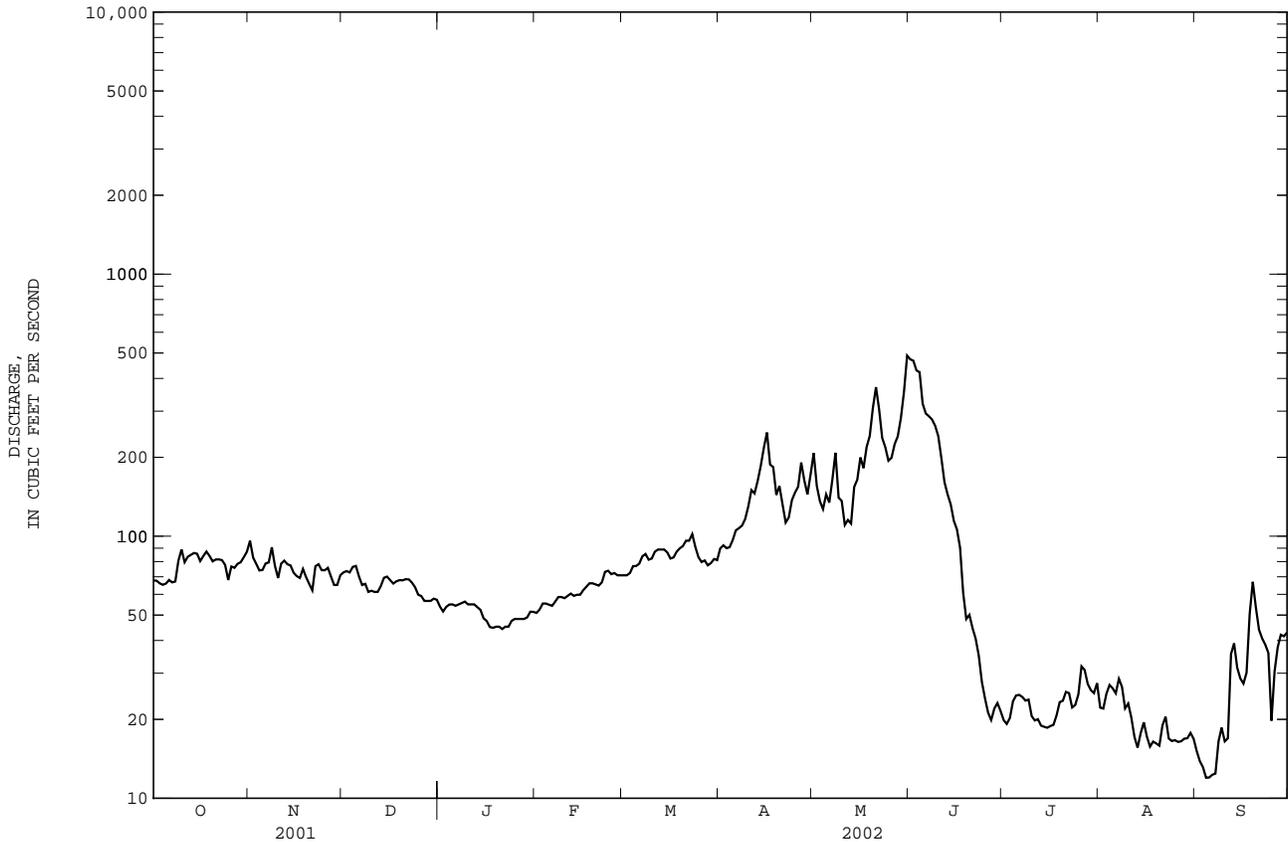
	MEAN	78.98	78.79	69.62	62.12	63.02	71.14	149.3	761.7	1168	279.2	67.12	55.42
MAX	167	156	131	122	115	117	352	1258	2029	942	178	174	
(WY)	1998	1998	1998	1998	1962	1989	1962	1952	1971	1995	1982	1997	
MIN	29.4	42.6	49.2	34.2	35.8	44.5	71.3	209	162	23.1	19.7	14.2	
(WY)	1980	1977	1964	1963	1955	1964	1944	2002	2002	2002	2002	1954	

PLATTE RIVER BASIN

06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1941 - 2002	
ANNUAL TOTAL	63430		30442		--	
ANNUAL MEAN	173.8		83.40		242.0	
HIGHEST ANNUAL MEAN	--		--		375	
LOWEST ANNUAL MEAN	--		--		83.4	
HIGHEST DAILY MEAN	1500	May 17	489	May 31	3640	Jun 4 1952
LOWEST DAILY MEAN	39	Aug 13	12	Sep 4-7	8.0 <sup>a</sup>	Sep 1 1954
ANNUAL SEVEN-DAY MINIMUM	40	Aug 4	13	Sep 1	8.9	Aug 28 1954
MAXIMUM PEAK FLOW	--		597 <sup>b</sup>		4510 <sup>c</sup>	
MAXIMUM PEAK STAGE	--		3.57 <sup>d</sup>		10.33 <sup>e</sup>	
ANNUAL RUNOFF (AC-FT)	125800		60380		175300	
10 PERCENT EXCEEDS	551		167		776	
50 PERCENT EXCEEDS	72		67		75	
90 PERCENT EXCEEDS	45		20		42	

- a Minimum daily discharge for period of record, 5.2 ft<sup>3</sup>/s, Aug. 15, 16, 1940.
- b Gage height, 3.45 ft.
- c Gage height, 10.25 ft, present datum.
- d Backwater from ice jam.
- e Estimated.
- f Present datum.



PLATTE RIVER BASIN

06627800 JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY

LOCATION.--Lat 41°26'21", long 106°58'16", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 poor. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e20	37	50	5.0	0.92	0.83
2	---	---	---	---	---	---	21	32	54	4.5	0.75	0.79
3	---	---	---	---	---	---	23	29	55	4.5	0.70	0.62
4	---	---	---	---	---	---	21	29	52	5.2	0.89	0.49
5	---	---	---	---	---	---	19	33	42	5.8	1.0	0.43
6	---	---	---	---	---	---	19	33	39	5.9	1.2	0.31
7	---	---	---	---	---	---	20	31	38	5.6	1.3	0.28
8	---	---	---	---	---	---	20	33	38	5.3	1.3	0.46
9	---	---	---	---	---	---	19	32	36	5.2	1.1	0.79
10	---	---	---	---	---	---	20	29	35	3.7	0.87	1.5
11	---	---	---	---	---	---	18	32	32	2.8	0.62	1.6
12	---	---	---	---	---	---	17	31	28	2.3	0.35	2.0
13	---	---	---	---	---	---	18	29	23	2.0	0.23	3.2
14	---	---	---	---	---	---	24	30	22	1.8	0.14	3.6
15	---	---	---	---	---	---	32	32	20	1.5	0.07	2.5
16	---	---	---	---	---	---	42	34	20	1.4	0.02	1.7
17	---	---	---	---	---	---	26	39	18	1.4	0.00	1.5
18	---	---	---	---	---	---	22	36	17	1.6	0.00	2.4
19	---	---	---	---	---	---	20	36	15	1.5	0.00	5.7
20	---	---	---	---	---	---	19	38	15	2.7	0.00	4.3
21	---	---	---	---	---	---	18	40	14	2.5	0.00	3.0
22	---	---	---	---	---	---	15	39	14	2.3	0.00	2.2
23	---	---	---	---	---	---	15	35	12	1.9	0.00	1.8
24	---	---	---	---	---	---	18	33	10	1.7	0.00	1.7
25	---	---	---	---	---	---	20	32	9.2	1.4	0.00	e1.7
26	---	---	---	---	---	---	23	29	8.5	1.8	0.00	e1.9
27	---	---	---	---	---	---	44	30	7.8	2.7	0.00	e1.9
28	---	---	---	---	---	---	37	31	8.2	2.7	0.00	e2.6
29	---	---	---	---	---	---	30	34	7.5	2.0	0.00	e2.8
30	---	---	---	---	---	---	31	38	5.8	1.4	0.17	e2.4
31	---	---	---	---	---	---	---	43	---	1.0	0.73	---
TOTAL	---	---	---	---	---	---	691	1039	746.0	91.1	12.36	57.00
MEAN	---	---	---	---	---	---	23.03	33.52	24.87	2.939	0.399	1.900
MAX	---	---	---	---	---	---	44	43	55	5.9	1.3	5.7
MIN	---	---	---	---	---	---	15	29	5.8	1.0	0.00	0.28
AC-FT	---	---	---	---	---	---	1370	2060	1480	181	25	113

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2002, BY WATER YEAR (WY)\*

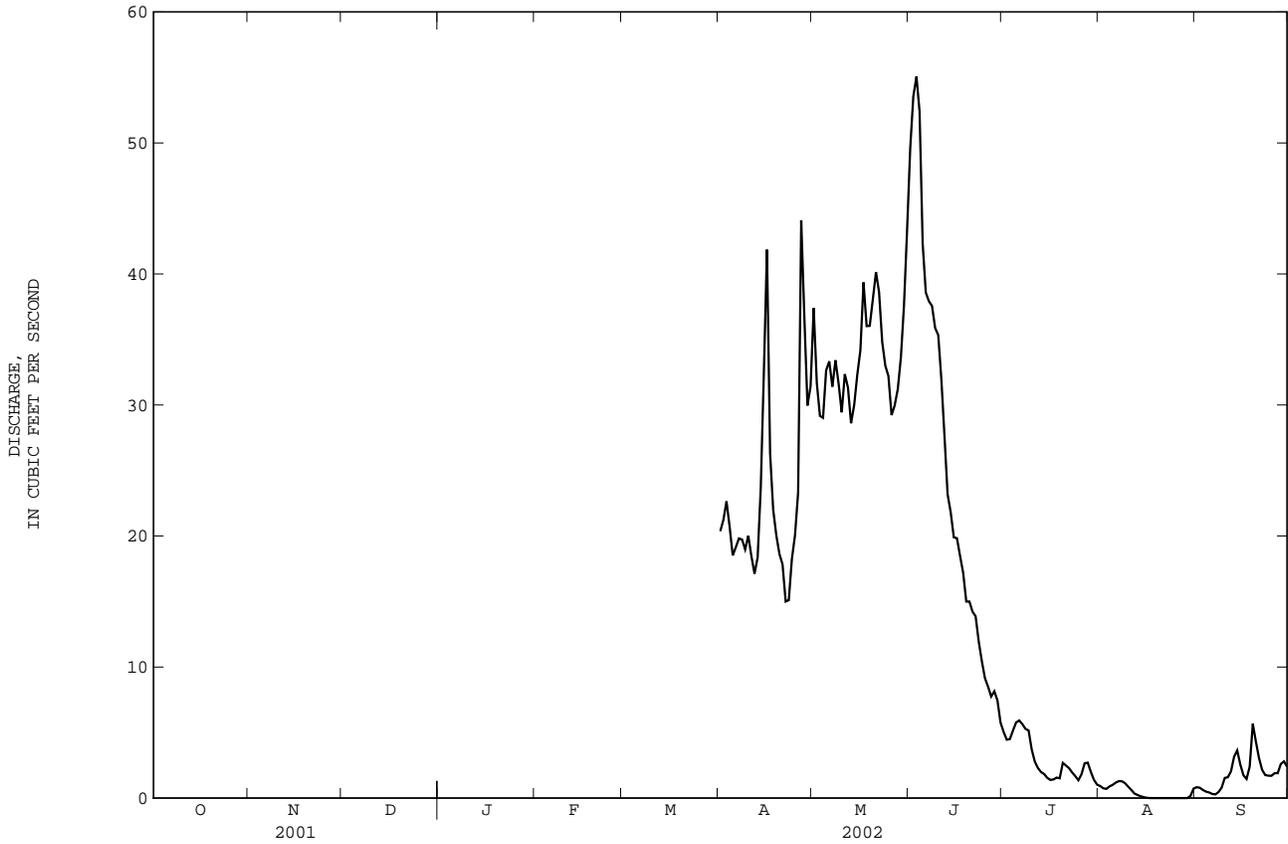
MEAN	---	---	---	---	---	---	29.65	100.1	91.22	23.46	6.630	5.479
MAX	---	---	---	---	---	---	44.0	175	230	84.0	14.0	10.9
(WY)	---	---	---	---	---	---	1997	1997	1995	1995	1995	1997
MIN	---	---	---	---	---	---	15.6	33.5	24.9	2.94	0.40	1.90
(WY)	---	---	---	---	---	---	1991	2002	2002	2002	2002	2002

PLATTE RIVER BASIN

06627800 JACK CREEK ABOVE COYOTE DRAW, NEAR SARATOGA, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1990 - 2002*
HIGHEST DAILY MEAN	55 Jun 3	379 Jun 9 1995
LOWEST DAILY MEAN	0.00 Aug 17-29	0.00 Aug 17-29 2002
MAXIMUM PEAK FLOW	60 Jun 3	461 <sup>a</sup> Jun 9 1993
MAXIMUM PEAK STAGE	4.52 Jun 3	7.22 Jun 9 1995

\* For period of operation.  
 a Gage height, 7.08 ft.  
 e Estimated.



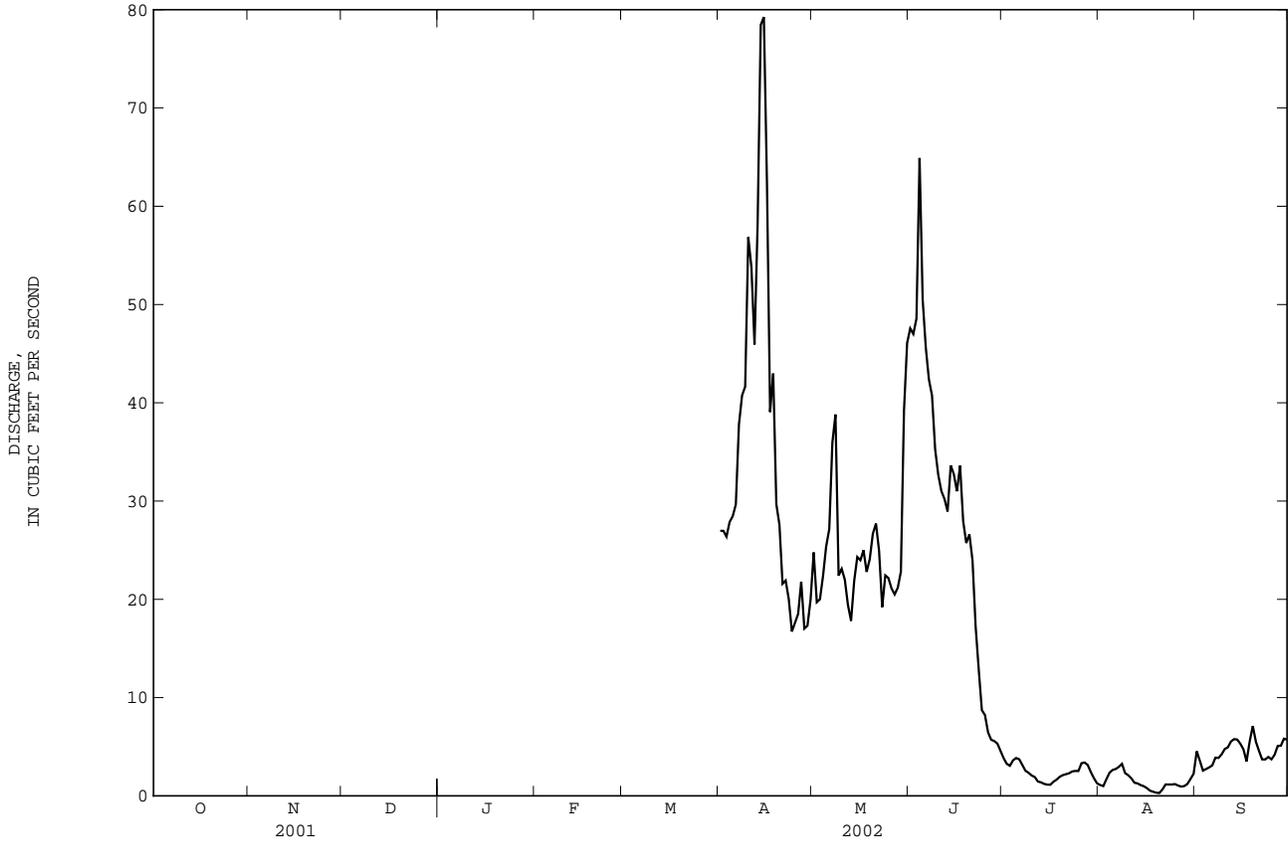


PLATTE RIVER BASIN

06628900 PASS CREEK NEAR ELK MOUNTAIN, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1957 - 2002*	
ANNUAL MEAN	--	41.12	
HIGHEST ANNUAL MEAN	--	86.4	1984
LOWEST ANNUAL MEAN	--	20.2	1959
HIGHEST DAILY MEAN	79 Apr 15	1780	May 12 1984
LOWEST DAILY MEAN	0.29 Aug 20	0.29	Aug 20 2002
MAXIMUM PEAK FLOW	105 Apr 14	4660 <sup>a</sup>	May 12 1984
MAXIMUM PEAK STAGE	6.10 <sup>c</sup> Apr 2	9.12 <sup>b</sup>	May 12 1984
ANNUAL RUNOFF (AC-FT)	--	29790	

\* For period of operation.  
 a From rating curve extended above 1,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.  
 b From floodmarks, site and datum then in use.  
 c Ice jam.  
 e Estimated.



06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY

LOCATION.--Lat 41°52'20", long 107°03'25", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>, of which 114 mi<sup>2</sup> probably is non-contributing.

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. Datum 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 Bureau of Reclamation.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	264	e270	e200	e200	e170	e700	464	813	138	94	48
2	181	274	e290	e220	e210	e160	e900	489	801	125	90	45
3	178	285	e300	e240	e220	e160	e860	415	837	116	79	44
4	178	277	e280	e250	e210	e160	892	348	941	106	73	44
5	180	273	e270	e250	e210	e160	957	330	1000	104	74	42
6	185	262	e290	e250	e210	e160	1070	319	867	106	68	39
7	186	270	e260	e260	e220	e150	1080	327	855	107	70	38
8	190	281	e280	e270	e210	e150	1050	307	824	107	82	38
9	219	295	e290	e250	e200	e140	994	345	736	107	100	37
10	233	305	e270	e230	e190	e140	897	319	626	105	101	39
11	258	279	e250	e240	e200	e150	870	282	552	118	96	39
12	270	273	e230	e250	e200	e160	846	270	495	112	90	46
13	266	292	e250	e250	e190	e150	790	262	442	100	89	47
14	277	296	e270	e240	e190	e140	755	261	401	93	75	53
15	280	297	e260	e240	e180	e150	746	264	366	84	66	63
16	281	290	e260	e230	e180	e150	806	278	339	77	59	57
17	278	277	e280	e230	e180	e150	834	268	317	73	55	55
18	270	275	e250	e230	e190	e150	709	296	306	69	52	60
19	278	275	e260	e230	e180	e160	662	301	287	71	52	66
20	281	278	e290	e220	e180	e170	602	341	260	141	50	71
21	273	261	e280	e230	e170	e180	566	390	254	90	51	99
22	267	233	e270	e220	e180	e200	520	503	252	76	52	100
23	261	254	e270	e210	e180	e250	453	524	226	76	53	90
24	257	306	e250	e220	e180	e300	421	453	225	85	53	85
25	257	295	e260	e230	e170	e400	432	436	216	122	56	83
26	250	295	e260	e240	e160	e380	458	481	206	141	54	77
27	234	e200	e250	e230	e170	e360	500	488	196	151	51	70
28	252	e140	e250	e230	e180	e400	575	511	175	146	52	63
29	263	e200	e230	e210	---	e450	537	511	161	130	65	72
30	262	e230	e240	e190	---	e500	470	528	142	118	54	80
31	263	---	e220	e190	---	e600	---	592	---	109	50	---
TOTAL	7485	8032	8180	7180	5340	7100	21952	11903	14118	3303	2106	1790
MEAN	241.5	267.7	263.9	231.6	190.7	229.0	731.7	384.0	470.6	106.5	67.94	59.67
MAX	281	306	300	270	220	600	1080	592	1000	151	101	100
MIN	177	140	220	190	160	140	421	261	142	69	50	37
AC-FT	14850	15930	16230	14240	10590	14080	43540	23610	28000	6550	4180	3550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

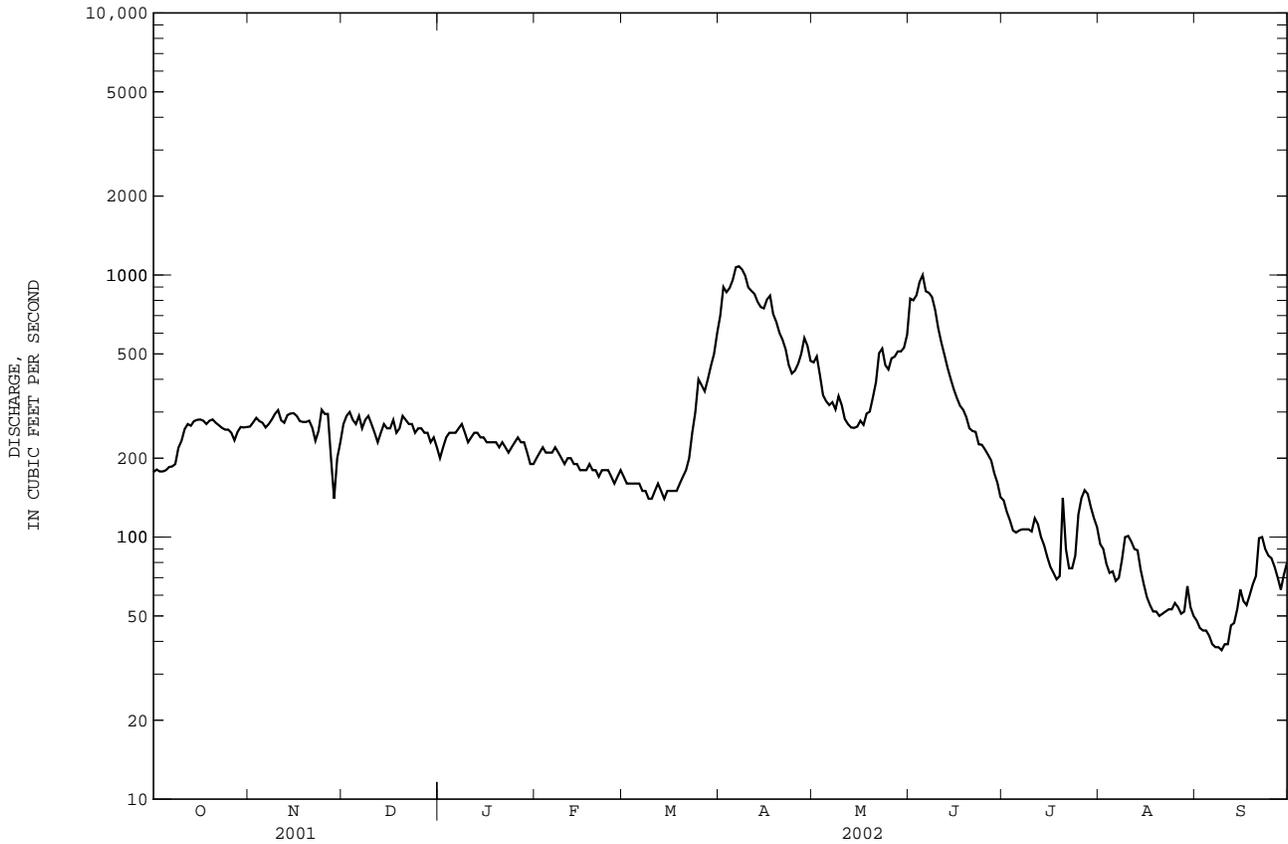
MEAN	411.9	426.6	351.0	317.0	347.0	550.0	1406	3119	4316	1392	494.8	310.4
MAX	1036	745	562	515	654	1190	4390	8568	9999	5256	1484	1198
(WY)	1966	1966	1998	1998	1996	1986	1962	1984	1983	1983	1983	1997
MIN	157	240	226	181	191	205	492	384	471	107	67.9	59.7
(WY)	1957	1953	1953	1963	2002	1964	1995	2002	2002	2002	2002	2002

PLATTE RIVER BASIN

06630000 NORTH PLATTE RIVER ABOVE SEMINOLE RESERVOIR, NEAR SINCLAIR, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	227604		98489		--	
ANNUAL MEAN	623.6		269.8		1123	
HIGHEST ANNUAL MEAN	--		--		2169 1984	
LOWEST ANNUAL MEAN	--		--		270 2002	
HIGHEST DAILY MEAN	3750	May 18	1080	Apr 7	14800	Jun 11 1986
LOWEST DAILY MEAN	136	Sep 6	37	Sep 9	37	Sep 9 2002
ANNUAL SEVEN-DAY MINIMUM	148	Sep 1	39	Sep 5	39	Sep 5 2002
MAXIMUM PEAK FLOW	--		1310 <sup>a</sup>	Apr 6	16200	Jun 11 1986
MAXIMUM PEAK STAGE	--		4.55 <sup>b</sup>	Apr 2	11.30	Jun 11 1986
INSTANTANEOUS LOW FLOW	--		--		70	Sep 17 1944
ANNUAL RUNOFF (AC-FT)	451500		195400		813400	
10 PERCENT EXCEEDS	1590		532		3110	
50 PERCENT EXCEEDS	310		230		440	
90 PERCENT EXCEEDS	194		66		225	

a Gage height, 4.23 ft.  
 b Backwater from ice.  
 e Estimated.



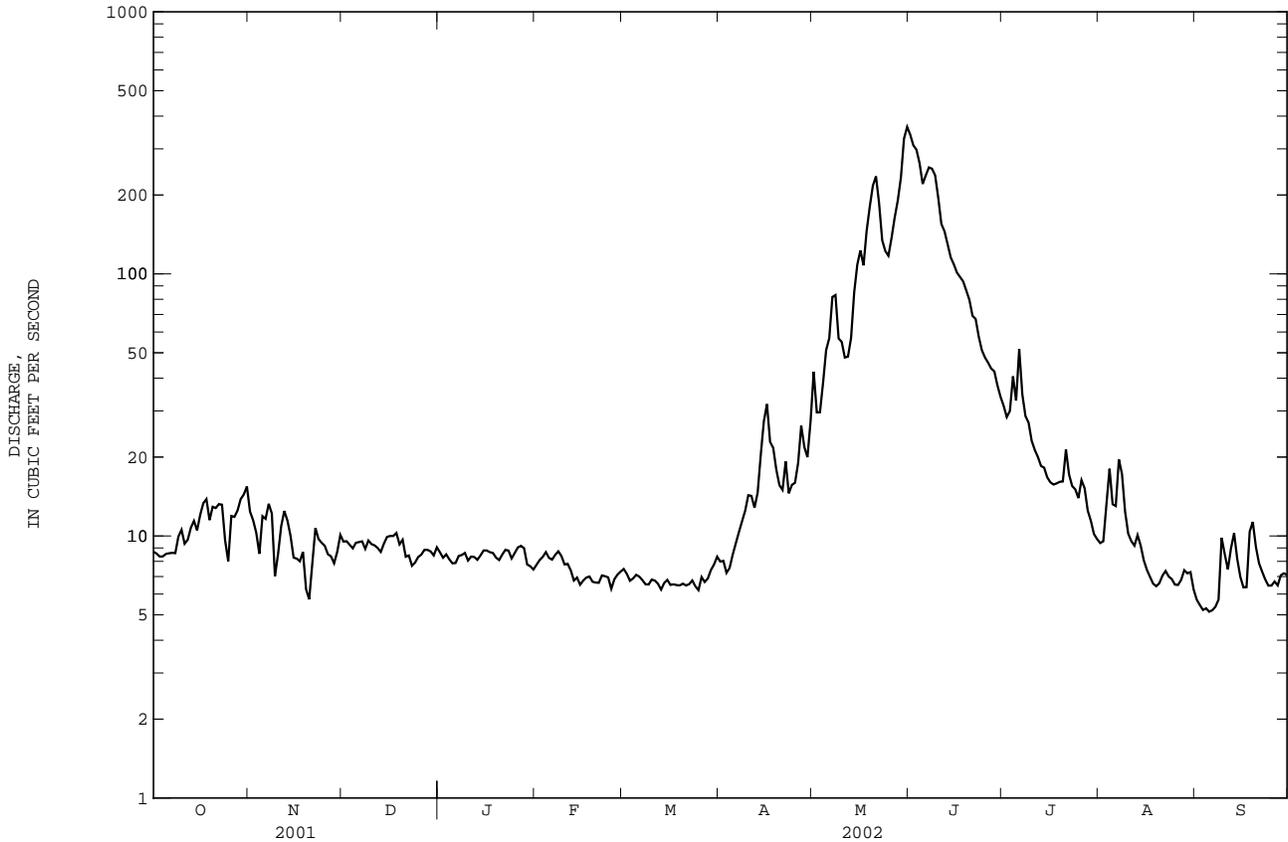


PLATTE RIVER BASIN

06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1955 - 2002	
ANNUAL TOTAL	22084.4		11321.2		--	
ANNUAL MEAN	60.51		31.02		80.44	
HIGHEST ANNUAL MEAN	--		--		142 1971	
LOWEST ANNUAL MEAN	--		--		31.0 2002	
HIGHEST DAILY MEAN	895	May 16	364	May 31	1690	Jun 19 1971
LOWEST DAILY MEAN	5.7	Nov 20	5.1	Sep 5	3.8	Nov 1 1963
ANNUAL SEVEN-DAY MINIMUM	6.3	Feb 9	5.3	Sep 1	4.4	Nov 26 1954
MAXIMUM PEAK FLOW	--		516	May 30	2590 <sup>a</sup>	Jun 19 1971
MAXIMUM PEAK STAGE	--		3.36	May 30	5.92	Jun 24 1983
ANNUAL RUNOFF (AC-FT)	43800		22460		58270	
10 PERCENT EXCEEDS	169		85		260	
50 PERCENT EXCEEDS	11		9.3		15	
90 PERCENT EXCEEDS	7.2		6.6		8.1	

a Gage height, 5.83 ft.  
e Estimated.



06634620 LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY

LOCATION.--Lat 41°57'40", long 106°12'31", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	9.1	e2.0	1.3	0.62	2.9	56	52	9.2	0.84	0.36	1.8
2	4.0	8.5	e2.2	1.3	0.61	2.8	109	52	8.5	0.73	0.44	1.6
3	4.6	8.6	e2.6	1.2	0.61	e2.7	132	55	8.5	0.71	0.39	1.5
4	5.2	e8.2	e3.4	1.2	0.62	e2.7	115	51	15	0.75	0.34	1.5
5	6.8	8.5	e3.2	1.1	e0.70	2.9	113	48	16	0.73	1.0	1.5
6	7.6	9.1	e3.6	1.1	0.70	2.9	123	44	9.2	0.73	0.62	1.5
7	7.1	9.8	e4.0	1.3	0.73	e3.0	128	41	8.2	0.72	0.47	1.5
8	5.9	e9.0	e6.0	1.7	e0.90	e4.0	122	39	7.6	0.64	0.38	1.7
9	7.6	e8.8	4.7	2.0	0.83	e2.5	115	35	6.4	0.68	0.34	2.6
10	9.7	e9.0	3.5	e1.8	0.75	e3.0	99	34	5.6	0.65	0.27	1.7
11	10	9.5	3.0	e1.8	0.79	e4.0	90	37	4.9	0.66	0.28	1.6
12	10	10	2.4	e1.6	0.81	e4.8	101	36	4.4	0.68	0.28	2.3
13	11	11	e2.2	e1.5	0.80	e6.0	90	33	4.1	0.68	0.32	3.2
14	9.9	10	2.0	e1.3	0.77	e5.4	76	31	4.0	0.63	0.24	4.2
15	10	9.6	1.7	e1.1	0.71	e4.6	84	29	3.7	0.60	0.28	3.2
16	10	e9.0	e3.0	e0.90	0.69	e4.0	94	27	4.1	0.59	0.31	2.6
17	9.8	e8.6	e4.0	e0.60	0.83	e5.0	94	29	3.7	0.64	0.28	2.2
18	9.7	e8.0	2.9	0.70	1.0	e6.0	88	26	3.1	0.64	0.39	2.4
19	9.2	e5.0	2.8	e0.70	1.1	e6.2	69	24	2.6	0.72	0.39	2.6
20	9.8	e4.0	2.9	e0.50	1.1	e7.0	61	23	2.0	0.60	0.50	2.3
21	11	e6.0	3.2	0.51	1.0	e7.8	55	22	2.2	0.59	0.62	2.3
22	11	e8.0	3.4	0.55	1.2	e8.6	62	20	2.7	1.6	0.61	2.4
23	11	e6.0	3.3	e0.40	e1.5	e9.2	53	18	2.1	0.48	0.62	2.4
24	e9.0	e4.0	2.6	0.45	e2.0	e9.8	49	17	1.7	4.1	0.65	2.4
25	e8.0	e3.0	1.9	0.39	e2.4	e12	47	17	1.4	11	0.62	2.6
26	e8.4	e2.5	1.5	0.51	e2.0	e13	50	16	1.3	5.9	0.63	2.8
27	10	e3.0	1.2	0.79	e2.5	e16	54	14	1.4	2.4	30	3.0
28	10	e1.5	1.1	1.0	3.0	e20	52	13	1.3	1.3	48	3.4
29	10	e2.0	1.2	1.1	---	e26	56	13	1.2	0.79	4.0	3.4
30	9.8	e2.0	1.2	0.95	---	33	56	12	1.00	0.54	2.6	3.4
31	9.5	---	1.2	0.73	---	40	---	10	---	0.46	2.0	---
TOTAL	269.5	211.3	83.9	32.08	31.27	277.8	2493	918	147.10	42.78	98.23	71.6
MEAN	8.694	7.043	2.706	1.035	1.117	8.961	83.10	29.61	4.903	1.380	3.169	2.387
MAX	11	11	6.0	2.0	3.0	40	132	55	16	11	48	4.2
MIN	3.9	1.5	1.1	0.39	0.61	2.5	47	10	1.0	0.46	0.24	1.5
AC-FT	535	419	166	64	62	551	4940	1820	292	85	195	142

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

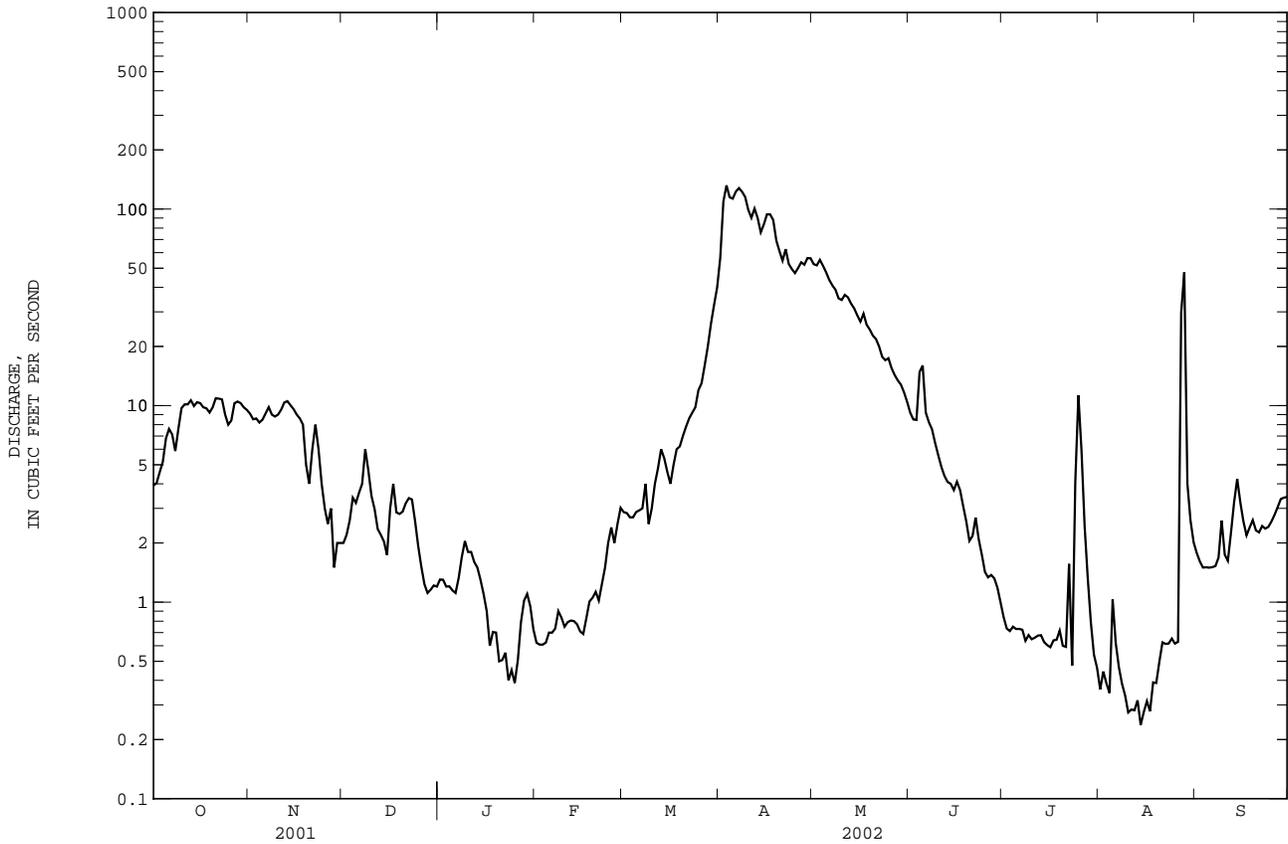
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	9.312	10.30	4.598	2.261	11.60	64.72	123.6	163.2	80.03	16.68	7.351	6.488						
MAX	18.0	36.0	11.5	7.50	110	286	246	388	419	46.0	22.1	19.5						
(WY)	1985	1999	1987	1997	1986	1997	1988	1995	1995	1995	1990	1985						
MIN	3.51	3.56	1.11	0.56	0.48	8.96	28.5	21.2	4.90	1.38	1.33	0.89						
(WY)	1997	2001	2001	2001	2001	2002	1992	1992	2002	2002	2000	1994						

PLATTE RIVER BASIN

06634620 LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1985 - 2002	
ANNUAL TOTAL	14226.34		4676.56		--	
ANNUAL MEAN	38.98		12.81		41.76 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		--		90.1 1999	
LOWEST ANNUAL MEAN	--		--		12.7 1992	
HIGHEST DAILY MEAN	361	May 3	132	Apr 3	1450	Mar 20 1997
LOWEST DAILY MEAN	0.39	Feb 25,27	0.24	Aug 14	0.12 <sup>b</sup>	Jan 24 1998
ANNUAL SEVEN-DAY MINIMUM	0.41	Feb 22	0.28	Aug 10	0.16	Jan 23 1998
MAXIMUM PEAK FLOW	--		240		9500 <sup>c</sup>	
MAXIMUM PEAK STAGE	--		3.09		14.10 <sup>d</sup>	
ANNUAL RUNOFF (AC-FT)	28220		9280		30260	
10 PERCENT EXCEEDS	157		45		126	
50 PERCENT EXCEEDS	7.6		3.0		8.4	
90 PERCENT EXCEEDS	0.55		0.62		1.3	

- a Average discharge, water years 1974-2002, 50.6 ft<sup>3</sup>/s, unadjusted for flow from Boles Spring.
- b No flow at times, water years 1974-1984, site and datum then in use.
- c From slope-area measurement of peak flow.
- d From floodmarks, site and datum then in use.
- e Estimated.



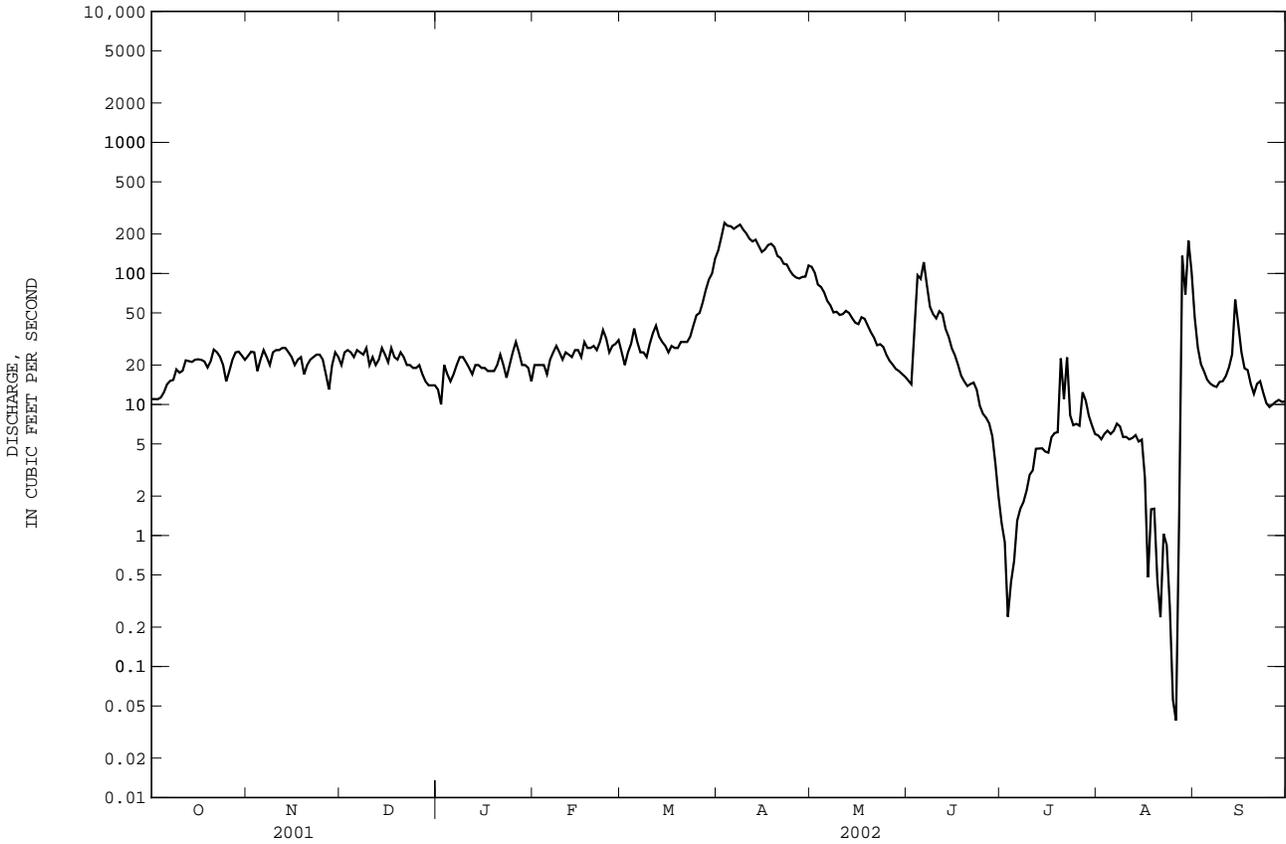


PLATTE RIVER BASIN

06635000 MEDICINE BOW RIVER ABOVE SEMINOE RESERVOIR, NEAR HANNA, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1939 - 2002	
ANNUAL TOTAL	37462.4		13071.22		--	
ANNUAL MEAN	102.6		35.81		180.4	
HIGHEST ANNUAL MEAN	--		--		531 1973	
LOWEST ANNUAL MEAN	--		--		35.8 2002	
HIGHEST DAILY MEAN	723	May 18	244	Apr 3	5330	May 11 1973
LOWEST DAILY MEAN	4.6	Aug 8	0.04	Aug 26	0.04	Aug 26 2002
ANNUAL SEVEN-DAY MINIMUM	6.3	Aug 5	0.42	Aug 20	0.33	Aug 19 2000
MAXIMUM PEAK FLOW	--		295		6010 <sup>a</sup> May 12 1973	
MAXIMUM PEAK STAGE	--		3.27		8.20 <sup>b</sup> Feb 26 1986	
ANNUAL RUNOFF (AC-FT)	74310		25930		130700	
10 PERCENT EXCEEDS	395		94		532	
50 PERCENT EXCEEDS	22		22		52	
90 PERCENT EXCEEDS	11		5.6		15	

a Gage height, 6.74 ft.  
 b From floodmarks, backwater from ice.  
 e Estimated.



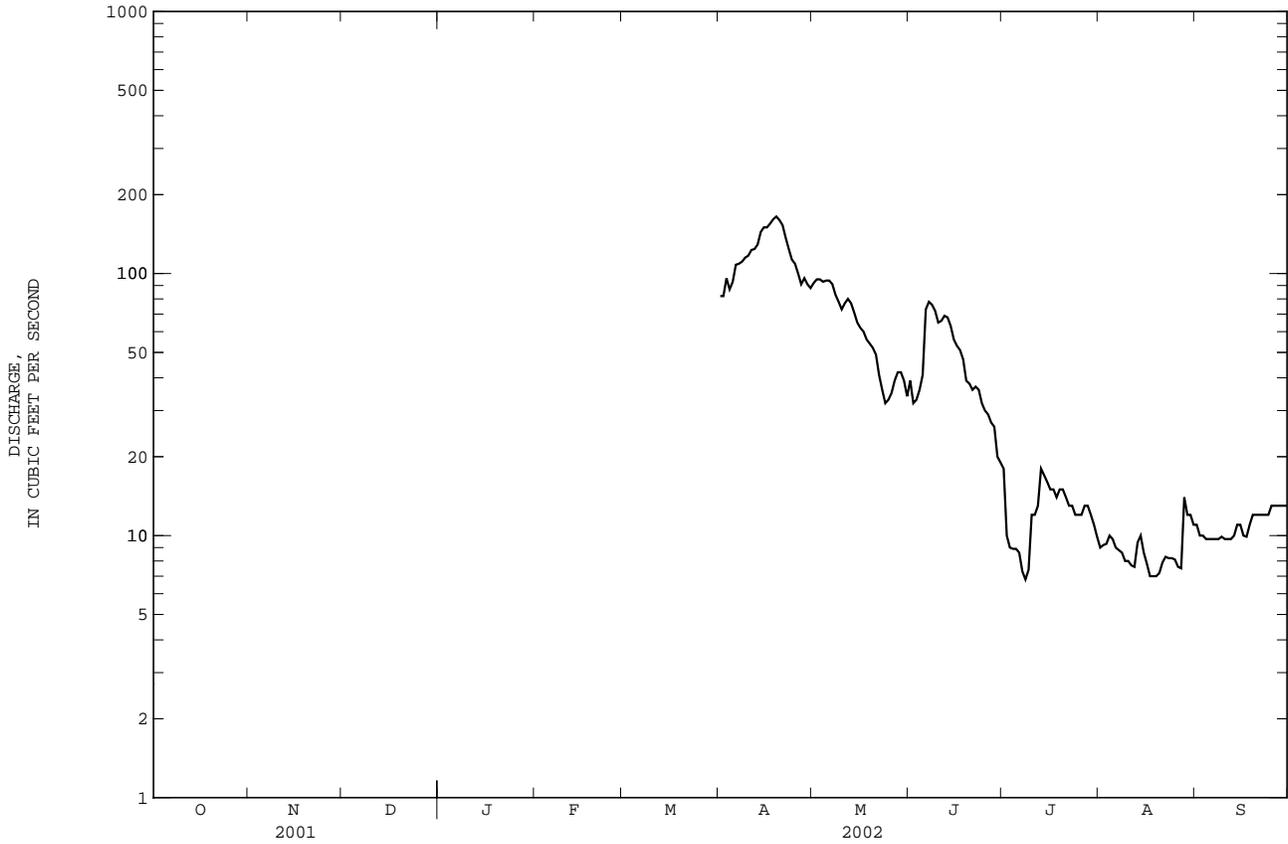


PLATTE RIVER BASIN

06639000 SWEETWATER RIVER NEAR ALCOVA, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1914 - 2002*	
ANNUAL MEAN	--	126.0	
HIGHEST ANNUAL MEAN	--	312	1924
LOWEST ANNUAL MEAN	--	25.8	1940
HIGHEST DAILY MEAN	165 Apr 19	4290	Apr 13 1924
LOWEST DAILY MEAN	6.8 Jul 8	0.50	Jul 30 to Aug 12 1940
MAXIMUM PEAK FLOW	170 Apr 19	4290	Apr 13 1924
MAXIMUM PEAK STAGE	2.51 Apr 19	9.90	Apr 27 1983
ANNUAL RUNOFF (AC-FT)	--	91260	

\* For period of operation.



06645000 NORTH PLATTE RIVER BELOW CASPER, WY

LOCATION.--Lat 42°51'40", long 106°12'53", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>, of which 831 mi<sup>2</sup> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT 16...	1030	644	639	10.6	103	8.4	741	11.0	6.5	--	--	--	--	
JAN 17...	1330	604	635	12.1	100	8.0	706	-8.0	.0	--	--	--	--	
JUN 25...	1015	2350	640	8.6	103	8.2	523	28.5	15.5	--	--	--	--	
SEP 04...	0820	492	634	5.7	72	8.3	777	25.0	17.5	260	62.6	25.8	4.20	
Date		SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L AS NA) (00930) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT DAY) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	<.04	--	
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	.12	--	
JUN 25...	--	--	--	--	--	--	--	--	--	--	--	<.04	--	
SEP 04...	2	66.1	141	15.3	.4	7.70	229	.72	706	532	498	<.04	.34	
Date		NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)
OCT 16...	--	.18	.009	--	.02	--	2	.15	2.1	53	<.06	80	E.03	
JAN 17...	--	.38	.021	--	.04	--	<1	.14	2.6	52	<.06	80	<.04	
JUN 25...	--	.05	<.008	--	E.01	--	5	.21	2.0	48	<.06	60	E.02	
SEP 04...	.40	.16	.027	.051	.04	.065	4	.21	2.3	48	<.06	90	<.04	
Date		CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)
OCT 16...	<.8	.17	2.7	<10	<.08	34	12.2	<.01	2.7	.18	4.3	<1	588	
JAN 17...	<.8	.22	1.5	<10	E.06	34	16.8	E.01	3.2	2.26	5.0	<1	593	
JUN 25...	<.8	.16	1.6	E6	E.07	26	7.1	E.01	2.7	1.66	1.3	<1	429	
SEP 04...	<.8	.24	1.6	E6	.13	42	21.8	<.01	3.3	1.04	3.7	<1	626	

## PLATTE RIVER BASIN

06645000 NORTH PLATTE RIVER BELOW CASPER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	VANA-DIUM, DIS-SOLVED (UG/L) (01085)	ZINC, DIS-SOLVED (UG/L) (01090)	OIL AND GREASE, TOTAL RECOV. METRIC (MG/L) (00556)	1,4-DI-CHLORO-BENZENE DISSOLV (UG/L) (34572)	1METHYL NAPH-THALENE WATER, FLTRD REC (UG/L) (62054)	26DIMET NAPH-THALENE WATER, FLTRD REC (UG/L) (62055)	2METHYL NAPH-THALENE WATER, FLTRD REC (UG/L) (62056)	3-BETA-STANOL, WATER, FLTRD REC (UG/L) (62057)	3METHYL 1(H)-INDOLE, WATER, FLTRD REC (UG/L) (62058)	3-TERT-BHA, WATER, FLTRD REC (UG/L) (62059)	4-CUMYL PHENOL, WATER, FLTRD REC (UG/L) (62060)	4-OCTYL PHENOL, WATER, FLTRD REC (UG/L) (62061)	4-TERT-OCTYL PHENOL, WATER, FLTRD REC (UG/L) (62062)
OCT 16...	<8	2	<7	--	--	--	--	--	--	--	--	--	--
JAN 17...	<8	1	<7	--	--	--	--	--	--	--	--	--	--
JUN 25...	<8	1	<7	--	--	--	--	--	--	--	--	--	--
SEP 04...	<8	4	<7	<.5	<.5	<.5	<.5	<2	<1	<5	<1	<1	<1
Date	5METHYL 1HBENZO TRIAZLE WATER, FLTRD REC (UG/L) (62063)	ACETO-PHENONE WATER, FLTRD REC (UG/L) (62064)	AHT NAPH-THALENE WATER, FLTRD REC (UG/L) (62065)	ANTHRA-CENE DISSOLV (UG/L) (34221)	ANTHRA-QUINONE WATER, FLTRD REC (UG/L) (62066)	BENZO-A-PYRENE DISSOLV (UG/L) (34248)	BENZO-PHENONE WATER, FLTRD REC (UG/L) (62067)	BETA-SITOS-TEROL, WATER, FLTRD REC (UG/L) (62068)	BISPHE-NOL A, WATER, FLTRD REC (UG/L) (62069)	BRO-MACIL, WATER, DISS, FORM DISSOLV (UG/L) (04029)	BROMO-FORM DISSOLV (UG/L) (34288)	CAF-FEINE, WATER, FLTRD REC (UG/L) (50305)	CAMPHOR WATER, FLTRD REC (UG/L) (62070)
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	<2	<.5	M	<.5	<.5	<.5	<.5	<2	<1	<.5	<.5	E.1	<.5
Date	CAR-BARYL WATER, FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBA-ZOLE, WATER, FLTRD REC (UG/L) (62071)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CHOLES-TEROL, WATER, FLTRD REC (UG/L) (62072)	COT-ININE, WATER, FLTRD REC (UG/L) (62005)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	D-LIMO-NENE, WATER, FLTRD REC (UG/L) (62073)	HHHMCP-BENZO-PYRAN, WATER, FLTRD REC (UG/L) (62075)	INDOLE, WATER, FLTRD REC (UG/L) (62076)	ISOBOR-NEOL, WATER, FLTRD REC (UG/L) (62077)	ISO-PHORONE DISSOLV (UG/L) (34409)	ISO-PROPYL BENZENE WATER, FLTRD REC (UG/L) (62078)	
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	--	
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	
JUN 25...	--	--	--	--	--	--	--	--	--	--	--	--	
SEP 04...	<1	<.5	<.5	<2	<1	<.5	<.5	<.5	<.5	<.5	<.5	<.5	
Date	ISO-QUIN-OLINE, WATER, FLTRD REC (UG/L) (62079)	MENTHOL WATER, FLTRD REC (UG/L) (62080)	METAL-AXYL WATER, FLTRD REC (UG/L) (50359)	METHYL SALICY-LATE, WATER, FLTRD REC (UG/L) (62081)	METO-LACHLOR WATER, DISSOLV (UG/L) (39415)	DEET, WATER, FLTRD REC (UG/L) (62082)	NAPHTH-ALENE DISSOLV (UG/L) (34443)	NONYL-PHENOL, DIETHOX, WATER, FLTRD REC (UG/L) (62083)	DI-ETHOXY-OCTYL-PHENOL, WAT FLT REC (UG/L) (61705)	MONO-ETHOXY-OCTYL-PHENOL, WAT FLT REC (UG/L) (61706)	PARA-CRESOL, WATER, FLTRD REC (UG/L) (62084)	PARA-NONYL-PHENOL, WATER, FLTRD REC (UG/L) (62085)	PENTA-CHLORO-PHENOL DISSOLV (UG/L) (34459)
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	<.5	<.5	<.5	<.5	<.5	M	<.5	<5	<1	<1	<1	<5	<2
Date	PHENAN-THREN EDISSOLV (UG/L) (34462)	PHENOL WATER FILTRD (UG/L) (34466)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PYRENE DISSOLV (UG/L) (34470)	STIGMA-STANOL, WATER, FLTRD REC (UG/L) (62086)	TETRA-CHLORO-ETHY-LENE DISSOLV (UG/L) (34476)	FYROL CEF, WATER, FLTRD REC (UG/L) (62087)	FYROL PCF, WATER, FLTRD REC (UG/L) (62088)	TRIBUTL PHOS-PHATE, WATER, FLTRD REC (UG/L) (62089)	TRICLO-SAN, WATER, FLTRD REC (UG/L) (62090)	TRI-ETHYL CITRATE, WATER, FLTRD REC (UG/L) (62091)	TRIPHNL PHOS-PHATE, WATER, FLTRD REC (UG/L) (62092)	TRIS(2-BUTOX-E)PHOS-PHATE, WATER, FLTRD REC (UG/L) (62093)
OCT 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	<.5	<.5	<.5	<.5	<2	<.5	<.5	M	<.5	<1	<.5	<.5	<.5

06645000 NORTH PLATTE RIVER BELOW CASPER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	DICHLOR VOS, WATER FLTRD REC (UG/L) (38775)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT 16...	--	8.90
JAN 17...	--	9.37
JUN 25...	--	6.47
SEP 04...	<1.00	9.89

E -- Estimated value

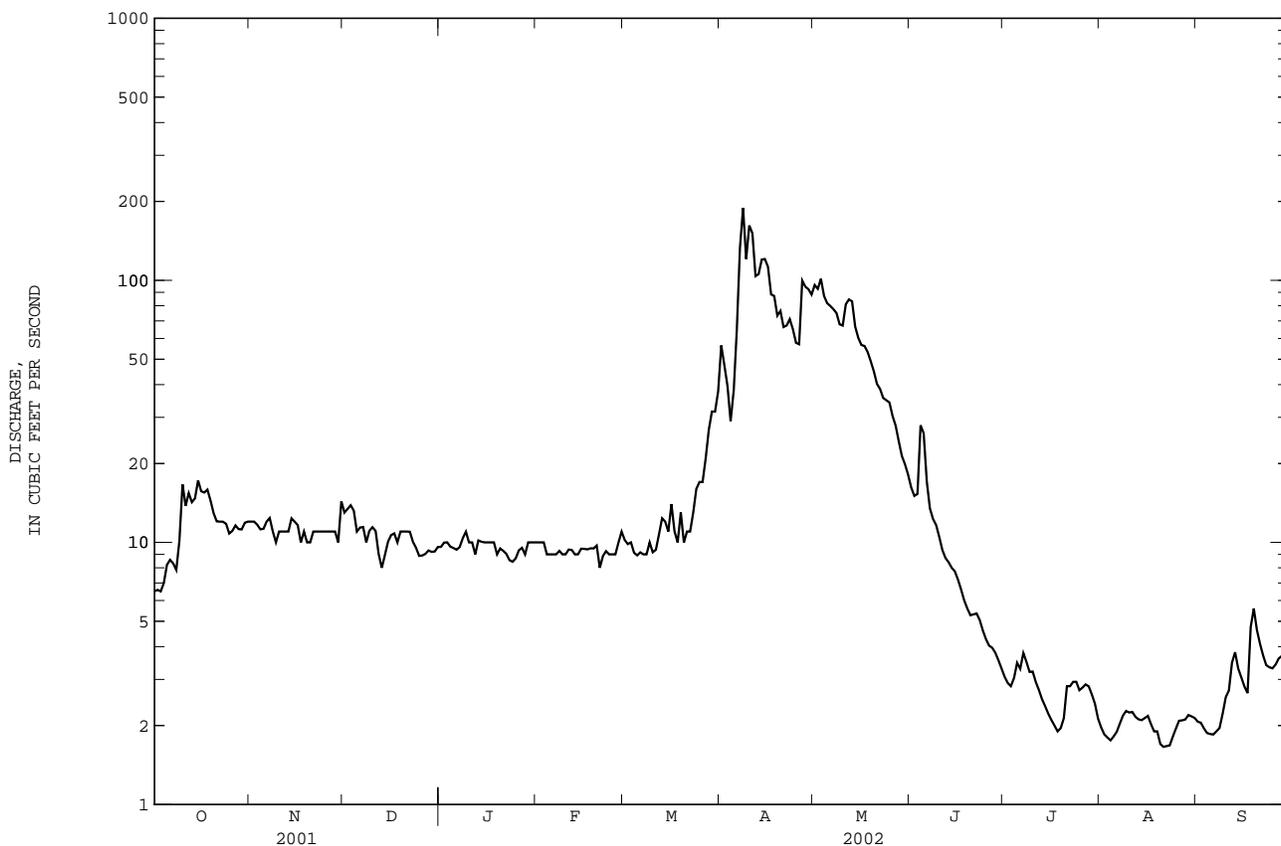
M -- Presence verified, not quantified



06646000 DEER CREEK IN CANYON, NEAR GLENROCK, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1946 - 2002	
ANNUAL TOTAL	18831.0	7011.3	--	
ANNUAL MEAN	51.59	19.21	55.72	
HIGHEST ANNUAL MEAN	--	--	124	1995
LOWEST ANNUAL MEAN	--	--	13.9	1989
HIGHEST DAILY MEAN	678 Apr 29	189 Apr 8	1920	Jun 10 1986
LOWEST DAILY MEAN	4.7 Sep 6	1.7 Aug 20-23	1.1	Sep 17 1990
ANNUAL SEVEN-DAY MINIMUM	5.0 Aug 31	1.8 Aug 18	1.4	Sep 12 1990
MAXIMUM PEAK FLOW	--	292 Apr 8	3200	Jun 10 1986
MAXIMUM PEAK STAGE	--	4.86 Apr 8	9.42	Jun 10 1986
ANNUAL RUNOFF (AC-FT)	37350	13910	40370	
10 PERCENT EXCEEDS	160	65	164	
50 PERCENT EXCEEDS	13	10	11	
90 PERCENT EXCEEDS	7.1	2.1	4.0	

e Estimated.



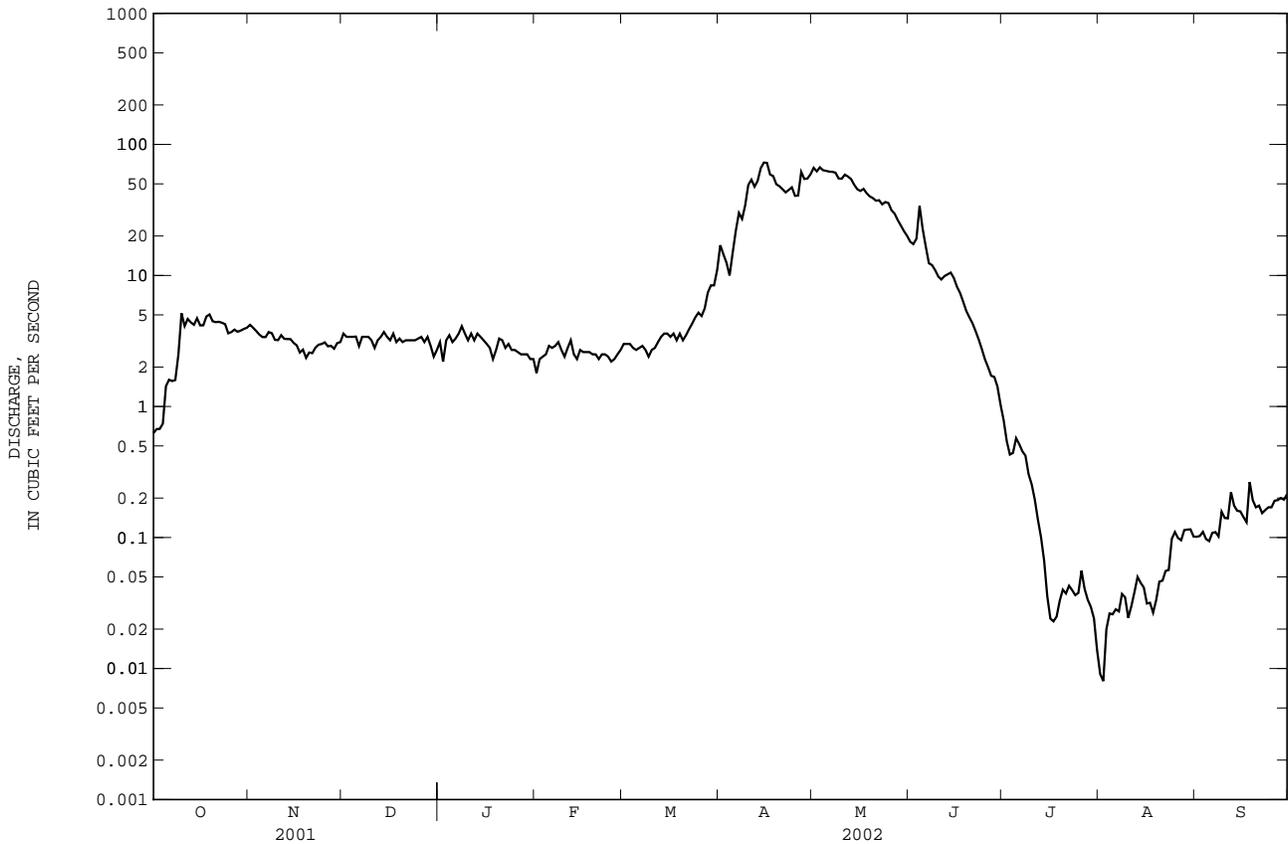


PLATTE RIVER BASIN

06647500 BOX ELDER CREEK AT BOXELDER, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1946 - 2002
ANNUAL TOTAL	10112.34	3614.89	--
ANNUAL MEAN	27.71	9.904	35.81
HIGHEST ANNUAL MEAN	--	--	85.8 1983
LOWEST ANNUAL MEAN	--	--	6.95 1989
HIGHEST DAILY MEAN	330 May 1	73 Apr 15	2460 May 14 1965
LOWEST DAILY MEAN	0.12 Sep 6	0.00 Aug 1,2	0.00 Several days, some years
ANNUAL SEVEN-DAY MINIMUM	0.16 Sep 1	0.02 Jul 28	0.00 Some years
MAXIMUM PEAK FLOW	--	82 Apr 16	4530 May 14 1965
MAXIMUM PEAK STAGE	--	2.39 Apr 16	8.58 <sup>a</sup> May 14 1965
ANNUAL RUNOFF (AC-FT)	20060	7170	25940
10 PERCENT EXCEEDS	79	42	105
50 PERCENT EXCEEDS	3.4	3.1	3.0
90 PERCENT EXCEEDS	0.58	0.05	0.40

a Site and datum then in use.  
e Estimated.



## PLATTE RIVER BASIN

06652000 NORTH PLATTE RIVER AT ORIN, WY

LOCATION.--Lat 42°39'10", long 105°09'32", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>, of which 1,203 mi<sup>2</sup> probably is noncontributing.

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.--Thirteen discharge measurements provided by the Wyoming State Engineer's Office, and seventeen discharge measurements provided by the Bureau of Reclamation.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	782	742	740	e560	e600	715	757	737	486	2130	1830	481
2	648	730	732	e500	e680	699	763	760	495	2120	1800	469
3	586	730	817	e600	e740	510	776	771	543	2110	1830	438
4	1330	736	799	e800	e800	627	761	727	651	2160	1850	431
5	875	742	771	e740	e900	723	763	684	678	2150	1910	444
6	784	742	760	e700	e1000	896	747	670	692	2180	2020	436
7	752	738	696	e800	e900	917	756	642	763	2090	1870	441
8	731	771	802	e900	785	953	812	661	814	1950	1850	458
9	759	783	716	e800	818	780	919	635	1060	1950	1830	495
10	768	756	712	e740	e840	552	869	625	1360	1730	1850	465
11	1580	750	738	e720	657	663	885	684	1400	1520	1870	460
12	1670	750	764	e700	718	970	908	811	1390	1410	1850	488
13	1700	746	716	692	723	1090	857	785	1410	1340	1840	509
14	1620	756	663	690	673	1010	802	690	1430	1490	1870	510
15	944	753	592	678	691	887	797	623	1440	1760	1870	480
16	864	751	652	e660	690	806	807	615	1450	1790	1880	483
17	831	751	673	e620	703	775	796	613	1460	1830	1860	483
18	774	755	614	e560	758	761	776	578	1440	1800	1860	480
19	738	757	741	e640	786	760	744	571	1440	1860	1650	573
20	706	760	693	e700	794	745	773	546	1480	1870	1300	563
21	761	754	712	e800	766	694	825	549	1770	1820	1020	507
22	768	751	761	e760	751	686	806	572	1770	2020	907	512
23	756	757	737	e700	789	689	730	552	1800	1830	871	510
24	752	758	729	e760	774	740	708	552	1930	1810	728	518
25	734	771	673	e840	852	720	703	557	1930	1800	557	517
26	738	783	667	e900	668	741	700	568	1930	1790	513	511
27	742	768	679	e800	513	764	729	555	1960	1840	464	505
28	742	773	664	e700	518	799	807	540	2100	1850	457	509
29	728	750	650	e640	---	774	795	517	2120	1810	459	508
30	734	712	654	e560	---	776	744	528	2110	1820	477	512
31	739	---	e620	e500	---	762	---	494	---	1820	473	---
TOTAL	27636	22576	21937	21760	20887	23984	23615	19412	41302	57450	43416	14696
MEAN	891.5	752.5	707.6	701.9	746.0	773.7	787.2	626.2	1377	1853	1401	489.9
MAX	1700	783	817	900	1000	1090	919	811	2120	2180	2020	573
MIN	586	712	592	500	513	510	700	494	486	1340	457	431
AC-FT	54820	44780	43510	43160	41430	47570	46840	38500	81920	114000	86120	29150

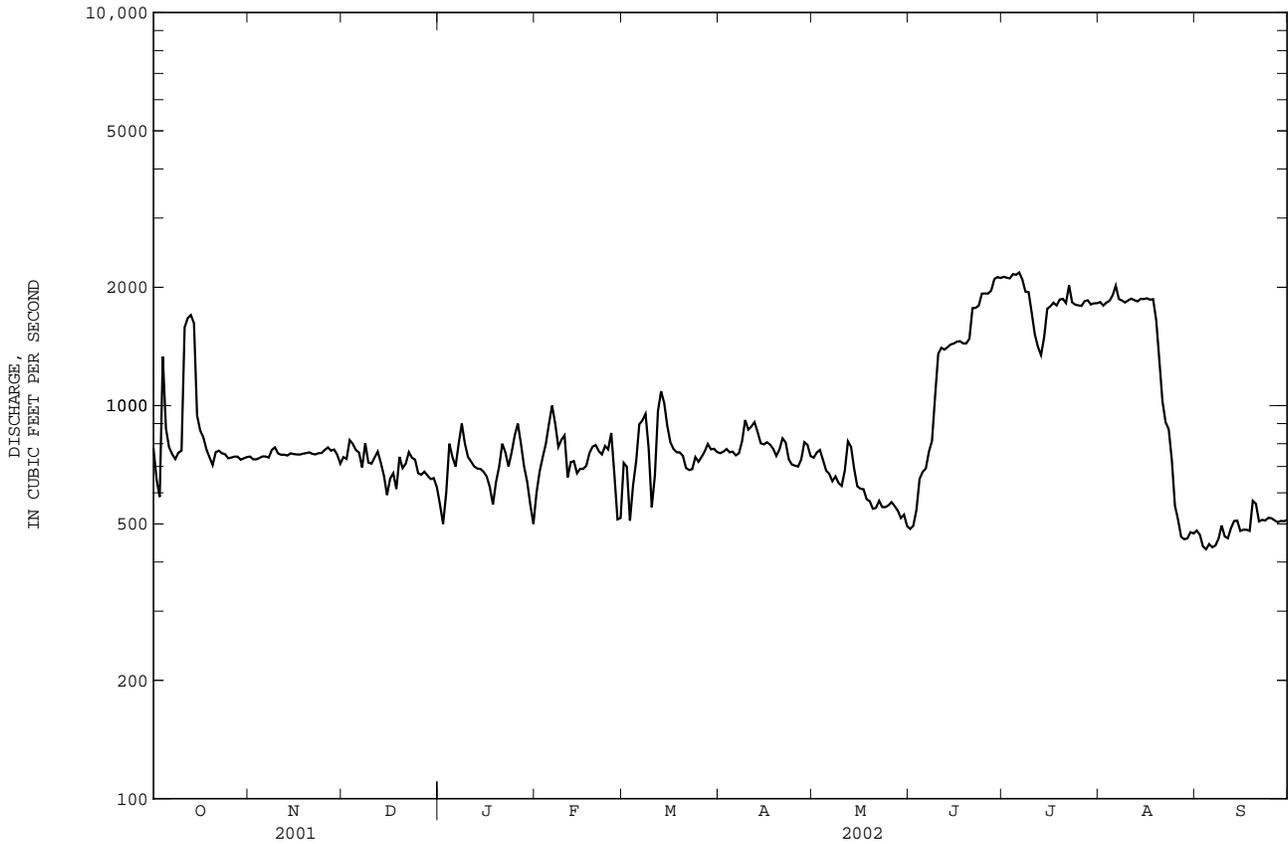
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 2002, BY WATER YEAR (WY)

	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1171	1056	885.3	897.1	982.9	1214	1899	3260	3198	2632	2282	1606																																																																																																
MAX	1708	2191	1223	1171	1472	2911	4578	9274	14430	9970	5258	4150																																																																																																
(WY)	1986	1987	1974	1986	1980	1984	1974	1973	1917	1917	1924	1917																																																																																																
MIN	571	639	544	600	594	618	670	626	958	982	583	399																																																																																																
(WY)	1961	1959	1991	1992	1993	1981	1981	2002	1990	1967	1898	1898																																																																																																

06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1895 - 2002
ANNUAL TOTAL	533963	338671	--
ANNUAL MEAN	1463	927.9	1630
HIGHEST ANNUAL MEAN	--	--	3110 1984
LOWEST ANNUAL MEAN	--	--	924 2002
HIGHEST DAILY MEAN	2830 Apr 30	2180 Jul 6	20300 Jun 27 1917
LOWEST DAILY MEAN	586 Oct 3	431 Sep 4	140 Dec 21 1990
ANNUAL SEVEN-DAY MINIMUM	658 Dec 25	445 Sep 2	324 Sep 25 1966
MAXIMUM PEAK FLOW	--	2590 <sup>a</sup> Aug 6	23800 <sup>b</sup> May 15 1965
MAXIMUM PEAK STAGE	--	7.39 <sup>c</sup> Jan 1	10.45 <sup>d</sup> Jun 12 1970
ANNUAL RUNOFF (AC-FT)	1059000	671800	1181000
10 PERCENT EXCEEDS	2580	1830	3700
50 PERCENT EXCEEDS	1140	754	1280
90 PERCENT EXCEEDS	718	512	695

- a Gage height, 5.02 ft.
- b Gage height, 10.00 ft, site and datum then in use.
- c Backwater from ice.
- d Site and datum then in use.
- e Estimated.

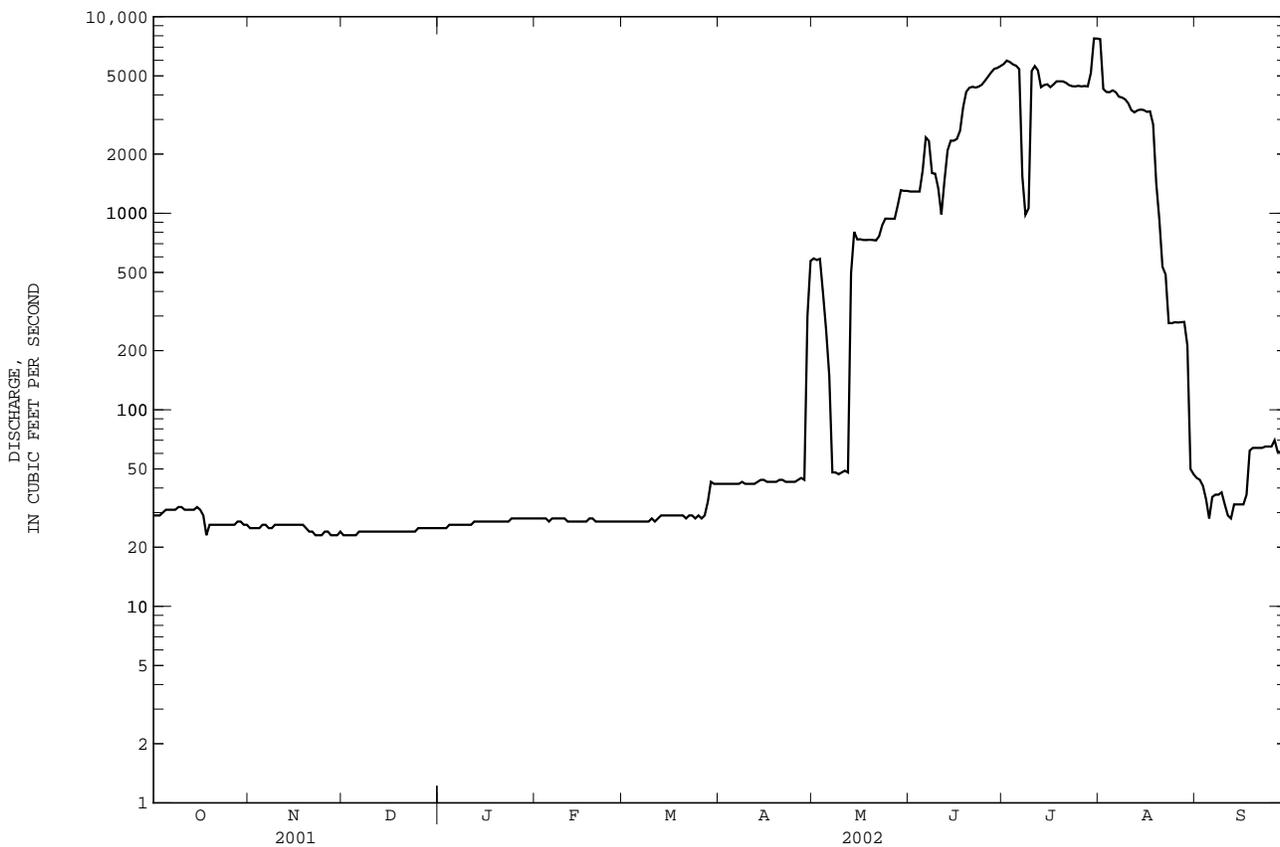




06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1958 - 2002
ANNUAL TOTAL	523732	341600	--
ANNUAL MEAN	1435	935.9	1607
HIGHEST ANNUAL MEAN	--	--	3126 1984
LOWEST ANNUAL MEAN	--	--	920 1961
HIGHEST DAILY MEAN	7620 Jul 25	7750 Jul 30	10300 Jun 30 1984
LOWEST DAILY MEAN	23 Several days	23 Several days	0.41 Oct 17 1977
ANNUAL SEVEN-DAY MINIMUM	23 Jan 31	23 Nov 27	0.64 Dec 20 1990
MAXIMUM PEAK FLOW	--	8140 Jul 29	10300 Jun 29 1984
MAXIMUM PEAK STAGE	--	10.17 Jul 29	11.16 Jun 29 1984
ANNUAL RUNOFF (AC-FT)	1039000	677600	1164000
10 PERCENT EXCEEDS	5050	4390	4930
50 PERCENT EXCEEDS	31	33	162
90 PERCENT EXCEEDS	24	25	2.2

e Estimated.

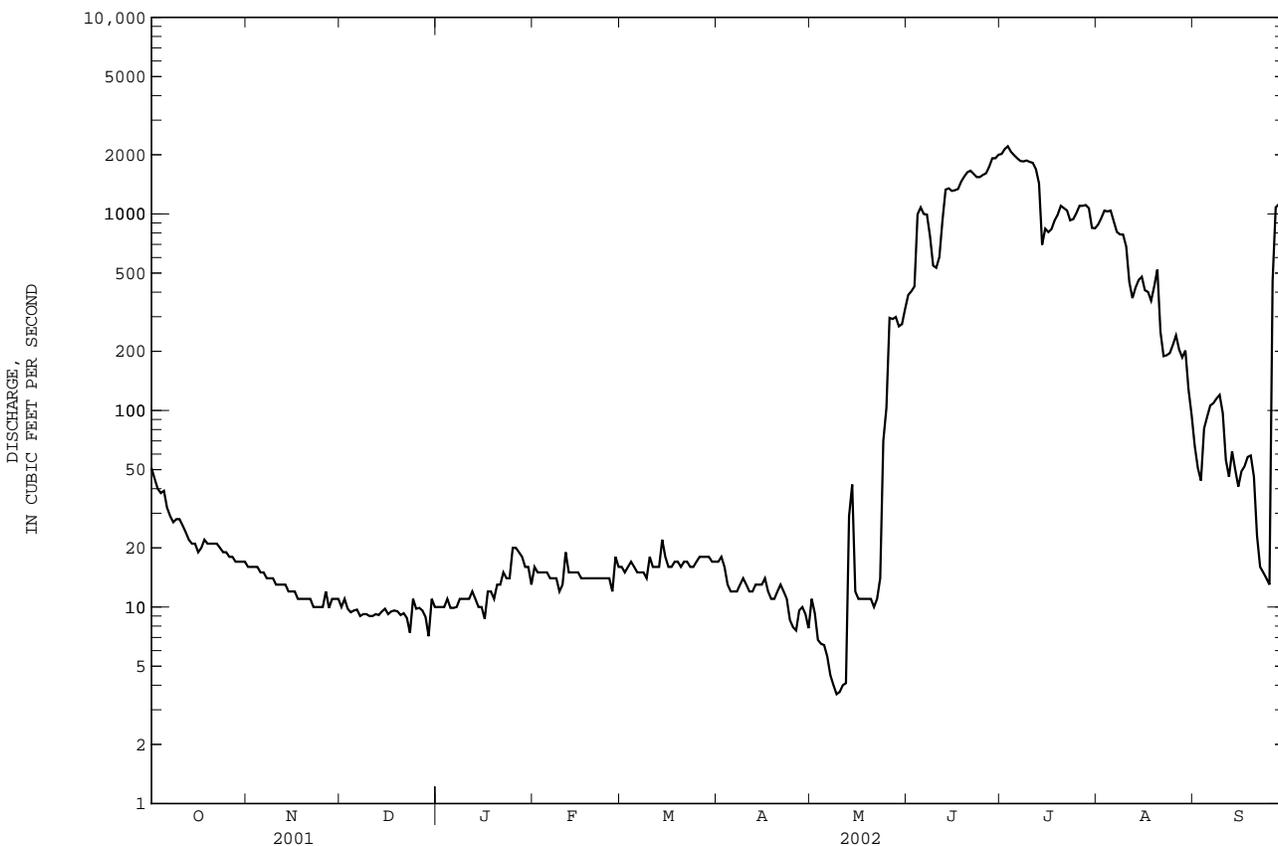




06657000 NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1917 - 2002*	
ANNUAL TOTAL	144897.4		105927.8		--	
ANNUAL MEAN	397.0		290.2		699.9	
HIGHEST ANNUAL MEAN	--		--		2992 1917	
LOWEST ANNUAL MEAN	--		--		178 1954	
HIGHEST DAILY MEAN	1860	Jul 10	2210	Jul 3	19500	Jun 28 1917
LOWEST DAILY MEAN	3.4	Apr 14	3.6	May 9	0.00	Many days, several years
ANNUAL SEVEN-DAY MINIMUM	5.2	Apr 9	4.2	May 6	0.00	Several years
MAXIMUM PEAK FLOW	--		2280	Jul 3	22000 <sup>a</sup>	Jun 26 1955
MAXIMUM PEAK STAGE	--		7.08	Jul 3	9.85 <sup>b</sup>	Jun 26 1955
ANNUAL RUNOFF (AC-FT)	287400		210100		507000	
10 PERCENT EXCEEDS	1440		1100		1860	
50 PERCENT EXCEEDS	15		16		138	
90 PERCENT EXCEEDS	9.3		9.6		4.0	

\* Period of record to 1917 not used in computations, monthly and seasonal records only.  
 a From rating curve extended above 4,500 ft<sup>3</sup>/s on basis of peak-flow measurement of upstream floods.  
 b Site and datum then in use.

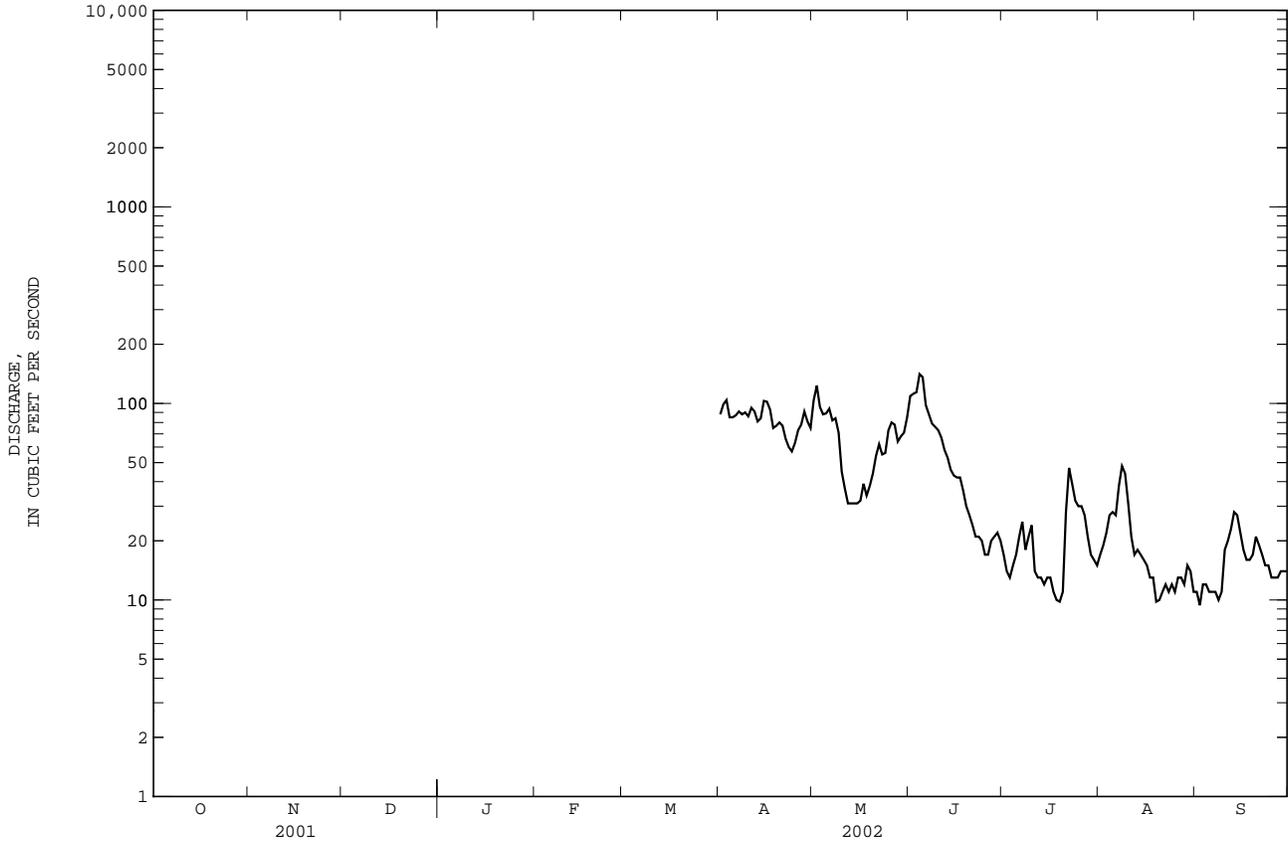




06659500 LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*		WATER YEARS 1912 - 2002*	
ANNUAL MEAN	--		170.0	
HIGHEST ANNUAL MEAN	--		319	1957
LOWEST ANNUAL MEAN	--		64.9	1934
HIGHEST DAILY MEAN	141	Jun 4	3320	Jun 14 1957
LOWEST DAILY MEAN	9.4	Sep 2	0.00	May 1 1912
MAXIMUM PEAK FLOW	206	Apr 3	5060	Jun 10 1923
ANNUAL RUNOFF (AC-FT)	--		123100	

\* For period of operation.

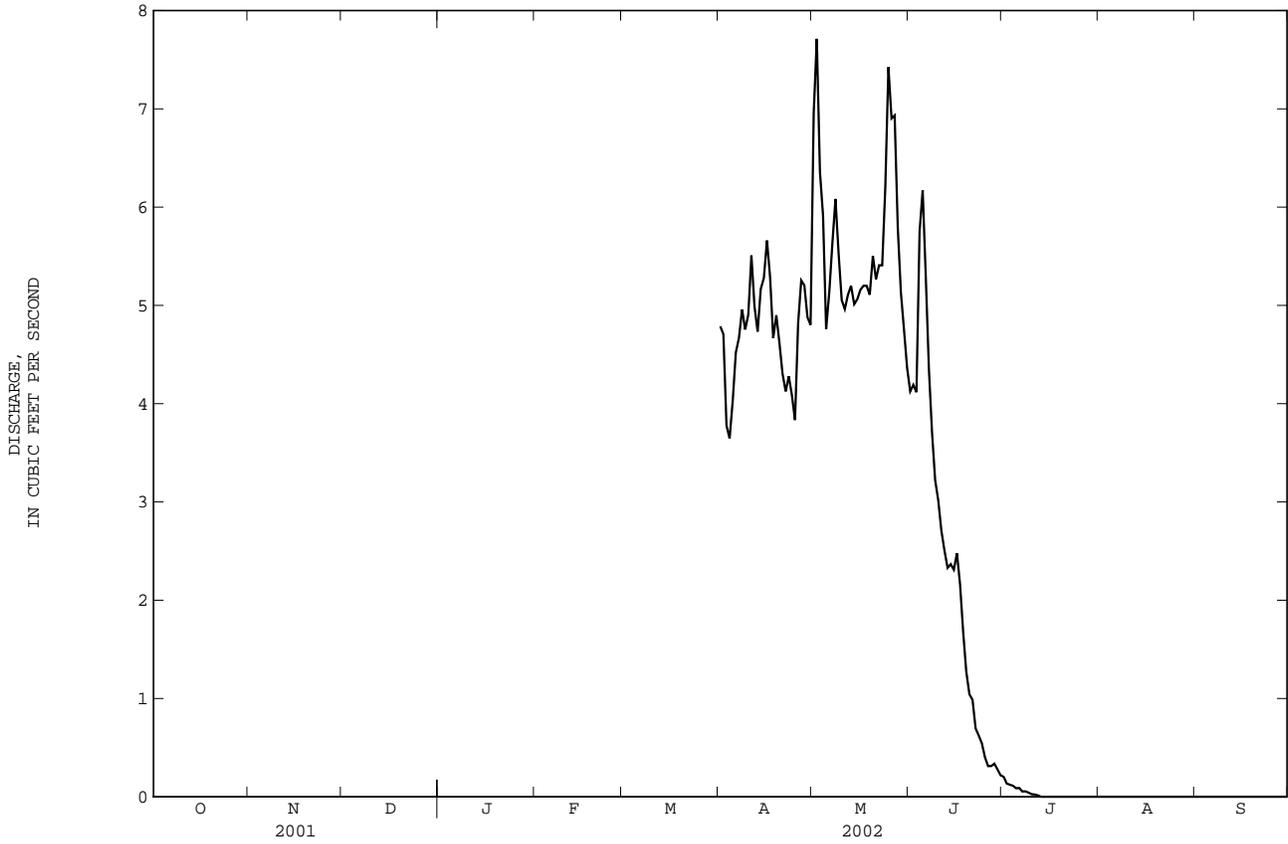




06659580 SAND CREEK AT COLORADO-WYOMING STATE LINE--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1969 - 2002*	
ANNUAL MEAN	--	12.75	
HIGHEST ANNUAL MEAN	--	18.0	1971
LOWEST ANNUAL MEAN	--	6.41	1969
HIGHEST DAILY MEAN	7.7 May 12	1500	Jul 19 1977
LOWEST DAILY MEAN	0.00 Many days	0.00	Many days, 2002
MAXIMUM PEAK FLOW	--	6710 <sup>a</sup>	Jul 19 1977
MAXIMUM PEAK STAGE	--	6.65 <sup>b</sup>	Jul 19 1977
ANNUAL RUNOFF (AC-FT)	--	9240	

\* For period of operation.  
 a From slope-area measurement of peak flow.  
 b From floodmarks.





06661000 LITTLE LARAMIE RIVER NEAR FILMORE, WY--Continued

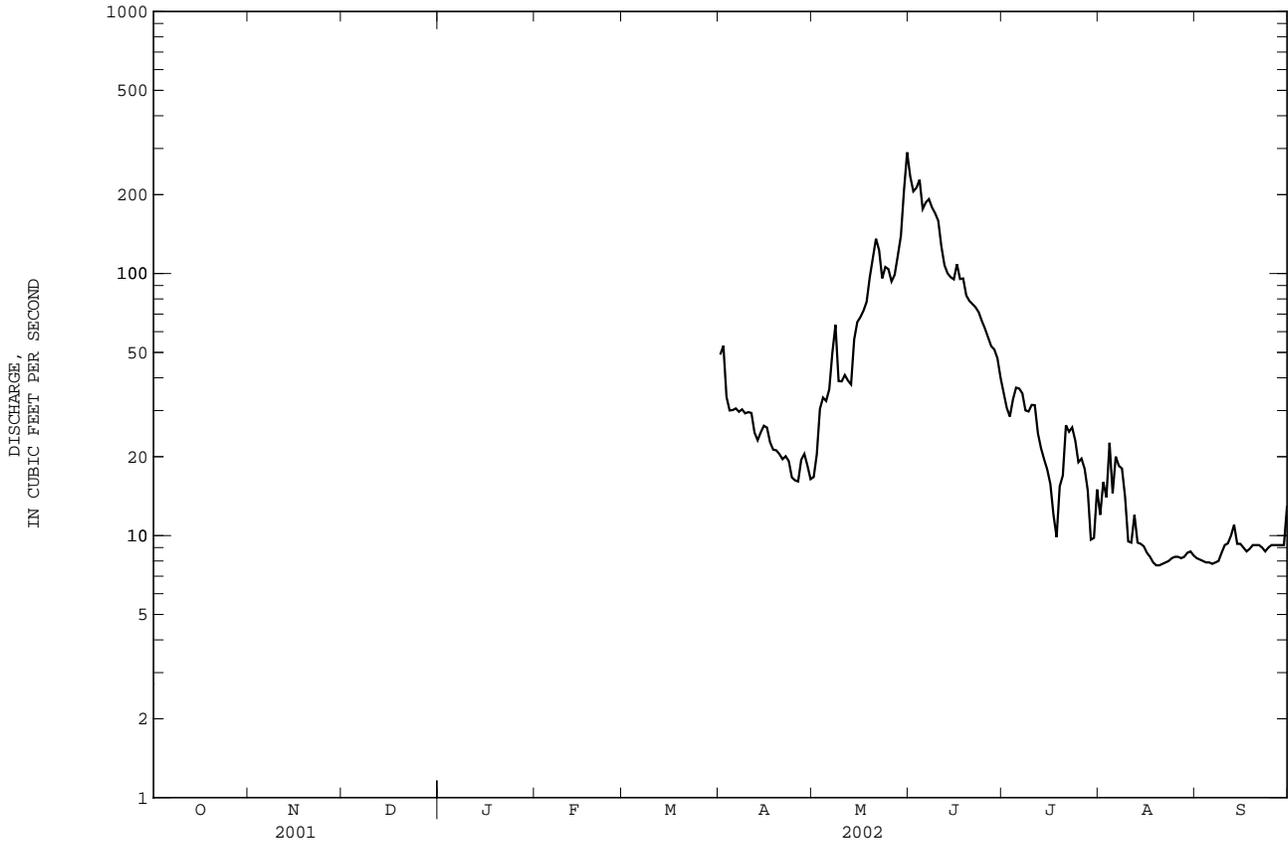
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1903 - 2002\*

ANNUAL MEAN	--		102.7	
HIGHEST ANNUAL MEAN	--		184	1917
LOWEST ANNUAL MEAN	--		32.7	1934
HIGHEST DAILY MEAN	290	May 31	2400	Jun 1 1914
LOWEST DAILY MEAN	7.7	Aug 19,20	1.0	Sep 17 1913
MAXIMUM PEAK FLOW	357	May 31	3450	Jun 10 1965
MAXIMUM PEAK STAGE	2.5	May 31	5.33	Jun 10 1965
ANNUAL RUNOFF (AC-FT)	--		74380	

\* For period of operation.  
e Estimated.

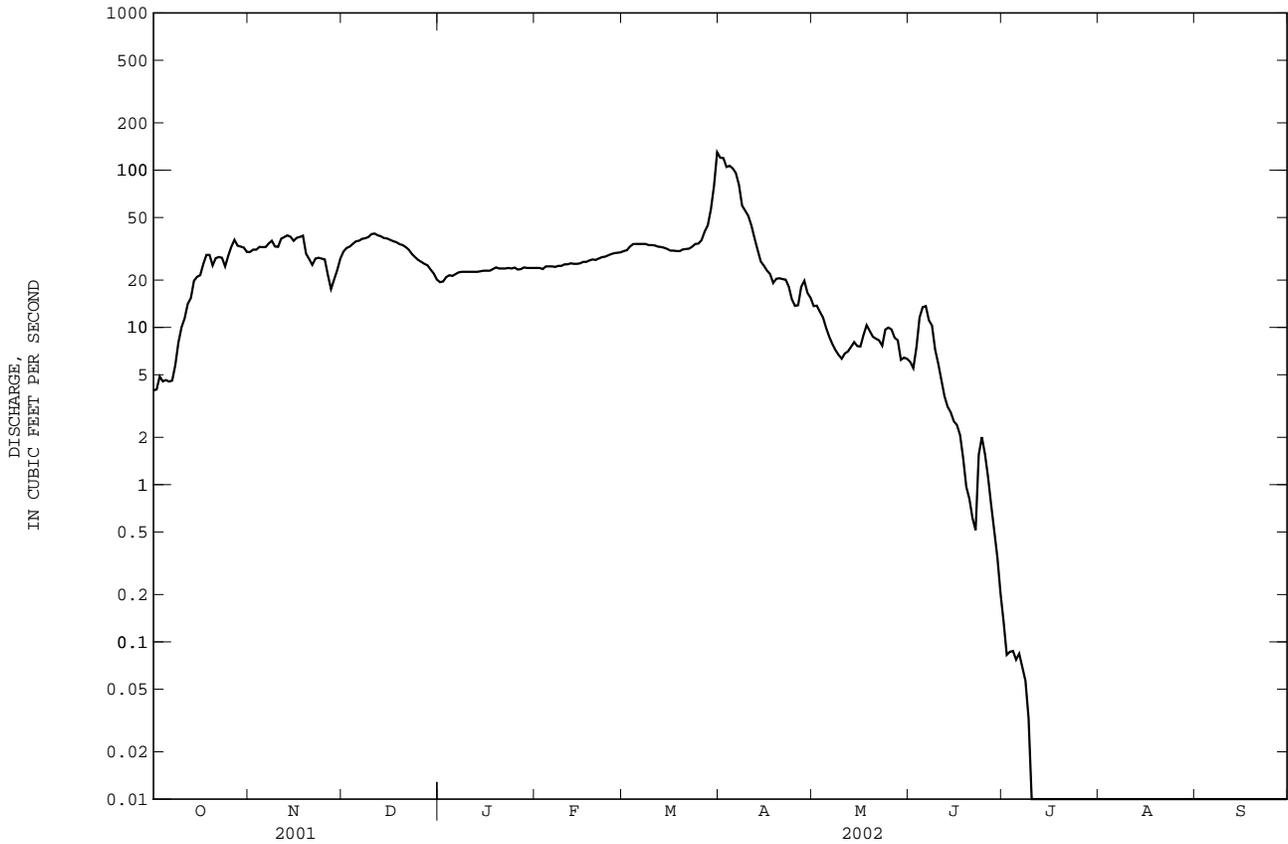




06661585 LARAMIE RIVER NEAR BOSLER, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1973 - 2002	
ANNUAL TOTAL	21561.01		6905.49		--	
ANNUAL MEAN	59.07		18.92		154.4	
HIGHEST ANNUAL MEAN	--		--		475 1983	
LOWEST ANNUAL MEAN	--		--		18.9 2002	
HIGHEST DAILY MEAN	458	May 22	130 <sup>e</sup>	Mar 31	4390	Jun 28 1983
LOWEST DAILY MEAN	0.25	Sep 5	0.00	Jul 10-Sep 30	0.00	Oct 10 1987, Jul 10 to Sep 30 2002
ANNUAL SEVEN-DAY MINIMUM	0.50	Aug 31	0.00	Jul 10	0.00	Jul 10 2002
MAXIMUM PEAK FLOW	--	--	Unknown <sup>b</sup>	Mar 31	4480 <sup>a</sup>	Jun 11 1986
MAXIMUM PEAK STAGE	--	--	Unknown <sup>b</sup>	Mar 31	8.40 <sup>b</sup>	Apr 22 1973
ANNUAL RUNOFF (AC-FT)	42770		13700		111800	
10 PERCENT EXCEEDS	169		36		346	
50 PERCENT EXCEEDS	30		20		63	
90 PERCENT EXCEEDS	2.6		0.00		12	

a Gage height, 7.39 ft.  
 b Ice jam.  
 e Estimated.





06664400 SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY--Continued

SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

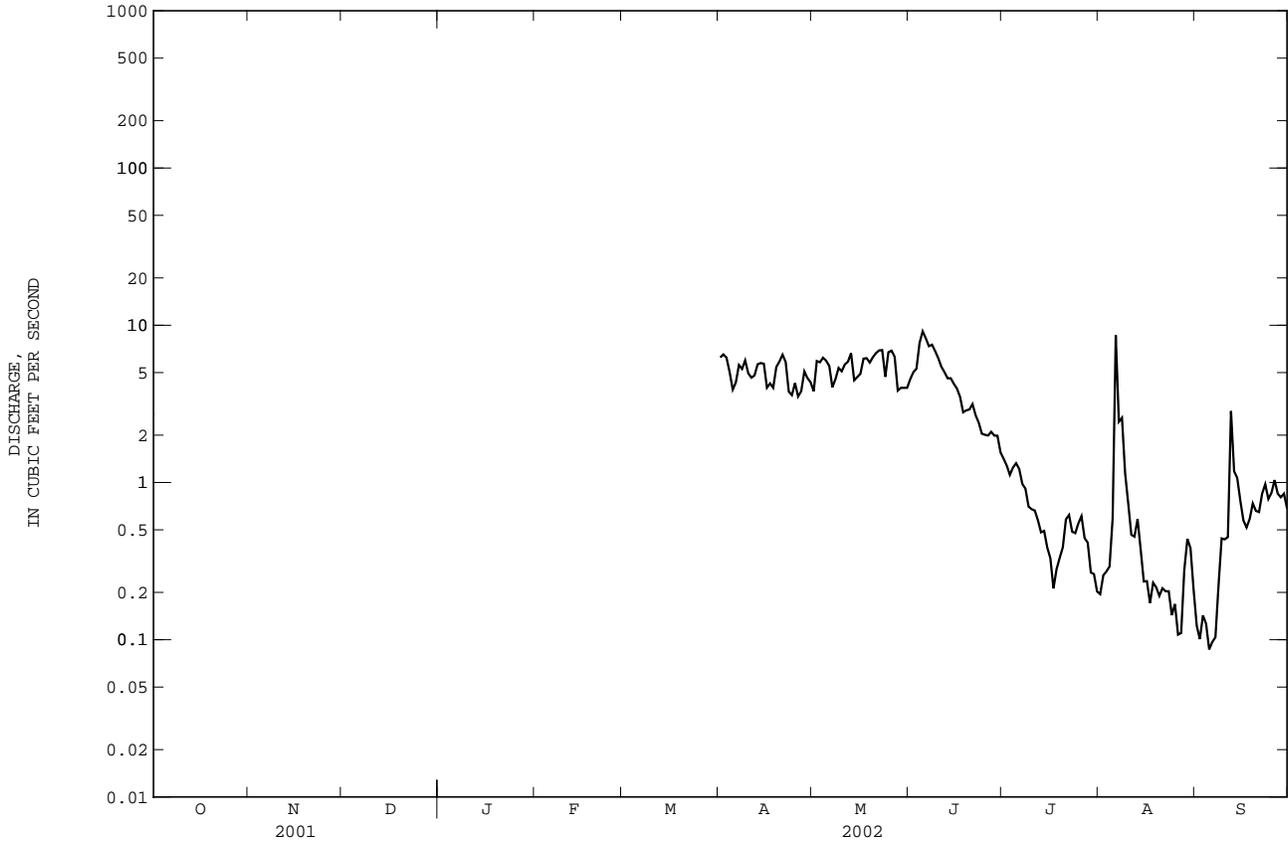
WATER YEARS 1974 - 2002\*

HIGHEST DAILY MEAN	9.2	Jun 5	1280	Aug 20 1990
LOWEST DAILY MEAN	0.09	Sep 5	0.09	Sep 5 2002
MAXIMUM PEAK FLOW	24	Aug 6	19900 <sup>a</sup>	Aug 20 1990
MAXIMUM PEAK STAGE	1.63	Aug 6	15.60 <sup>b</sup>	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.

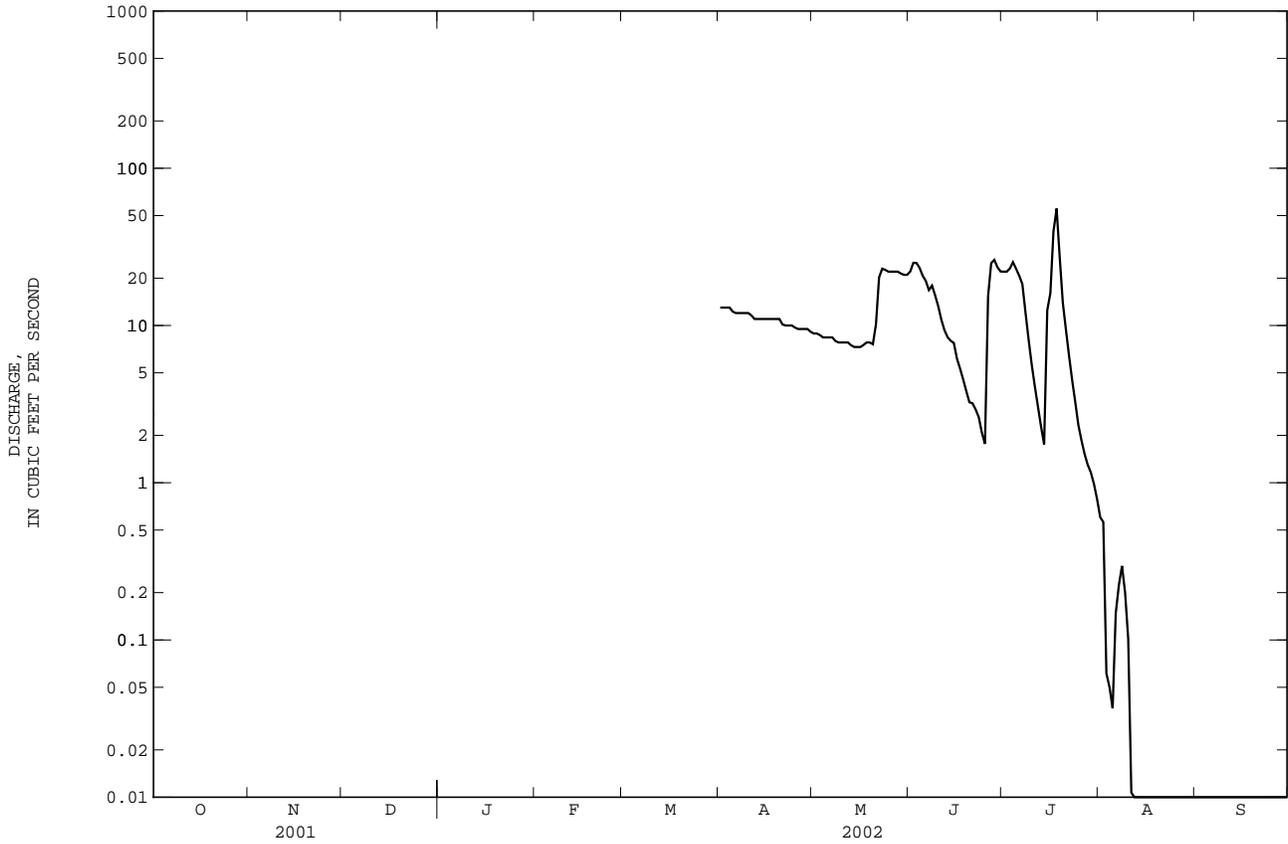




06665790 SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR*	WATER YEARS 1980 - 2002*
HIGHEST DAILY MEAN	55 Jul 18	1280 May 22 1983
LOWEST DAILY MEAN	0.00 Aug 12-Sep 30	0.00 Sep 1 1981, Aug 12 to Sep 30 2002
MAXIMUM PEAK FLOW	79 Jul 17	6900 <sup>a</sup> Aug 20 1990
MAXIMUM PEAK STAGE	1.17 Jul 17	8.35 <sup>b</sup> Aug 20 1990

\* For period of operation.  
 a From rating curve extended above 1,300 ft<sup>3</sup>/s on basis of contracted opening measurement of peak flow.  
 b From floodmarks.  
 e Estimated.



PLATTE RIVER BASIN

06669050 WHEATLAND CREEK BELOW WHEATLAND, WY

LOCATION.--Lat 42°05'05", long 104°57'02", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STAND-ARDS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT 25...	0915	.88	651	10.2	93	8.6	1210	2.0	4.5	--	--	--	--	
FEB 28...	1010	.78	639	13.3	115	8.8	1320	-1.0	2.0	--	--	--	--	
MAY 15...	0945	.48	643	10.3	122	9.1	1250	15.0	15.0	--	--	--	--	
AUG 12...	1010	.26	649	5.8	73	8.5	1780	14.0	18.0	430	105	39.7	21.8	
Date		SODIUM AD-SORPTION RATIO (00931)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	
OCT 25...	--	--	--	--	--	--	--	--	--	.24	--	3.96	.064	
FEB 28...	--	--	--	--	--	--	--	--	--	5.55	--	2.96	.074	
MAY 15...	--	--	--	--	--	--	--	--	--	.71	--	1.55	.133	
AUG 12...	4	203	379	235	73.1	198	1.53	.79	1130	11.2	16	.40	.261	
Date		PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	1,4-DI-CHLORO-BENZENE DISSOLV (UG/L) (34572)	1METHYL NAPH-THALENE FILTERD REC (UG/L) (62054)	26DIMET NAPH-THALENE FILTERD REC (UG/L) (62055)	2METHYL NAPH-THALENE FILTERD REC (UG/L) (62056)	3-BETA-COPRO-STANOL, WATER, FILTERD REC (UG/L) (62057)	3METHYL 1(H)-INDOLE, WATER, FILTERD REC (UG/L) (62058)	3-TERT-BHA, WATER, FILTERD REC (UG/L) (62059)
OCT 25...	--	.09	--	--	130	E100k	--	--	--	--	--	--	--	--
FEB 28...	--	1.73	--	--	190	110	--	--	--	--	--	--	--	--
MAY 15...	--	.67	--	--	E27k	E26k	--	--	--	--	--	--	--	--
AUG 12...	3.12	2.65	4.58	>2700	>2000	14	<.5	<.5	<.5	<.5	<2	<1	<5	
Date		4-CUMYL PHENOL, WATER, FILTERD REC (UG/L) (62060)	4-OCTYL PHENOL, WATER, FILTERD REC (UG/L) (62061)	4-TERT-OCTYL PHENOL, WATER, FILTERD REC (UG/L) (62062)	5METHYL 1HBENZO TRIAZLE WATER, FILTERD REC (UG/L) (62063)	ACETO-PHENONE WATER, FILTERD REC (UG/L) (62064)	AHT NAPH-THALENE WATER, FILTERD REC (UG/L) (62065)	ANTHRA-QUINONE WATER, FILTERD REC (UG/L) (34221)	ANTHRA-QUINONE WATER, FILTERD REC (UG/L) (62066)	BENZO-A-PYRENE DISSOLV (UG/L) (34248)	BENZO-PHENONE WATER, FILTERD REC (UG/L) (62067)	BETA-SITOS-TEROL, WATER, FILTERD REC (UG/L) (62068)	BISPHE-NOL A, WATER, FILTERD REC (UG/L) (62069)	BRO-MACIL, WATER, DISS, REC (UG/L) (04029)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 28...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	<1	<1	<1	<2	<.5	<.5	<.5	<.5	<.5	<.5	E.1	M	M	<.5

06669050 WHEATLAND CREEK BELOW WHEATLAND, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BROMO-FORM DISSOLV (UG/L) (34288)	CAF-FEINE, WATER FLTRD REC (UG/L) (50305)	CAMPBOR WATER, FLTRD REC (UG/L) (62070)	CAR-BARYL WATER, FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBA-ZOLE, WATER, FLTRD REC (UG/L) (62071)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CHOLESTEROL, WATER, FLTRD REC (UG/L) (62072)	COT-ININE, WATER, FLTRD REC (UG/L) (62005)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	D-LIMONENE, WATER, FLTRD REC (UG/L) (62073)	FLUOR-ANTHENE DISSOLV (UG/L) (34377)	HHMCP-BENZO-PYRAN, WATER, FLTRD REC (UG/L) (62075)	INDOLE, WATER, FLTRD REC (UG/L) (62076)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	<.5	E.3	<.5	<1	<.5	<.5	<2	M	<.5	<.5	<.5	<.5	<.5

Date	ISOBOR-NEOL, WATER, FLTRD REC (UG/L) (62077)	ISO-PHORONE DISSOLV (UG/L) (34409)	ISO-PROPYLENE BENZENE WATER, FLTRD REC (UG/L) (62078)	ISO-QUINOLINE, WATER, FLTRD REC (UG/L) (62079)	MENTHOL WATER, FLTRD REC (UG/L) (62080)	METAL-AXYL WATER, FLTRD REC (UG/L) (50359)	METHYL-SALICY-LATE, WATER, FLTRD REC (UG/L) (62081)	METO-LACHLOR WATER, DISSOLV REC (UG/L) (39415)	DEET, WATER, FLTRD REC (UG/L) (62082)	NAPHTH-ALENE DISSOLV (UG/L) (34443)	NONYL-PHENOL, DIETHOX WATER, FLTRD REC (UG/L) (62083)	DI-ETHOXY-OCTYL-PHENOL WAT FLT REC (UG/L) (61705)	MONO-OCTYL-PHENOL WAT FLT REC (UG/L) (61706)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	E.5	<.5	E4	<1	E1

Date	PARA-CRESOL, WATER, FLTRD REC (UG/L) (62084)	PARA-NONYL-PHENOL, WATER, FLTRD REC (UG/L) (62085)	PENTA-CHLORO-PHENOL DISSOLV (UG/L) (34459)	PHENAN-THREN WATER EDISSOLV (UG/L) (34462)	PHENOL WATER FILTRD (UG/L) (34466)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PYRENE DISSOLV (UG/L) (34470)	STIGMA-STANOL, WATER, FLTRD REC (UG/L) (62086)	TETRA-CHLORO-ETHY-LENE DISSOLV (UG/L) (34476)	FYROL CEF, WATER, FLTRD REC (UG/L) (62087)	FYROL PCF, WATER, FLTRD REC (UG/L) (62088)	TRIBUTL PHOS-PHATE, WATER, FLTRD REC (UG/L) (62089)	TRICLO-SAN, WATER, FLTRD REC (UG/L) (62090)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	M	E2	<2	<.5	.8	<.5	<.5	<2	<.5	E.3	E.1	E.1	M

Date	TRI-ETHYL CITRATE WATER, FLTRD REC (UG/L) (62091)	TRIPHNL PHOS-PHATE, WATER, FLTRD REC (UG/L) (62092)	TRIS(2-BUTOXE- PHOS-PHATE, WATER, FLTRD REC (UG/L) (62093)	DICHLOR VOS, WATER FLTRD REC (UG/L) (38775)
OCT 25...	--	--	--	--
FEB 28...	--	--	--	--
MAY 15...	--	--	--	--
AUG 12...	<.5	M	E2.4	<1.00

E -- Estimated value  
M -- Presence verified, not quantified  
k -- Counts outside acceptable range (Non-ideal colony count)



06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY--Continued

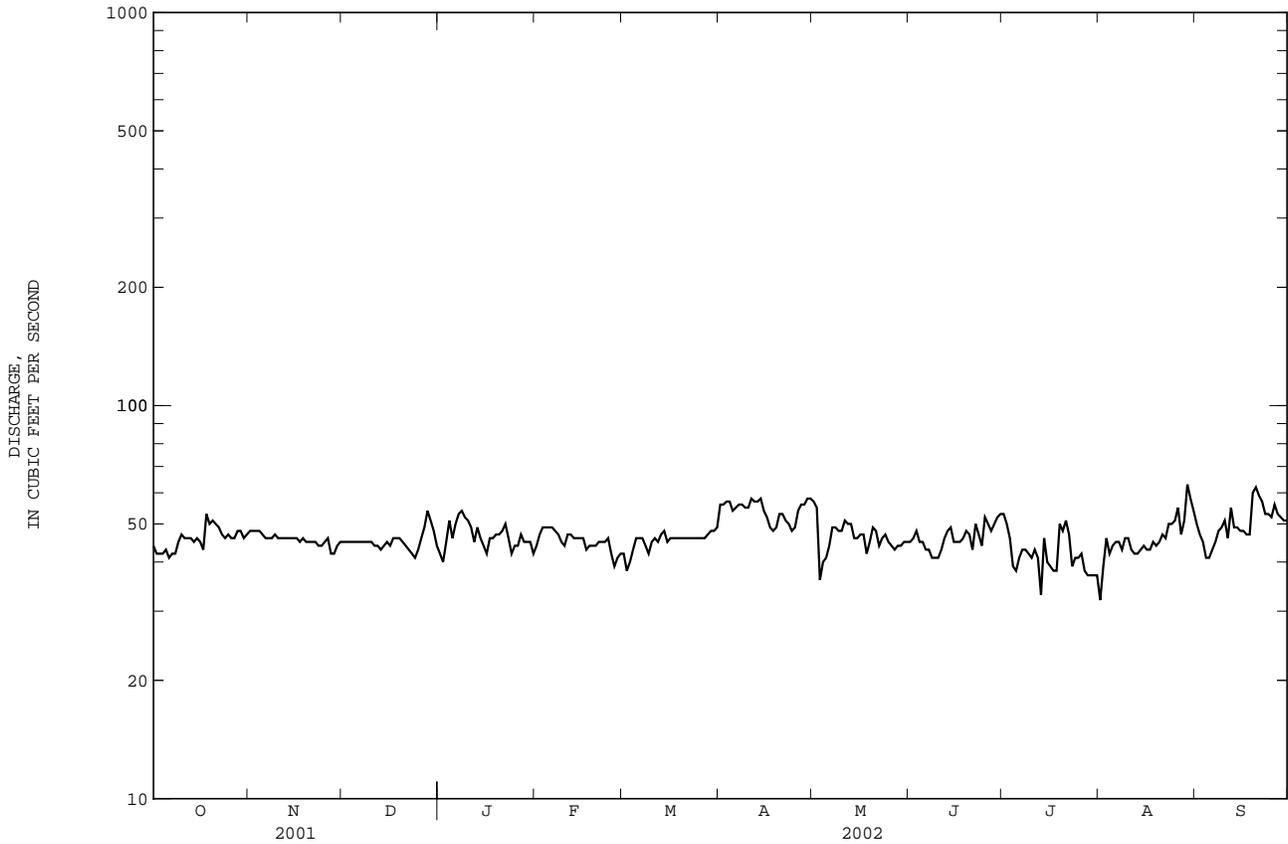
SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1957 - 2002	
ANNUAL TOTAL	22793		17001		--	
ANNUAL MEAN	62.45		46.58		135.2	
HIGHEST ANNUAL MEAN	--		--		672 1983	
LOWEST ANNUAL MEAN	--		--		26.1 1981	
HIGHEST DAILY MEAN	234	May 9	63	Aug 29	5810	May 10 1973
LOWEST DAILY MEAN	36	Aug 8	32	Aug 1	2.0 <sup>a</sup>	Jan 23 1981
ANNUAL SEVEN-DAY MINIMUM	40	Aug 8	37	Jul 27	3.1	Jan 21 1981
MAXIMUM PEAK FLOW	--		105	Aug 26	6260	May 10 1973#
MAXIMUM PEAK STAGE	--		2.94	Feb 10	9.40 <sup>b</sup>	May 10 1973#
ANNUAL RUNOFF (AC-FT)	45210		33720		97940	
10 PERCENT EXCEEDS	98		53		217	
50 PERCENT EXCEEDS	49		46		62	
90 PERCENT EXCEEDS	43		42		30	

# For period of record 1915-2002.

a No flow Jan. 31 to Mar. 20, Oct. 24 to Dec. 17, 1926, Mar.1-26, 1927, Apr. 14, 1938, all flows diverted by Gering-Fort Laramie Canal.

b Site and datum then in use.

e Estimated.



## PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'19", long 104°03'10", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>, of which 1,929 mi<sup>2</sup> 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. Datum 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.--Six discharge measurements provided by Wyoming State Engineer's Office, fourteen discharge measurements provided by U.S. Bureau of Reclamation and eleven discharge measurements provided by Nebraska Department of Natural Resources.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	474	308	244	e215	e185	e175	177	5.1	108	1520	644	358
2	456	304	243	e215	185	e175	176	5.8	136	1580	647	334
3	437	301	243	e215	187	e175	177	5.5	148	1710	706	311
4	422	297	243	217	185	177	181	5.0	178	1800	756	300
5	432	293	243	217	183	178	182	3.8	425	1730	786	284
6	418	300	242	217	184	178	182	3.0	619	1690	1120	276
7	406	299	238	217	182	175	179	3.0	746	1650	870	268
8	395	293	237	216	183	179	179	2.9	799	1590	762	265
9	389	293	237	217	184	180	176	2.3	681	1590	710	269
10	405	293	237	217	e180	174	170	1.2	551	1600	684	263
11	382	288	236	217	179	176	167	1.2	508	1610	628	256
12	376	286	231	216	181	176	163	1.2	521	1570	499	330
13	370	286	231	211	181	174	163	1.2	699	1470	450	285
14	364	284	227	211	181	186	165	0.0	1030	1200	425	264
15	362	278	230	202	180	183	70	0.0	1120	791	460	254
16	352	276	229	e200	176	178	22	0.0	1160	727	514	247
17	348	271	224	e200	175	176	19	0.0	1180	677	466	243
18	343	272	226	193	175	175	18	0.0	1190	660	471	109
19	343	271	227	e190	175	175	17	0.0	1200	706	439	25
20	340	271	223	191	174	175	17	0.0	1280	780	449	22
21	334	271	224	e190	171	175	16	0.0	1360	868	493	19
22	332	271	225	190	170	175	15	0.0	1420	886	410	19
23	330	268	e220	191	170	175	13	0.0	1460	838	366	18
24	322	264	218	e190	170	175	9.1	0.0	1410	793	360	18
25	316	260	218	182	174	172	7.1	0.0	1370	801	367	21
26	316	264	218	187	175	174	6.5	0.0	1330	866	338	52
27	315	258	217	193	179	175	6.1	0.0	1290	907	355	151
28	308	253	212	190	176	172	5.9	52	1350	906	429	556
29	302	e250	e210	193	---	170	5.4	93	1440	907	450	730
30	313	248	214	185	---	173	4.6	95	1470	852	448	835
31	311	---	e215	e185	---	175	---	98	---	700	396	---
TOTAL	11313	8371	7082	6270	5000	5451	2688.7	379.2	28179	35975	16898	7382
MEAN	364.9	279.0	228.5	202.3	178.6	175.8	89.62	12.23	939.3	1160	545.1	246.1
MAX	474	308	244	217	187	186	182	98	1470	1800	1120	835
MIN	302	248	210	182	170	170	4.6	0.00	108	660	338	18
AC-FT	22440	16600	14050	12440	9920	10810	5330	752	55890	71360	33520	14640

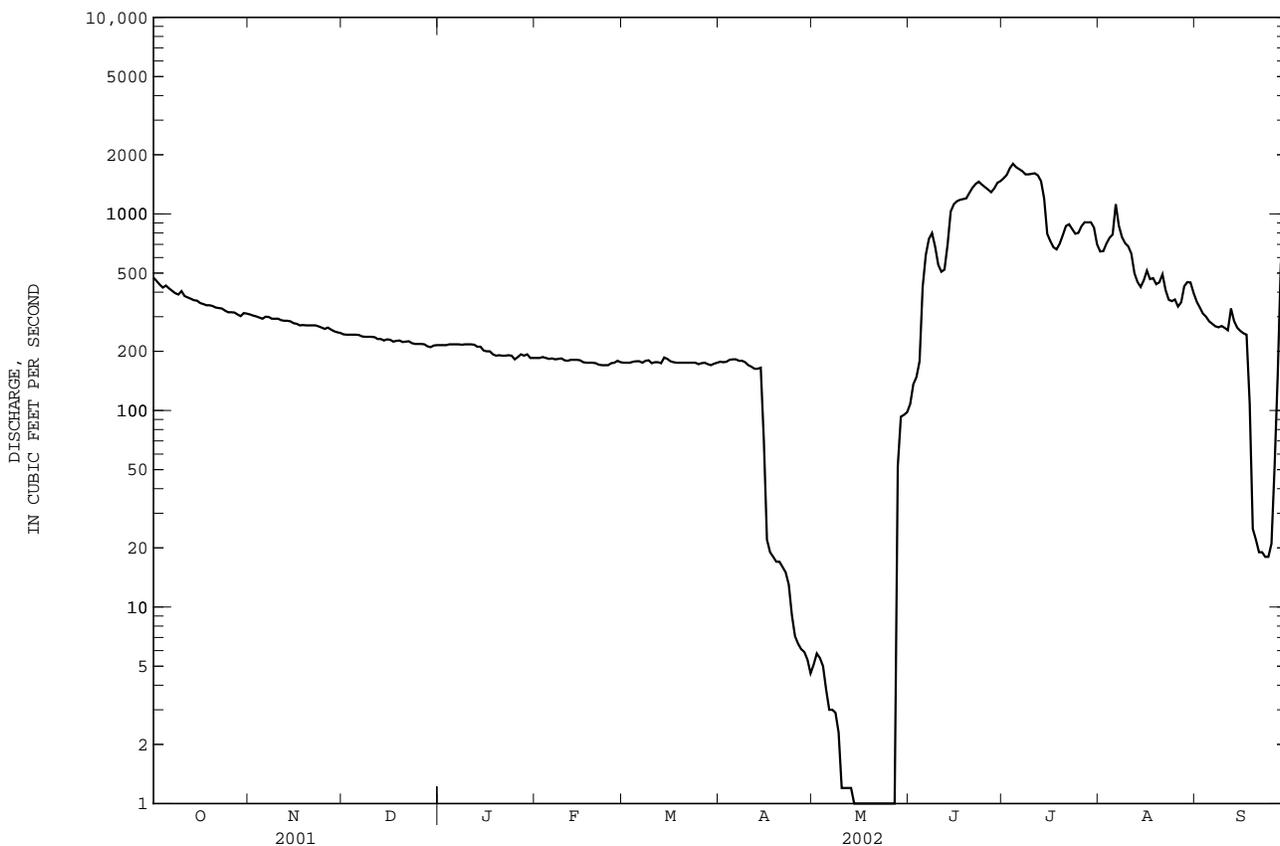
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

	MEAN	503.1	418.0	369.3	327.1	331.7	500.1	653.8	1176	1671	1546	1259	855.1
MAX	1666	1454	895	751	1063	4202	4407	7226	10360	7170	5751	4766	
(WY)	1987	1987	1930	1930	1984	1974	1974	1971	1929	1983	1983	1983	1983
MIN	150	174	191	166	148	141	89.6	12.2	49.1	611	154	230	
(WY)	1957	1935	1991	1993	1993	1991	2002	2002	1992	1934	1934	1934	1934

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1929 - 2002	
ANNUAL TOTAL	192056		134988.9		--	
ANNUAL MEAN	526.2		369.8		785.1	
HIGHEST ANNUAL MEAN	--		--		2863 1984	
LOWEST ANNUAL MEAN	--		--		370 2002	
HIGHEST DAILY MEAN	2540	Jul 10	1800	Jul 4	17600	Jun 2 1929
LOWEST DAILY MEAN	159	Apr 16,17	0.00	May 14-27	0.00	May 14-27 2002
ANNUAL SEVEN-DAY MINIMUM	162	Feb 23	0.00	May 14	0.00	May 14 2002
MAXIMUM PEAK FLOW	--	--	1870	Jul 4	17900 <sup>a</sup>	Jun 2 1929
MAXIMUM PEAK STAGE	--	--	3.52	Jul 4	7.04 <sup>b</sup>	Jun 2 1929
ANNUAL RUNOFF (AC-FT)	380900		267800		568700	
10 PERCENT EXCEEDS	1360		876		1460	
50 PERCENT EXCEEDS	293		230		481	
90 PERCENT EXCEEDS	170		16		204	

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	
NOV 30...	1055	248	653	14.2	125	8.0	942	8.0	3.5	--	--	--	--	
FEB 06...	1530	193	661	10.9	101	7.9	917	10.5	6.0	--	--	--	--	
MAY 17...	1240	2.8*	666	6.6	73	7.7	799	10.5	13.5	--	--	--	--	
30...	1150	82	660	8.6	111	8.1	837	18.5	20.5	--	--	--	--	
AUG 27...	1045	337	665	9.3	114	8.1	829	24.0	18.5	250	68.6	19.0	5.78	
Date		SODIUM ADSORPTION RATIO (00931)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT DAY) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, DIS-SOLVED (MG/L AS N) (00613)	
NOV 30...	--	--	--	--	--	--	--	--	--	.05	--	2.50	.022	
FEB 06...	--	--	--	--	--	--	--	--	--	.14	--	2.59	.030	
MAY 17...	--	--	--	--	--	--	--	--	--	<.04	--	.21	E.004	
30...	--	--	--	--	--	--	--	--	--	<.04	--	.90	.018	
AUG 27...	2	63.8	208	15.4	16.8	191	.69	465	511	<.04	.27	1.24	.011	
Date		PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOSPHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC, DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)
NOV 30...	--	<.02	--	--	--	--	--	--	--	--	--	--	--	--
FEB 06...	--	.03	--	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	--	<.02	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	<.02	--	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	<.06	E.01	<.06	<10	<.006	<.006	<.004	<.005	.012	<.010	<.002	<.041	<.020	
Date		CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER, FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN, DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP ALIN WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS, REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)
NOV 30...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 17...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	<.005	<.018	<.003	E.009	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	



## PLATTE RIVER BASIN

06755960 CROW CREEK AT 19TH STREET, AT CHEYENNE, WY

LOCATION.--Lat 41°07'52", long 104°49'41", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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.

REMARKS.--Records fair, except for discharges less than 0.5 ft<sup>3</sup>/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<sup>3</sup>/s; flood of August 1, 1985, reached a stage of 9.6 ft, present datum, from floodmarks, discharge, 2,980 ft<sup>3</sup>/s, on basis of indirect measurement of peak flow.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.8	e2.6	e2.0	2.5	e5.4	5.2	2.5	1.6	0.36	0.16	0.45
2	2.1	2.9	1.9	e2.0	2.7	e4.3	5.1	4.7	1.3	0.34	0.15	0.46
3	1.9	2.6	2.0	e3.4	e2.9	e4.8	4.6	6.6	2.9	0.34	0.17	0.47
4	2.3	2.4	2.0	3.3	e2.8	e5.6	3.7	4.6	4.9	0.35	0.23	0.51
5	4.0	2.5	e1.9	e3.1	e2.7	e5.8	3.9	3.4	2.4	0.31	4.2	0.53
6	3.2	2.6	e1.7	e3.4	e3.0	e5.3	4.6	2.8	1.6	0.32	0.57	0.54
7	2.3	2.7	e1.6	e4.1	e3.3	e6.3	4.1	2.5	1.3	0.30	0.60	0.56
8	1.7	2.9	e1.7	e5.8	e3.4	e5.9	4.0	2.3	1.1	0.29	0.46	1.2
9	1.4	2.9	2.1	e5.4	e3.0	e5.6	3.6	2.0	0.98	0.29	0.33	2.8
10	1.3	2.8	e2.0	e4.8	e3.0	e6.0	5.0	2.0	0.90	0.28	0.29	0.80
11	1.4	2.9	e1.9	e5.0	e3.3	5.8	4.6	2.0	0.82	0.28	0.28	8.0
12	1.5	3.1	e1.8	e5.0	e3.0	6.2	4.1	2.0	0.79	0.27	0.68	13
13	2.3	3.3	e2.0	e4.6	e2.7	6.7	3.8	2.0	0.83	0.25	0.74	2.6
14	2.7	3.1	e3.0	e4.0	e2.7	e6.0	3.8	2.3	0.80	0.25	0.33	2.0
15	4.5	2.6	e2.8	e3.8	e3.0	e5.0	3.3	2.1	0.74	0.24	0.32	1.8
16	3.4	2.4	e2.8	e3.6	e3.6	e5.2	2.9	3.0	0.73	0.24	1.4	1.7
17	3.6	2.2	e3.9	e3.4	e5.0	e5.2	2.6	3.8	0.70	0.23	1.7	1.6
18	3.6	2.1	e3.5	e3.0	7.0	e4.8	2.4	3.3	0.68	0.22	1.6	1.4
19	3.6	2.1	e3.4	e3.3	e6.0	e5.1	2.4	3.1	0.67	0.21	1.1	1.4
20	4.0	2.1	e3.0	3.1	e5.4	5.6	2.5	2.7	1.0	0.21	0.56	1.4
21	4.0	2.0	e3.2	3.5	e5.2	5.9	2.7	2.5	0.98	0.21	0.46	1.1
22	3.7	2.0	e2.9	3.2	e6.0	6.0	3.0	2.2	0.97	0.22	0.43	0.93
23	2.8	2.1	e2.7	e2.8	8.2	5.9	3.0	2.0	0.92	0.21	0.40	0.95
24	2.7	2.0	e2.6	e2.7	9.4	5.8	2.8	3.9	0.54	0.20	0.40	0.90
25	2.5	2.0	e2.8	2.9	e7.1	e4.8	2.3	2.8	0.49	0.19	0.41	0.90
26	2.1	e1.9	e3.2	3.1	e6.6	e5.0	2.2	2.4	0.46	0.20	2.2	0.96
27	2.0	e1.9	e2.8	3.3	e6.8	5.2	2.8	2.1	0.45	0.19	4.7	0.93
28	2.1	e1.9	e2.5	e3.0	e7.3	5.2	3.0	2.0	0.43	0.29	0.49	0.93
29	2.4	e2.0	e2.3	e2.7	---	5.2	2.9	1.8	0.40	0.22	0.45	0.93
30	2.5	2.0	e2.0	e2.5	---	5.1	2.7	1.7	0.39	0.18	0.45	0.93
31	2.6	---	e2.1	e2.4	---	5.3	---	1.8	---	0.17	0.43	---
TOTAL	82.6	72.8	76.7	108.2	127.6	170.0	103.6	84.9	32.77	7.86	26.69	52.68
MEAN	2.665	2.427	2.474	3.490	4.557	5.484	3.453	2.739	1.092	0.254	0.861	1.756
MAX	4.5	3.3	3.9	5.8	9.4	6.7	5.2	6.6	4.9	0.36	4.7	13
MIN	1.3	1.9	1.6	2.0	2.5	4.3	2.2	1.7	0.39	0.17	0.15	0.45
AC-FT	164	144	152	215	253	337	205	168	65	16	53	104

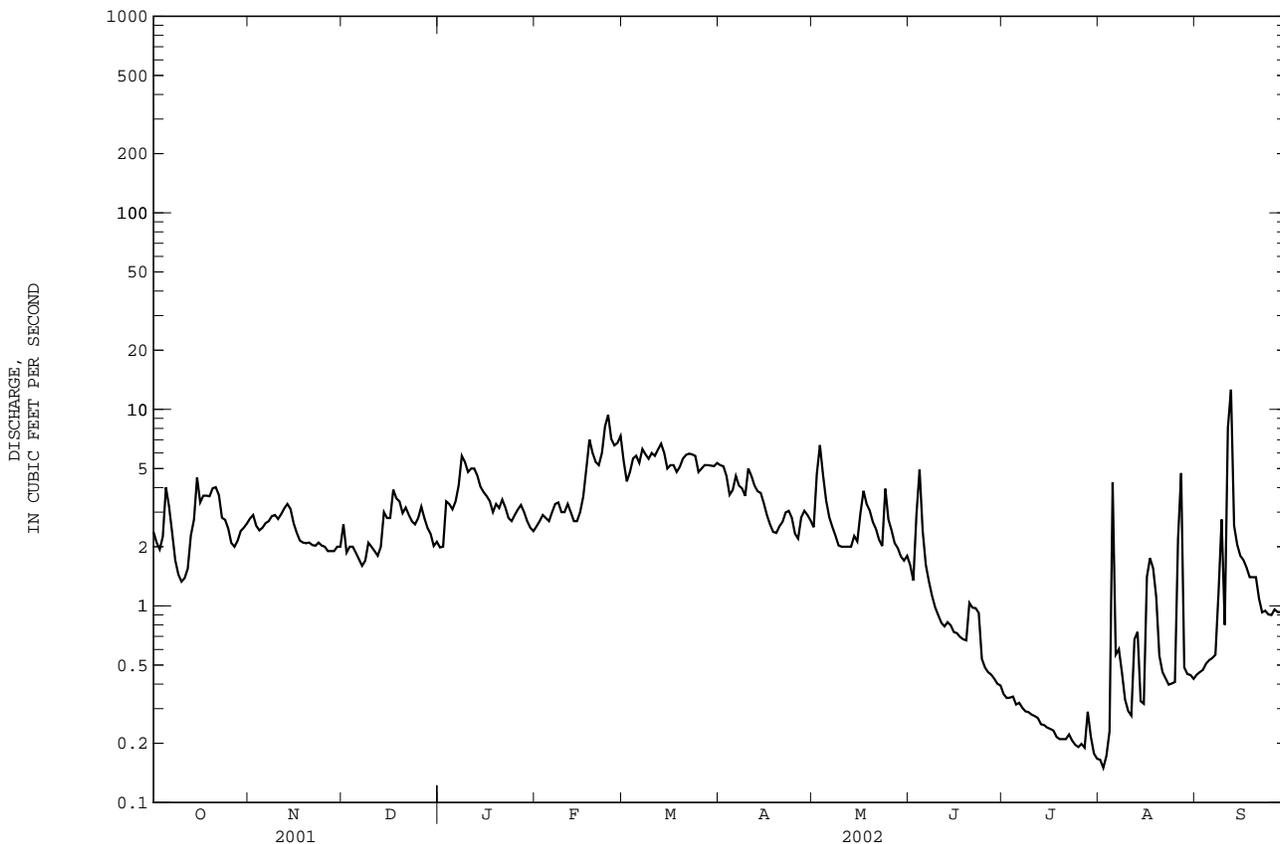
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	6.334	7.693	6.362	6.224	7.003	8.326	11.41	38.57	25.02	7.205	6.434	4.752
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	1.70	1.46	1.39	1.48	1.61	1.60	1.95	2.74	0.90	0.25	0.86	1.07
(WY)	2001	1995	1995	1995	1995	1995	1995	2002	2000	2002	2002	1998

06755960 CROW CREEK AT 19TH STREET, AT CHEYENNE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1994 - 2002	
ANNUAL TOTAL	1516.42	946.40	--	
ANNUAL MEAN	4.155	2.593	11.30	
HIGHEST ANNUAL MEAN	--	--	37.4 1999	
LOWEST ANNUAL MEAN	--	--	2.59 2002	
HIGHEST DAILY MEAN	27 Jul 14	13 Sep 12	579	May 1 1999
LOWEST DAILY MEAN	0.65 Sep 24	0.15 Aug 2	0.15	Aug 2 2002
ANNUAL SEVEN-DAY MINIMUM	0.99 Sep 21	0.18 Jul 29	0.18	Jul 29 2002
MAXIMUM PEAK FLOW	--	88 Sep 11	687	Apr 30 1999
MAXIMUM PEAK STAGE	--	3.01 Sep 11	5.56	Apr 30 1999
ANNUAL RUNOFF (AC-FT)	3010	1880	8190	
10 PERCENT EXCEEDS	9.0	5.2	21	
50 PERCENT EXCEEDS	2.9	2.4	4.3	
90 PERCENT EXCEEDS	1.8	0.34	1.3	

e Estimated.



## PLATTE RIVER BASIN

06756060 CROW CREEK NEAR ARCHER, WY

LOCATION.--Lat 41°07'35", long 104°39'04", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT 25...	1350	8.2	621	8.2	81	8.0	769	12.0	6.0	--	--	--	--	
FEB 27...	1130	15	618	8.4	71	7.7	747	-5.0	.0	--	--	--	--	
MAY 15...	1440	3.6	613	9.4	124	8.1	775	19.0	18.0	--	--	--	--	
AUG 14...	1000	5.9	616	5.2	64	7.7	705	20.0	15.0	170	53.6	9.41	10.6	
Date		SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	
OCT 25...	--	--	--	--	--	--	--	--	--	4.92	--	3.13	.068	
FEB 27...	--	--	--	--	--	--	--	--	--	9.24	--	3.00	.084	
MAY 15...	--	--	--	--	--	--	--	--	--	4.23	--	5.54	.563	
AUG 14...	2	64.4	177	74.2	14.8	38.0	.56	6.53	409	3.12	4.5	6.35	.442	
Date		PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF WATER (COLS./100 ML) (31625)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	1,4-DI-CHLORO-BENZENE DISSOLV (UG/L) (34572)	1METHYL NAPH-THALENE WATER, FILTERD REC (UG/L) (62054)	26DIMET NAPH-THALENE WATER, FILTERD REC (UG/L) (62055)	2METHYL NAPH-THALENE WATER, FILTERD REC (UG/L) (62056)	3-BETA-COPRO-STANOL, WATER, FILTERD REC (UG/L) (62057)	3METHYL 1(H)-INDOLE, WATER, FILTERD REC (UG/L) (62058)	3-TERT-BHA, WATER, FILTERD REC (UG/L) (62059)
OCT 25...	--	1.02	--	E22k	E27k	--	--	--	--	--	--	--	--	--
FEB 27...	--	1.95	--	<1	<1	--	--	--	--	--	--	--	--	--
MAY 15...	--	1.76	--	230	76	--	--	--	--	--	--	--	--	--
AUG 14...	2.13	1.97	2.12	120	83	16	<.5	<.5	<.5	<.5	<2	<1	<5	
Date		4-CUMYL PHENOL, WATER, FILTERD REC (UG/L) (62060)	4-OCTYL PHENOL, WATER, FILTERD REC (UG/L) (62061)	4-TERT-OCTYL-PHENOL, WATER, FILTERD REC (UG/L) (62062)	5METHYL 1HBENZO TRIAZLE WATER, FILTERD REC (UG/L) (62063)	ACETO-PHENONE WATER, FILTERD REC (UG/L) (62064)	AHT NAPH-THALENE WATER, FILTERD REC (UG/L) (62065)	ANTHRA-QUINONE WATER, FILTERD REC (UG/L) (34221)	ANTHRA-QUINONE WATER, FILTERD REC (UG/L) (62066)	BENZO-A-PYRENE DISSOLV REC (UG/L) (34248)	BENZO-PHENONE WATER, FILTERD REC (UG/L) (62067)	BETA-SITOS-TEROL, WATER, FILTERD REC (UG/L) (62068)	BISPHE-NOL A, WATER, FILTERD REC (UG/L) (62069)	BRO-MACIL, DISS, REC (UG/L) (04029)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	<1	<1	<1	<2	E.2	<.5	<.5	<.5	<.5	E.1	<2	M	<.5	

PLATTE RIVER BASIN

379

06756060 CROW CREEK NEAR ARCHER, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	BROMO-FORM DISSOLV (UG/L) (34288)	CAF-FEINE, WATER, FLTRD REC (UG/L) (50305)	CAMPHOR WATER, FLTRD REC (UG/L) (62070)	CAR-BARYL WATER 0.7 U GF, REC (UG/L) (82680)	CARBA-ZOLE, WATER, FLTRD REC (UG/L) (62071)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CHOLESTEROL, WATER, FLTRD REC (UG/L) (62072)	COT-ININE, WATER, FLTRD REC (UG/L) (62005)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	D-LIMONENE, WATER, FLTRD REC (UG/L) (62073)	FLUOR-ANTHENE DISSOLV (UG/L) (34377)	HHMCP-BENZO-PYRAN, WATER, FLTRD REC (UG/L) (62075)	INDOLE, WATER, FLTRD REC (UG/L) (62076)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	<.5	<.5	<.5	<1	<.5	<.5	<2	<1	<.5	<.5	<.5	<.5	<.5

Date	ISOBOR-NEOL, WATER, FLTRD REC (UG/L) (62077)	ISO-PHORONE DISSOLV (UG/L) (34409)	ISO-PROPYLENE BENZENE WATER, FLTRD REC (UG/L) (62078)	ISO-QUINOLINE, WATER, FLTRD REC (UG/L) (62079)	MENTHOL WATER, FLTRD REC (UG/L) (62080)	METAL-AXYL WATER, FLTRD REC (UG/L) (50359)	METHYL-SALICY-LATE, WATER, FLTRD REC (UG/L) (62081)	METO-LACHLOR WATER, FLTRD DISSOLV REC (UG/L) (39415)	DEET, WATER, FLTRD REC (UG/L) (62082)	NAPHTH-ALENE DISSOLV (UG/L) (34443)	NONYL-PHENOL, DIETHOX WATER, FLTRD REC (UG/L) (62083)	DI-ETHOXY-OCTYL-PHENOL WAT FLT REC (UG/L) (61705)	MONO-ETHOXY-OCTYL-PHENOL WAT FLT REC (UG/L) (61706)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	E.3	<.5	<5	<1	E1

Date	PARA-CRESOL, WATER, FLTRD REC (UG/L) (62084)	PARA-NONYL-PHENOL, WATER, FLTRD REC (UG/L) (62085)	PENTA-CHLORO-PHENOL DISSOLV (UG/L) (34459)	PHENAN-THREN WATER EDISSOLV V(UG/L) (34462)	PHENOL WATER FILTRD (UG/L) (34466)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PYRENE DISSOLV (UG/L) (34470)	STIGMA-STANOL, WATER, FLTRD REC (UG/L) (62086)	TETRA-CHLORO-ETHY-LENE DISSOLV (UG/L) (34476)	FYROL CEF, WATER, FLTRD REC (UG/L) (62087)	FYROL PCF, WATER, FLTRD REC (UG/L) (62088)	TRIBUTL PHOS- PHATE, WATER, FLTRD REC (UG/L) (62089)	TRICLO-SAN, WATER, FLTRD REC (UG/L) (62090)
OCT 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	<1	E2	<2	<.5	<.5	<.5	<.5	<2	<.5	M	M	E.2	<1

Date	TRI-ETHYL CITRATE WATER, FLTRD REC (UG/L) (62091)	TRIPHNL PHOS- PHATE, WATER, FLTRD REC (UG/L) (62092)	TRIS(2-BUTOXE- PHOS- PHATE, WATER, FLTRD REC (UG/L) (62093)	DICHLOR VOS, WATER FLTRD REC (UG/L) (38775)
OCT 25...	--	--	--	--
FEB 27...	--	--	--	--
MAY 15...	--	--	--	--
AUG 14...	<.5	E.1	E.1	<1.00

E -- Estimated value  
M -- Presence verified, not quantified  
k -- Counts outside acceptable range (Non-ideal colony count)

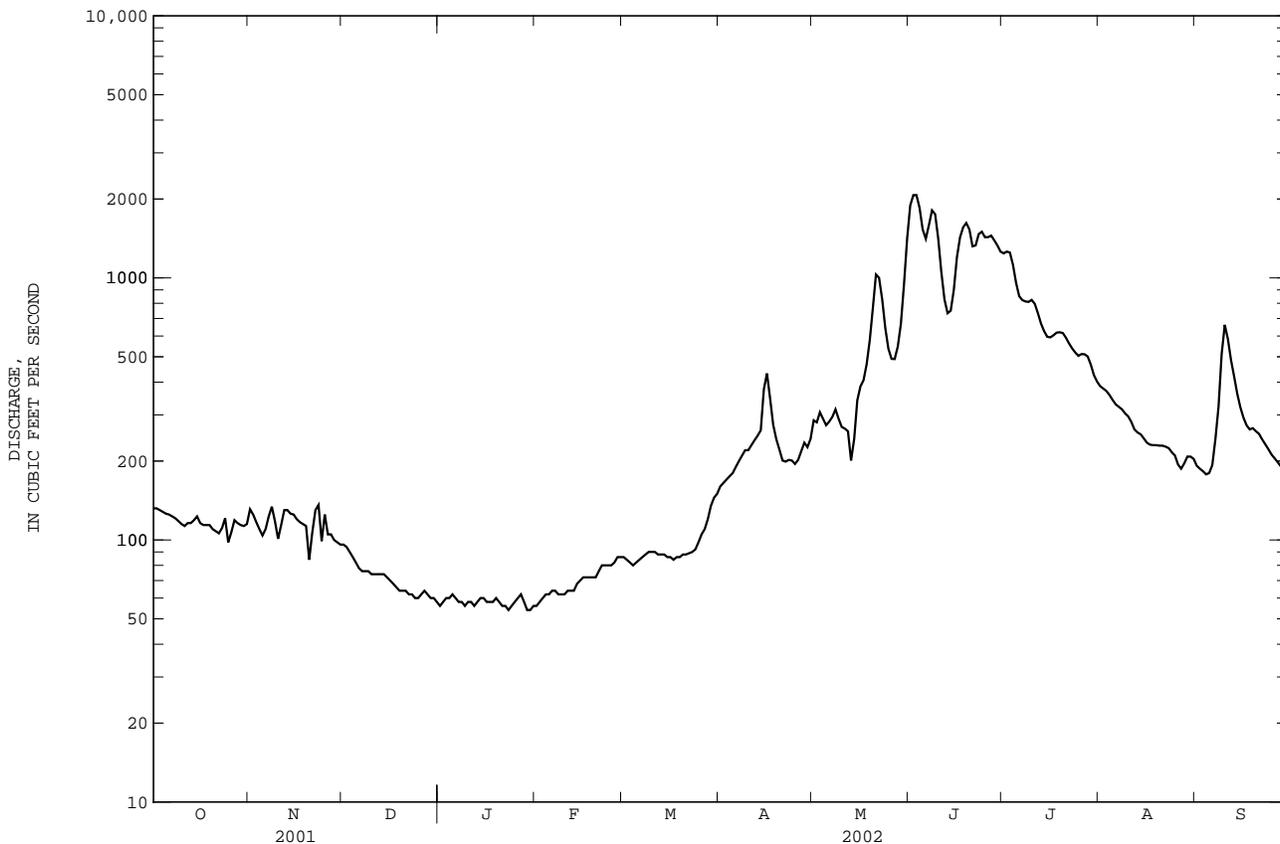


GREEN RIVER BASIN

09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1932 - 2002	
ANNUAL TOTAL	100134		119772		--	
ANNUAL MEAN	274.3		328.1		500.7	
HIGHEST ANNUAL MEAN	--		--		768 1986	
LOWEST ANNUAL MEAN	--		--		280 2001	
HIGHEST DAILY MEAN	1950	May 17	2070	Jun 2	5620	Jun 11 1997
LOWEST DAILY MEAN	58 <sup>e</sup>	Dec 31	54 <sup>e</sup>	Jan 23	36	Nov 26 1933
ANNUAL SEVEN-DAY MINIMUM	61	Dec 25	57	Jan 28	43	Nov 24 1933
MAXIMUM PEAK FLOW	--		2100	Jun 2	5930	Jun 11 1997
MAXIMUM PEAK STAGE	--		4.03	Jun 2	6.04	Jun 11 1997
ANNUAL RUNOFF (AC-FT)	198600		237600		362700	
10 PERCENT EXCEEDS	684		871		1420	
50 PERCENT EXCEEDS	140		160		200	
90 PERCENT EXCEEDS	90		60		100	

e Estimated.



## GREEN RIVER BASIN

09196500 PINE CREEK ABOVE FREMONT LAKE, WY

LOCATION.--Lat 43°01'50", long 109°46'10", in SW<sup>1</sup>/<sub>4</sub> S<sup>1</sup>/<sub>2</sub> 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<sup>2</sup>.

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 for those estimated daily discharges, which are poor. No diversion upstream from station.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	23	20	18	e12.5	e8.8	e27	36	1220	632	103	33
2	26	23	21	18	e12.5	e8.6	e30	38	1130	609	101	32
3	24	22	21	19	e13	e8.2	e32	39	1030	536	98	32
4	24	21	22	17	e13.5	e8.0	34	40	859	449	96	32
5	23	22	21	16	e14	e8.4	34	43	842	368	93	31
6	23	25	23	15	e14.5	e8.8	34	42	992	330	90	31
7	22	30	28	14	e15.5	e9.2	34	43	1310	323	86	32
8	22	27	29	14	e15	e9.8	33	42	1310	321	82	51
9	21	26	29	13	e14	e9.6	33	40	869	322	78	66
10	20	26	29	13	e13	e9.0	33	39	626	319	75	77
11	20	27	29	13	e12	e8.8	33	39	501	294	71	94
12	19	25	27	12	e12	e9.0	33	39	469	270	67	100
13	18	25	29	12	12	e9.4	33	41	570	251	63	100
14	18	25	30	12	12	e9.8	33	55	803	233	60	98
15	19	23	29	12	11	e9.8	39	73	1020	217	56	95
16	17	22	28	e12	11	e10	42	82	1080	207	53	92
17	17	21	27	e11.5	11	e10	40	97	1240	222	50	93
18	17	19	26	e11	9.9	e10	37	141	1240	202	48	91
19	16	17	26	e11	9.2	e10	36	235	938	194	46	86
20	16	16	25	e11	9.4	e10	34	385	857	186	45	81
21	16	16	26	e11	9.1	e11	34	495	896	176	42	77
22	16	17	26	e11.5	8.9	e12	33	394	1010	164	40	72
23	19	18	22	e12	8.6	e13	33	315	946	151	38	67
24	18	17	23	e12	8.1	e14	33	277	867	140	38	64
25	16	19	24	e13	8.2	e15	33	254	815	136	37	59
26	16	19	23	e13	e8.4	e15	33	240	764	131	37	56
27	17	19	22	13	e8.6	e16	34	250	744	129	36	53
28	17	19	22	14	e8.8	e17	34	292	699	125	36	51
29	17	20	21	e14	---	e18	34	383	640	118	35	52
30	17	20	19	e14	---	e20	34	603	614	112	34	54
31	23	---	20	e13	---	e23	---	1040	---	108	33	---
TOTAL	601	649	767	415.0	315.7	359.9	1019	6132	26901	7975	1867	1952
MEAN	19.39	21.63	24.74	13.39	11.28	11.61	33.97	197.8	896.7	257.3	60.23	65.07
MAX	27	30	30	19	16	23	42	1040	1310	632	103	100
MIN	16	16	19	11	8.1	8.0	27	36	469	108	33	31
AC-FT	1190	1290	1520	823	626	714	2020	12160	53360	15820	3700	3870

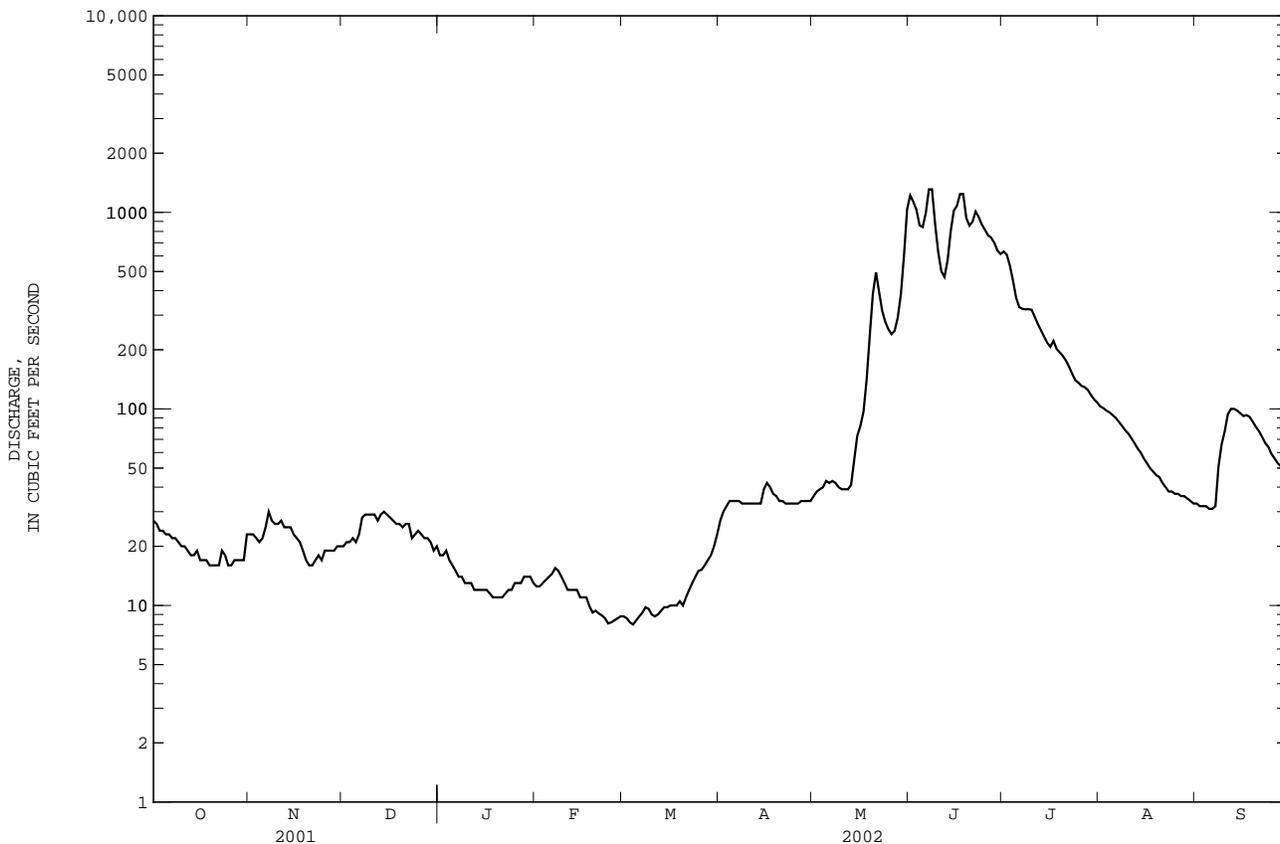
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2002, BY WATER YEAR (WY)

	54.06	32.53	23.95	19.27	16.57	16.58	37.62	294.1	841.9	512.2	158.2	88.21
MEAN	54.06	32.53	23.95	19.27	16.57	16.58	37.62	294.1	841.9	512.2	158.2	88.21
MAX	165	71.8	53.0	37.6	36.7	35.0	98.4	586	1476	1142	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1955 - 2002	
ANNUAL TOTAL	44417.4		48953.6		--	
ANNUAL MEAN	121.7		134.1		174.9	
HIGHEST ANNUAL MEAN	--		--		253 1986	
LOWEST ANNUAL MEAN	--		--		96.7 1977	
HIGHEST DAILY MEAN	1500	May 16, 19	1310	Jun 7, 8	2290	Jun 10 1997
LOWEST DAILY MEAN	9.7	Mar 18	8.0 <sup>e</sup>	Mar 4	3.3	Apr 4 1977
ANNUAL SEVEN-DAY MINIMUM	10	Mar 13	8.5	Feb 26	3.4	Mar 31 1977
MAXIMUM PEAK FLOW	--		1490	Jun 8	2550 <sup>a</sup>	Jun 16 1959
MAXIMUM PEAK STAGE	--		5.63	Jun 8	7.65	Jun 6 1986
ANNUAL RUNOFF (AC-FT)	88100		97100		126700	
10 PERCENT EXCEEDS	410		457		564	
50 PERCENT EXCEEDS	27		30		41	
90 PERCENT EXCEEDS	13		11		13	

a Gage height, 7.15 ft.  
e Estimated.





09197000 PINE CREEK BELOW FREMONT LAKE, WY--Continued

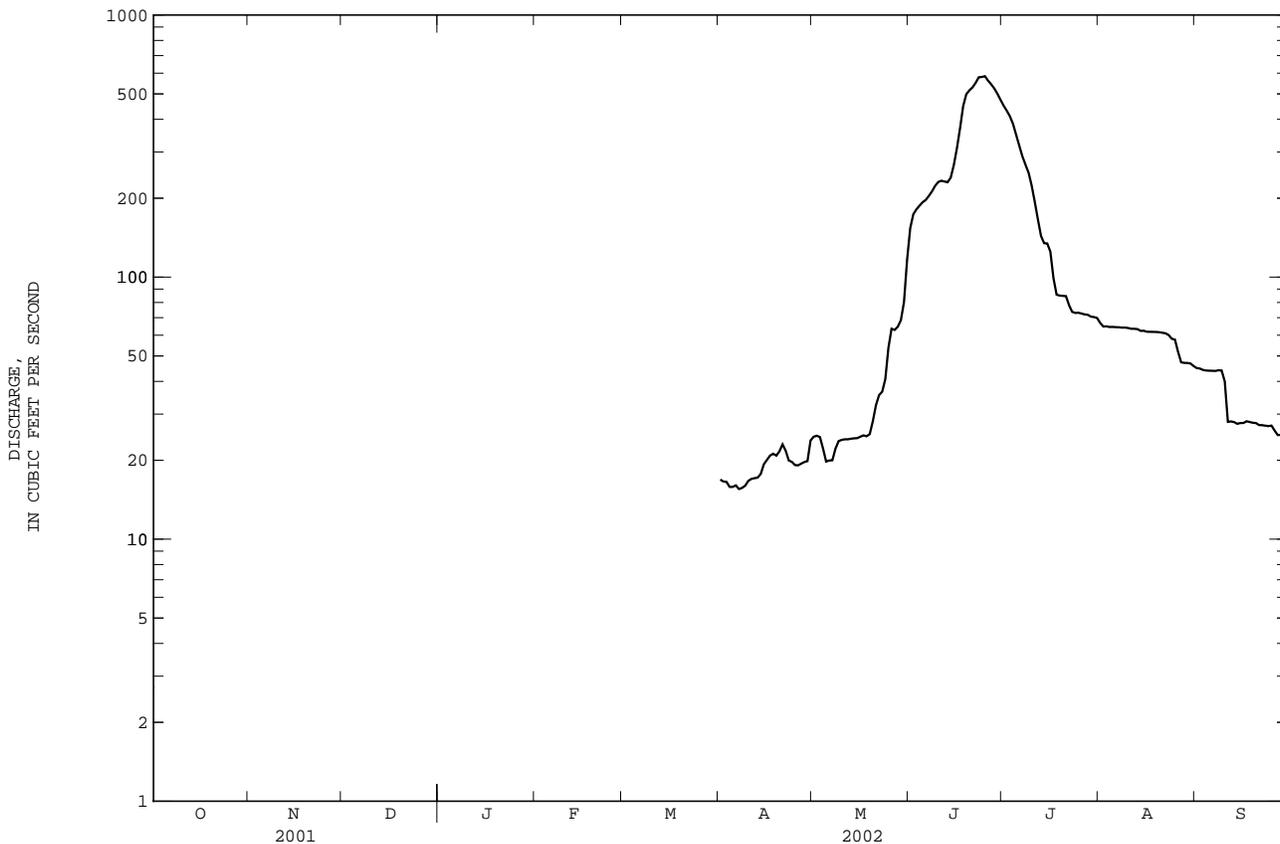
SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1911 - 2002\*

ANNUAL MEAN	--		197.3	
HIGHEST ANNUAL MEAN	--		211	1917
LOWEST ANNUAL MEAN	--		183	1912
HIGHEST DAILY MEAN	584	Jun 25	2330	Jun 17 1918
LOWEST DAILY MEAN	16	Apr 4-9	9.6	Apr 23 1990
MAXIMUM PEAK FLOW	634	Jun 25	2330 <sup>a</sup>	Jun 17 1918
MAXIMUM PEAK STAGE	3.06	Jun 25	3.06	Jun 25 2002
ANNUAL RUNOFF (AC-FT)	--		143000	

\* For period of operation.  
 a At different site and datum.

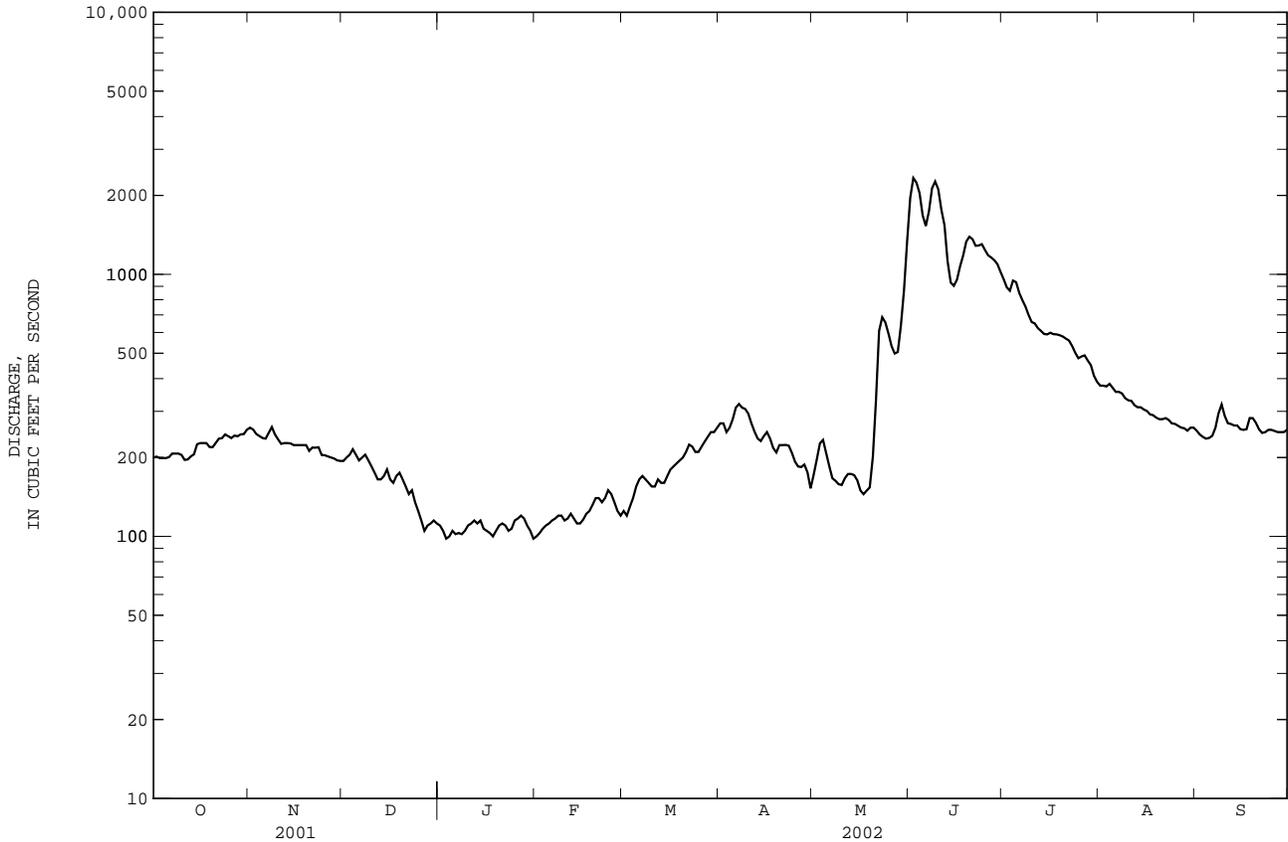




09205000 NEW FORK RIVER NEAR BIG PINEY, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1954 - 2002	
ANNUAL TOTAL	138380		130468		--	
ANNUAL MEAN	379.1		357.4		727.7	
HIGHEST ANNUAL MEAN	--		--		1288 1986	
LOWEST ANNUAL MEAN	--		--		313 1977	
HIGHEST DAILY MEAN	2800	May 18	2330	Jun 2	9110	Jun 7 1986
LOWEST DAILY MEAN	105 <sup>e</sup>	Dec 27	98 <sup>e</sup>	Jan 3,31	90	Jan 13 1963
ANNUAL SEVEN-DAY MINIMUM	113	Dec 25	102	Jan 2	102	Jan 2 2002
MAXIMUM PEAK FLOW	--		2420	Jun 2	9190	Jun 7 1986
MAXIMUM PEAK STAGE	--		4.35	Jun 2	8.28	Jun 7 1986
ANNUAL RUNOFF (AC-FT)	274500		258800		527200	
10 PERCENT EXCEEDS	662		867		1820	
50 PERCENT EXCEEDS	236		226		330	
90 PERCENT EXCEEDS	182		114		190	

e Estimated.

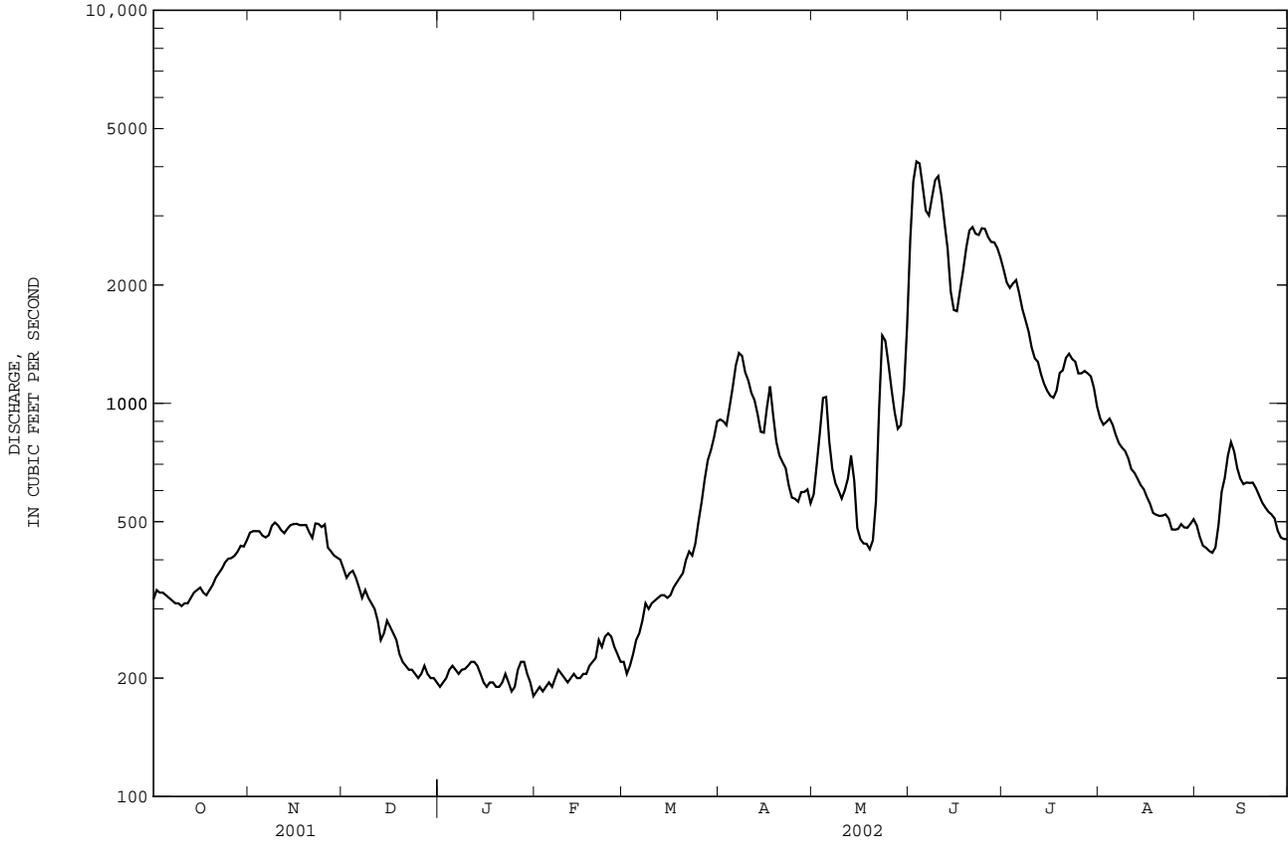




09209400 GREEN RIVER NEAR LA BARGE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL TOTAL	250697		273791		--	
ANNUAL MEAN	686.8		750.1		1616	
HIGHEST ANNUAL MEAN	--		--		2908	
LOWEST ANNUAL MEAN	--		--		668	
HIGHEST DAILY MEAN	4370	May 18	4130	Jun 3	18800	Jun 9 1986
LOWEST DAILY MEAN	195 <sup>e</sup>	Dec 31	180 <sup>e</sup>	Jan 31	180	Jan 31 2002
ANNUAL SEVEN-DAY MINIMUM	203	Dec 25	188	Jan 31	188	Jan 31 2002
MAXIMUM PEAK FLOW	--		4190	Jun 3	18800	Jun 9 1986
MAXIMUM PEAK STAGE	--		7.08	Jun 3	10.50	Jun 9 1986
ANNUAL RUNOFF (AC-FT)	497300		543100		1171000	
10 PERCENT EXCEEDS	1170		1720		3970	
50 PERCENT EXCEEDS	492		483		797	
90 PERCENT EXCEEDS	318		205		421	

e Estimated.

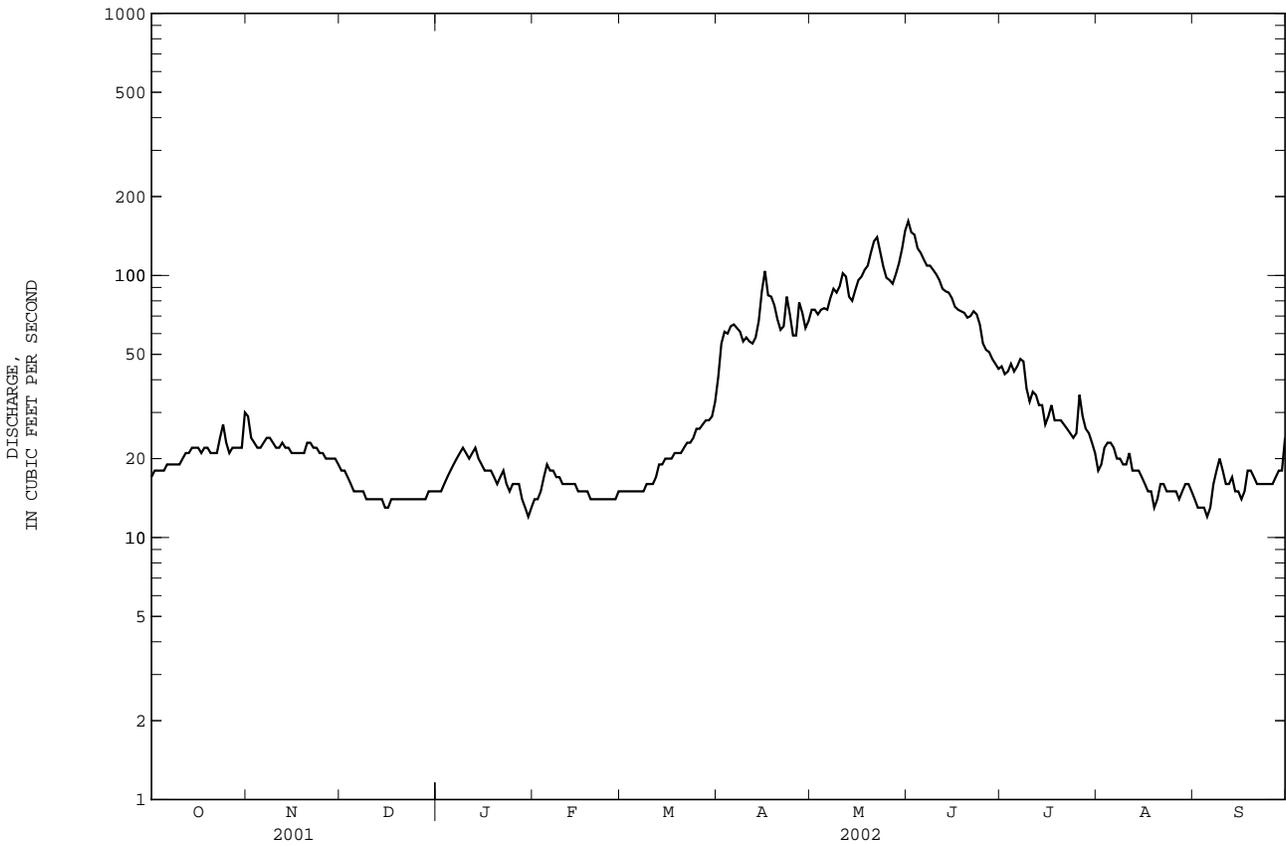




09210500 FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1952 - 2002	
ANNUAL TOTAL	11307		13085		--	
ANNUAL MEAN	30.98		35.85		71.17	
HIGHEST ANNUAL MEAN	--		--		155 1986	
LOWEST ANNUAL MEAN	--		--		24.8 1977	
HIGHEST DAILY MEAN	155 <sup>e</sup>	May 4	161	Jun 1	865	Jun 6 1986
LOWEST DAILY MEAN	12	Aug 3, 28-30	12 <sup>e</sup>	Jan 30	5.6	Aug 14 1992
ANNUAL SEVEN-DAY MINIMUM	13	Aug 25	13	Aug 31	6.2	Aug 10 1992
MAXIMUM PEAK FLOW	--		187 <sup>a</sup>	Jun 1	907	Apr 23 1986
MAXIMUM PEAK STAGE	--		6.65 <sup>b</sup>	Jan 29	9.51	Apr 23 1986
ANNUAL RUNOFF (AC-FT)	22430		25950		51560	
10 PERCENT EXCEEDS	60		86		181	
50 PERCENT EXCEEDS	23		21		33	
90 PERCENT EXCEEDS	14		14		20	

a Gage height, 6.57 ft.  
 b Backwater from ice.  
 e Estimated.

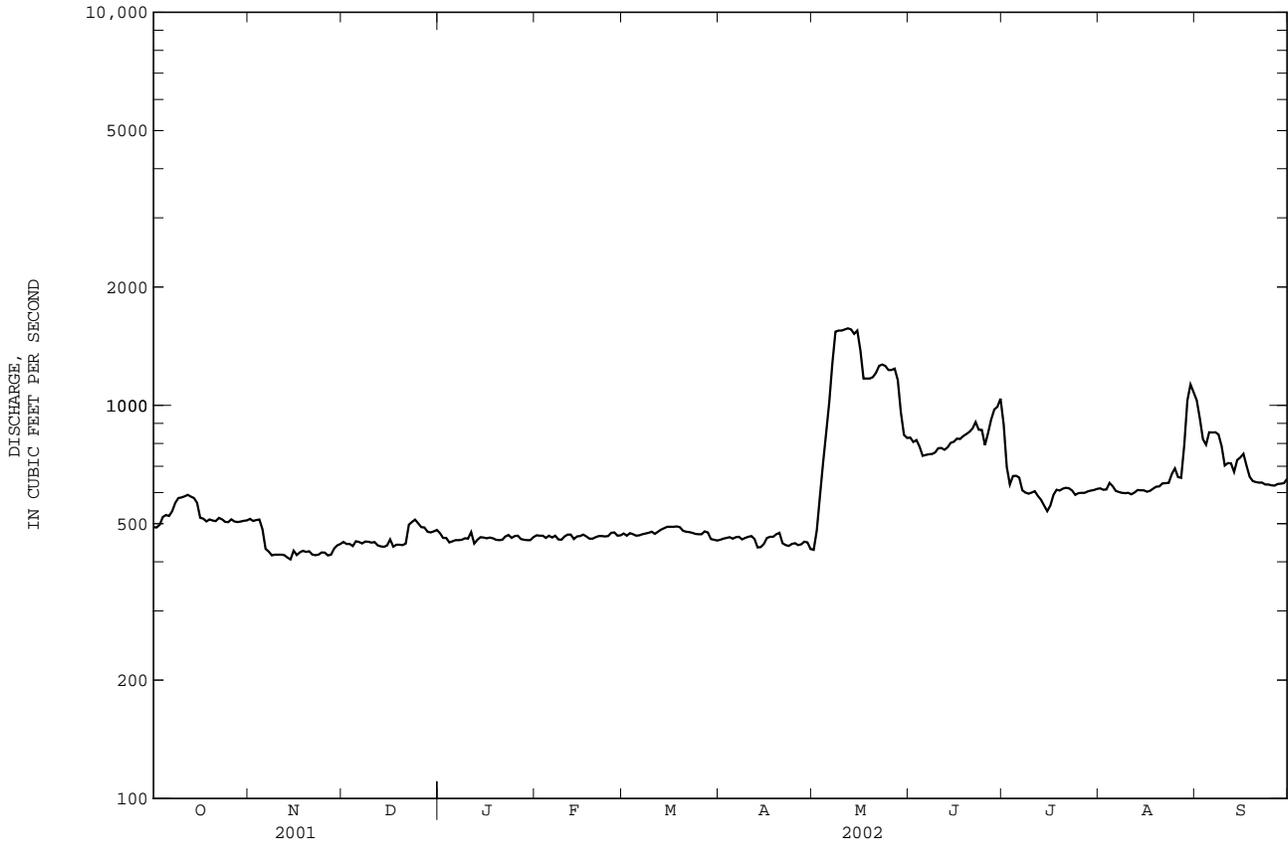




09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL TOTAL	249695		222156		--	
ANNUAL MEAN	684.1		608.6		1636	
HIGHEST ANNUAL MEAN	--		--		3060	
LOWEST ANNUAL MEAN	--		--		609	
HIGHEST DAILY MEAN	1440	May 3	1570	May 12	18600	Sep 6 1965
LOWEST DAILY MEAN	406	Nov 14	406	Nov 14	209	Nov 22 1968
ANNUAL SEVEN-DAY MINIMUM	414	Nov 8	414	Nov 8	251	Dec 25 1967
MAXIMUM PEAK FLOW	--		1680	Jul 1	19400 <sup>a</sup>	Sep 5 1965
MAXIMUM PEAK STAGE	--		11.98	Jul 1	18.74 <sup>b</sup>	Sep 5 1965
ANNUAL RUNOFF (AC-FT)	495300		440600		1185000	
10 PERCENT EXCEEDS	938		869		3520	
50 PERCENT EXCEEDS	605		505		1110	
90 PERCENT EXCEEDS	445		441		492	

a Caused by emergency release from Fontenelle Reservoir.  
 b From floodmarks.



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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 10...	0935	570	610	8.8	89	9.0	357	13.0	6.0	--	--	--	--
JAN 31...	1200	463	608	9.6	90	8.3	472	-10.0	3.0	--	--	--	--
MAR 21...	1110	470	608	9.5	90	7.7	488	2.5	3.5	--	--	--	--
APR 17...	1335	475	590	9.6	100	8.0	475	7.0	6.0	--	--	--	--
MAY 21...	1655	1240	595	9.2	105	8.0	466	9.0	10.0	--	--	--	--
JUN 26...	1730	894	605	7.5	92	7.7	352	31.0	14.0	--	--	--	--
JUL 31...	1630	628	605	9.7	129	7.8	370	29.0	17.5	--	--	--	--
AUG 29...	1050	920	603	7.4	99	8.1	328	21.0	18.0	140	38.6	11.1	1.54
SEP 11...	1300	708	605	9.7	127	8.1	330	23.5	17.0	--	--	--	--

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 10...	--	--	--	--	--	--	--	--	218	--	<.04	--	.41
JAN 31...	--	--	--	--	--	--	--	--	274	--	E.03	--	.24
MAR 21...	--	--	--	--	--	--	--	--	286	--	E.02	--	.28
APR 17...	--	--	--	--	--	--	--	--	264	--	<.04	--	.30
MAY 21...	--	--	--	--	--	--	--	--	285	--	<.04	--	.39
JUN 26...	--	--	--	--	--	--	--	--	218	--	E.03	--	.29
JUL 31...	--	--	--	--	--	--	--	--	234	--	<.04	--	.23
AUG 29...	.5	14.9	127	3.03	6.37	43.6	.27	485	--	195	<.04	.24	--
SEP 11...	--	--	--	--	--	--	--	--	219	--	<.04	--	.25

09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT						
10...	E.02	<.008	<.06	<.02	<.06	--
JAN						
31...	<.05	<.008	<.06	<.02	<.06	--
MAR						
21...	<.05	<.008	<.06	<.02	<.06	--
APR						
17...	<.05	<.008	<.06	<.02	E.04	--
MAY						
21...	<.05	<.008	<.06	<.02	<.06	--
JUN						
26...	<.05	E.004	<.06	<.02	<.06	--
JUL						
31...	.10	E.007	<.06	.02	E.03	--
AUG						
29...	<.05	<.008	<.06	<.02	<.06	<10
SEP						
11...	<.05	<.008	<.06	<.02	<.06	--

E -- Estimated value

GREEN RIVER BASIN

09213500 BIG SANDY RIVER NEAR FARSON, WY

LOCATION.--Lat 42°19'01", long 109°29'06", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 fair 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 established 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. 2 . . . . 8.21

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e60	e47	611	121	30	7.6
2	---	---	---	---	---	---	e75	e50	591	117	27	7.7
3	---	---	---	---	---	---	e90	e54	493	110	27	6.6
4	---	---	---	---	---	---	e90	e57	429	107	25	5.5
5	---	---	---	---	---	---	e94	e58	369	104	26	4.9
6	---	---	---	---	---	---	e100	e56	363	95	24	16
7	---	---	---	---	---	---	e110	e58	419	86	23	20
8	---	---	---	---	---	---	e90	e56	478	79	22	25
9	---	---	---	---	---	---	e90	e55	427	71	20	25
10	---	---	---	---	---	---	e93	51	367	66	20	27
11	---	---	---	---	---	---	e90	56	310	62	18	29
12	---	---	---	---	---	---	e80	57	246	57	16	28
13	---	---	---	---	---	---	68	54	225	53	15	27
14	---	---	---	---	---	---	58	49	230	51	14	26
15	---	---	---	---	---	---	65	52	225	48	13	26
16	---	---	---	---	---	---	70	73	257	46	11	22
17	---	---	---	---	---	---	67	94	250	44	10	22
18	---	---	---	---	---	---	57	99	261	45	9.6	24
19	---	---	---	---	---	---	57	130	270	45	8.7	25
20	---	---	---	---	---	---	48	191	234	44	10	27
21	---	---	---	---	---	---	45	302	202	43	8.3	32
22	---	---	---	---	---	---	45	353	200	42	8.4	31
23	---	---	---	---	---	---	44	235	214	42	7.4	30
24	---	---	---	---	---	---	42	173	236	38	7.2	28
25	---	---	---	---	---	---	41	164	197	38	6.6	25
26	---	---	---	---	---	---	41	138	182	38	6.9	25
27	---	---	---	---	---	---	43	137	167	35	7.8	23
28	---	---	---	---	---	---	47	152	155	35	9.7	23
29	---	---	---	---	---	---	46	217	145	34	7.5	22
30	---	---	---	---	---	---	43	323	134	32	8.3	21
31	---	---	---	---	---	---	---	459	---	32	8.4	---
TOTAL	---	---	---	---	---	---	1989	4050	8887	1860	455.8	661.3
MEAN	---	---	---	---	---	---	66.30	130.6	296.2	60.00	14.70	22.04
MAX	---	---	---	---	---	---	110	459	611	121	30	32
MIN	---	---	---	---	---	---	41	47	134	32	6.6	4.9
AC-FT	---	---	---	---	---	---	3950	8030	17630	3690	904	1310

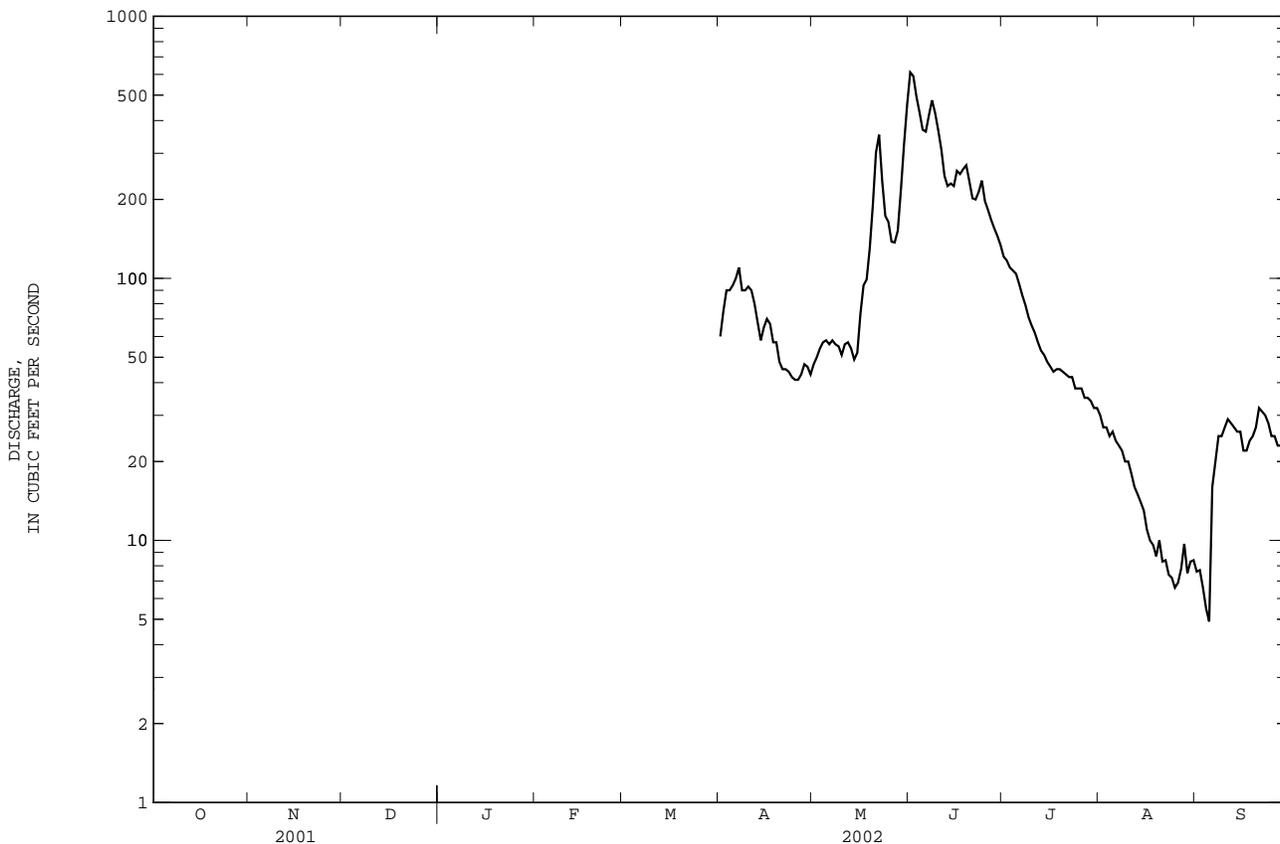
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2002, BY WATER YEAR (WY)\*

	30.17	21.23	13.22	11.13	12.11	21.77	60.16	236.3	417.2	174.5	48.78	30.47
MEAN	30.17	21.23	13.22	11.13	12.11	21.77	60.16	236.3	417.2	174.5	48.78	30.47
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 2002 WATER YEAR*	WATER YEARS 1915 - 2002*	
ANNUAL MEAN	--	86.68	
HIGHEST ANNUAL MEAN	--	148	1917
LOWEST ANNUAL MEAN	--	33.0	1934
HIGHEST DAILY MEAN	611 Jun 1	1690	Jun 4 1986
LOWEST DAILY MEAN	4.9 Sep 5	0.00	Jan 27 1963
ANNUAL SEVEN-DAY MINIMUM	--	0.10	Feb 1 1960
MAXIMUM PEAK FLOW	713 Jun 1	1890	Jun 3 1986
MAXIMUM PEAK STAGE	6.87 Jun 2	8.46	Jun 3 1986
ANNUAL RUNOFF (AC-FT)	--	62800	
10 PERCENT EXCEEDS	--	270	
50 PERCENT EXCEEDS	--	25	
90 PERCENT EXCEEDS	--	9.0	

\* For period of operation.  
e Estimated.



GREEN RIVER BASIN

09213700 BIG SANDY RESERVOIR NEAR FARSON, WY

LOCATION.--Lat 42°14'57", long 109°25'43", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--May 1987 to current year.

REVISED. --WDR WY-98-1: 1996, 1997.

GAGE.--Water-stage recorder. Datum 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.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded 6748.44 ft, June 12, contents 19,400 acre-ft. Minimum elevation recorded 6725.40ft, October 1, contents 1100 acre-ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

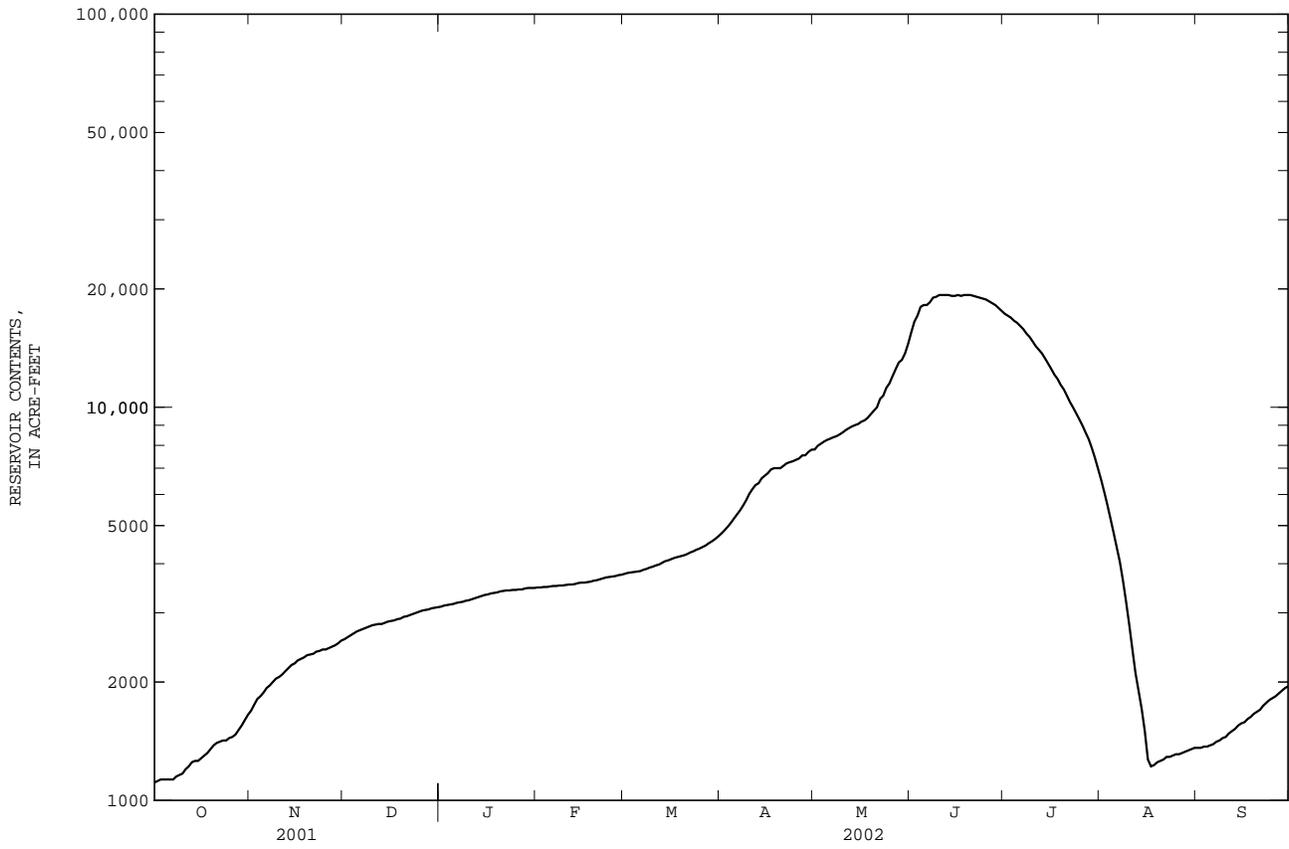
6,720	0	6,740	8,655	6,760	44,905
6,730	2,545	6,750	22,155		

RESERVOIR STORAGE FROM DCP, in (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1110	1690	2570	3110	3480	3770	4770	e7810	e15500	17300	6530	1360
2	1120	1750	2600	3130	3480	3790	4860	7980	e16500	17100	6080	1360
3	1130	1810	2630	3140	3490	3800	4960	8080	e17100	16900	5640	1370
4	1130	1840	2660	3150	3490	3810	5070	8180	18000	16600	5200	1370
5	1130	1880	2690	3160	3500	3820	5200	8260	18200	16400	4790	1380
6	1130	1930	2710	3180	3510	3830	5330	8320	18200	16100	4400	1390
7	e1130	1960	2730	3190	3510	3860	5460	8390	18500	15800	4040	1410
8	e1150	2000	2750	3200	3520	3880	5620	8440	19000	15400	3620	1420
9	e1160	2040	2770	3220	3520	3910	5800	8530	19100	15100	3200	1440
10	e1170	2060	2790	3230	3530	3930	6020	8630	19300	14700	2800	1450
11	e1200	2090	2800	3250	3540	3960	6190	8750	19300	14300	2430	1480
12	e1220	2130	2810	3270	3540	3980	6340	8850	19300	14000	2110	1500
13	e1250	2170	2810	3290	3550	4020	e6410	8940	19300	13700	1900	1520
14	e1260	2210	2830	3310	3570	4060	e6600	9010	19200	13300	1710	1550
15	e1260	2230	2850	3330	3580	4080	e6700	9070	19200	12900	1500	1570
16	e1280	2270	2860	3340	3580	4110	e6800	9190	19300	12500	1270	1580
17	e1300	2290	2870	3360	3590	4140	e6950	e9260	19200	12100	1220	1610
18	e1320	2310	2890	3370	3600	4160	e7000	e9400	19300	11800	1230	1630
19	e1350	2340	2900	3380	3620	4180	e7000	e9600	19300	11400	1250	1660
20	e1380	2350	2930	3400	3630	4200	e7000	e9800	19300	11100	1260	1680
21	e1400	2360	2940	3410	3650	4230	e7100	e10000	19200	10700	1270	1700
22	e1410	2390	2960	3420	3670	4270	e7200	e10500	19100	10300	1290	1740
23	1420	2400	2980	3420	3690	4300	e7250	e10700	19000	9980	1290	1770
24	1420	2420	3000	3430	3700	4340	e7290	e11200	18900	9640	1300	1800
25	1440	2420	3020	3430	3710	4370	7350	e11500	18800	9310	1310	1820
26	1450	2440	3040	3440	3720	4410	7410	e12000	18600	8980	1310	1840
27	1470	2460	3050	3440	3740	4450	7540	e12500	18400	8620	1320	1870
28	1510	2480	3060	3460	3750	4510	e7550	e13000	18200	8290	1330	1900
29	1550	2510	3080	3470	---	4560	e7700	e13200	17900	7870	1340	1930
30	1600	2550	3090	3470	---	4620	e7800	e13700	17600	7430	1350	1950
31	1650	---	3100	3470	---	4690	---	e14500	---	6970	1360	---
MAX	1650	2550	3100	3470	3750	4690	7800	14500	19300	17300	6530	1950
MIN	1110	1690	2570	3110	3480	3770	4770	7810	15500	6970	1220	1360
(#)	6727.4	6730	6731.4	6732.2	6732.8	6734.5	--	--	6747.4	6737.9	6726.4	6728.3
(*)	+550	+900	+550	+370	+280	+940	+3110	+6700	+3100	-10630	-5620	+600
CAL YR 2001	MAX 22500	MIN 358										
WTR YR 2002	MAX 19300	MIN 1110										

(#) Elevation, in feet, at end of month.  
 (\*) Change in contents, in acre-feet.  
 e Estimated.

09213700 BIG SANDY RESERVOIR NEAR FARSON, WY--Continued



## GREEN RIVER BASIN

09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY

LOCATION.--Lat 41°56'51", long 109°41'15", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 fair 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	34	e16	e10	e11	e14	116	34	17	27	e26	e21
2	24	32	e15	e9.8	e12	e14	108	32	17	27	e26	e20
3	25	30	e16	e9.6	e12	e13	86	29	18	32	e25	e19
4	23	29	e17	e10	e12	e14	82	28	19	27	e25	e19
5	23	28	e16	e10	e12	e15	92	26	23	27	e25	e20
6	24	28	e15	e11	e12	e15	87	25	22	27	e25	e21
7	25	29	e13	e11	e13	e16	82	25	20	26	e25	e22
8	24	27	e14	e11	e13	e15	83	24	19	29	e25	e23
9	24	26	e13	e10	e13	e15	77	24	20	29	e24	e26
10	24	24	e12	e10	e12	e16	70	24	21	28	e24	e24
11	24	26	e12	e10	e13	e17	64	26	27	27	e24	e22
12	23	27	e11	e10	e13	e18	58	26	27	25	e23	e21
13	24	27	e12	e9.8	e12	e19	62	24	26	26	e23	e21
14	25	26	e12	e9.6	e12	e20	48	24	27	24	e23	e21
15	25	26	e12	e9.6	e12	e20	42	23	30	22	e24	e20
16	24	25	e12	e9.6	e13	e21	35	23	31	27	e24	e20
17	25	24	e12	e10	e14	e22	33	23	29	27	e23	e21
18	26	30	e12	e10	e14	e24	31	22	27	27	e22	e22
19	26	28	e12	e11	e14	e25	29	21	27	29	e22	e21
20	25	24	e12	e12	e14	e25	29	21	27	29	e23	e21
21	29	24	e12	e12	e14	e26	28	21	28	27	e22	e20
22	30	29	e12	e12	e15	e28	29	21	28	28	e22	e19
23	30	30	e11	e11	e15	e29	29	20	27	30	e21	e18
24	27	27	e11	e10	e15	e37	27	20	28	e30	e21	e19
25	25	e27	e10	e11	e15	e60	27	21	27	e29	e21	e20
26	27	e26	e10	e12	e15	43	26	21	28	e27	e22	e20
27	28	e25	e9.8	e13	e14	74	30	21	29	e26	e22	e19
28	28	25	e9.8	e13	e13	74	31	21	24	e27	e21	e19
29	27	e24	e10	e12	---	77	32	21	27	e28	e20	e21
30	28	e22	e10	e10	---	102	32	20	30	e27	e20	e21
31	36	---	e10	e10	---	105	---	18	---	e26	e21	---
TOTAL	800	809	381.6	330.0	369	1013	1605	729	750	847	714	621
MEAN	25.81	26.97	12.31	10.65	13.18	32.68	53.50	23.52	25.00	27.32	23.03	20.70
MAX	36	34	17	13	15	105	116	34	31	32	26	26
MIN	22	22	9.8	9.6	11	13	26	18	17	22	20	18
AC-FT	1590	1600	757	655	732	2010	3180	1450	1490	1680	1420	1230

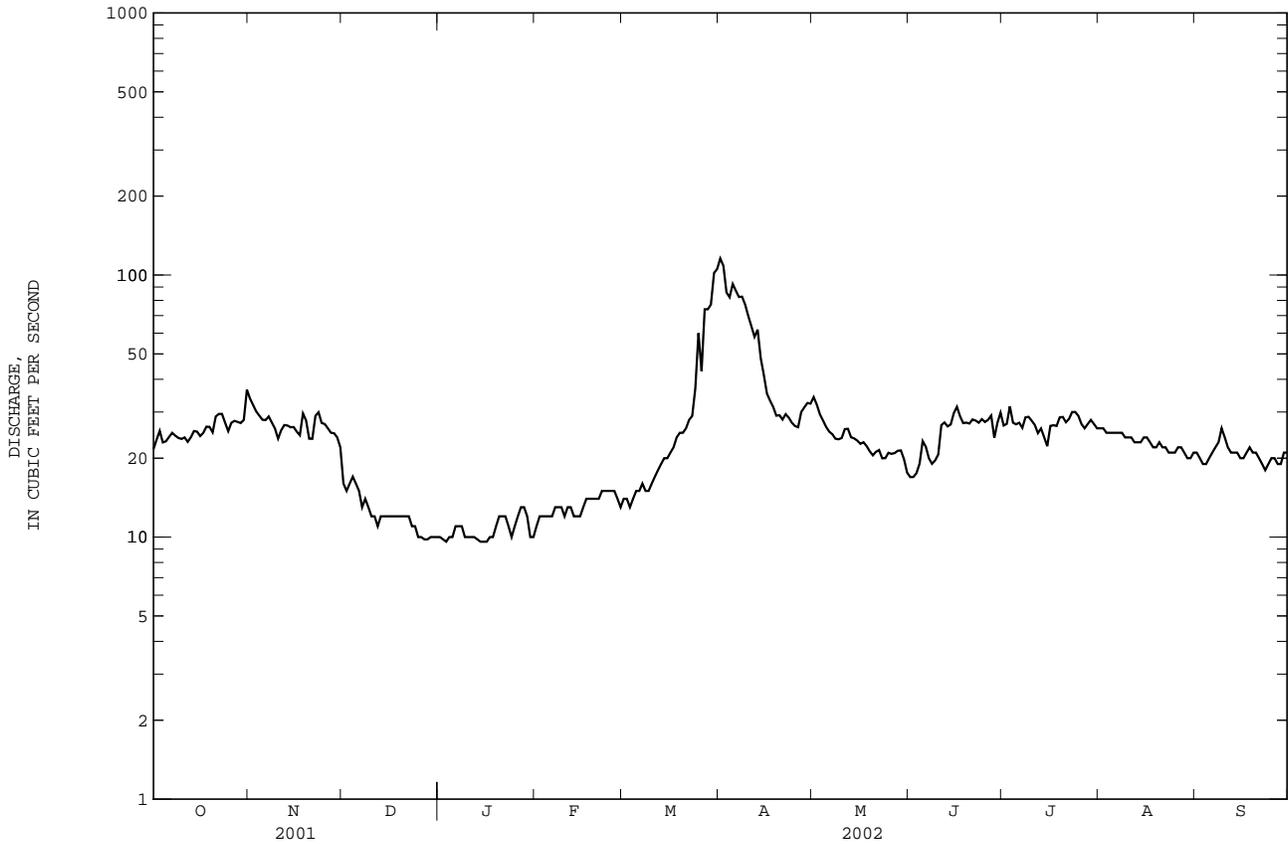
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2002, BY WATER YEAR (WY)

	MEAN	60.66	53.31	37.70	30.57	33.19	84.18	108.6	75.97	144.6	104.4	77.72	70.95
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	25.8	27.0	12.3	10.6	13.2	32.7	28.3	19.7	25.0	21.8	23.0	20.7	
(WY)	2002	2002	2002	2002	2002	2002	2002	1990	1990	2002	2001	2002	

09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1972 - 2002	
ANNUAL TOTAL	11039.6	8968.6	--	
ANNUAL MEAN	30.25	24.57	72.53	
HIGHEST ANNUAL MEAN	--	--	139	1983
LOWEST ANNUAL MEAN	--	--	24.6	2002
HIGHEST DAILY MEAN	172 Mar 15	116 Apr 1	5530	Apr 24 1980
LOWEST DAILY MEAN	9.8 <sup>e</sup> Dec 27,28	9.6 <sup>e</sup> Jan 3,14-16	7.0	Dec 24 1990
ANNUAL SEVEN-DAY MINIMUM	9.9 Dec 25	9.8 Jan 10	9.8	Jan 10 2002
MAXIMUM PEAK FLOW	--	153 <sup>a</sup> Apr 1	7430 <sup>b</sup>	Apr 24 1980
MAXIMUM PEAK STAGE	--	6.00 <sup>c</sup> Feb 7	10.58	Apr 24 1980
ANNUAL RUNOFF (AC-FT)	21900	17790	52540	
10 PERCENT EXCEEDS	46	30	109	
50 PERCENT EXCEEDS	26	23	53	
90 PERCENT EXCEEDS	18	12	26	

- a Gage height, 3.80 ft.
- b From rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- c Backwater from ice.
- e Estimated.

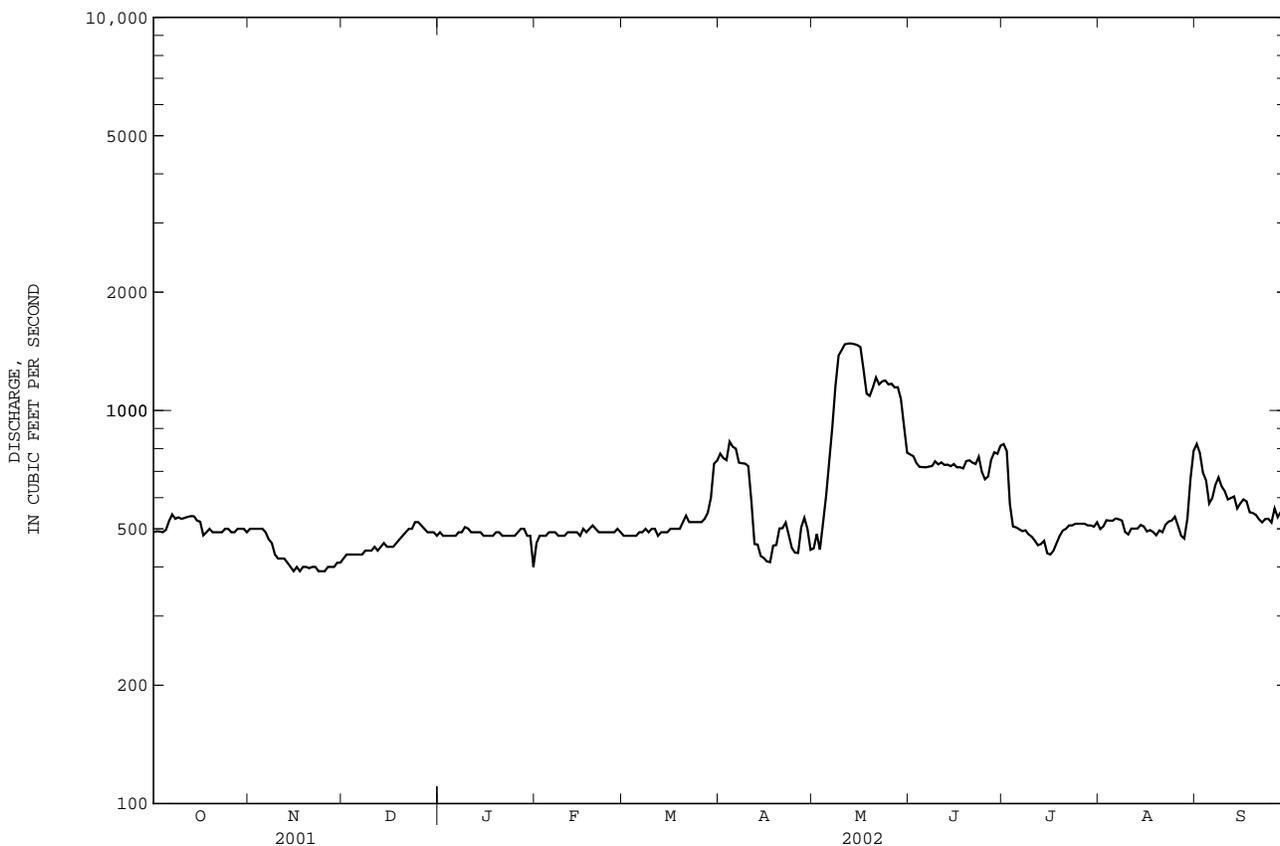




09217000 GREEN RIVER NEAR GREEN RIVER, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1952 - 2002	
ANNUAL TOTAL	243358		210309		--	
ANNUAL MEAN	666.7		576.2		1662	
HIGHEST ANNUAL MEAN	--		--		3089 1986	
LOWEST ANNUAL MEAN	--		--		576 2002	
HIGHEST DAILY MEAN	1600 <sup>e</sup>	Apr 30, May 2	1480	May 12-14	16700	Sep 7 1965
LOWEST DAILY MEAN	390 <sup>e</sup>	Nov 15-17, 23-25	390	Nov 15,17, 23-25	170	Nov 16 1955
ANNUAL SEVEN-DAY MINIMUM	395	Nov 19	395	Nov 19	214	Dec 24 1962
MAXIMUM PEAK FLOW	--	--	1550	May 12	16800 <sup>a</sup>	Sep 7 1965
MAXIMUM PEAK STAGE	--	--	2.28	May 12	8.53 <sup>a</sup>	Sep 7 1965
ANNUAL RUNOFF (AC-FT)	482700		417100		1204000	
10 PERCENT EXCEEDS	920		776		3640	
50 PERCENT EXCEEDS	610		500		1080	
90 PERCENT EXCEEDS	450		434		459	

a Caused by emergency release from Fontenelle Reservoir.  
 e Estimated.



GREEN RIVER BASIN

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT	11...	1120	541	611	10.1	102	8.5	543	9.5	6.0	--	--	--
JAN	31...	1615	279	610	10.9	93	8.7	624	-10.0	.0	--	--	--
MAR	21...	1340	540	608	11.6	100	8.4	674	6.0	.0	--	--	--
MAY	22...	1100	1150	605	9.2	99	8.2	540	7.0	8.5	--	--	--
JUL	31...	1740	477	608	8.2	119	8.5	471	31.0	22.0	--	--	--
AUG	29...	1420	495	604	8.5	111	8.3	466	19.0	16.6	160	39.3	15.4

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT	11...	--	--	--	--	--	--	--	354	--	--	--	--
JAN	31...	--	--	--	--	--	--	--	420	--	--	--	--
MAR	21...	--	--	--	--	--	--	--	402	--	--	--	--
MAY	22...	--	--	--	--	--	--	--	336	--	--	--	--
JUL	31...	--	--	--	--	--	--	--	298	--	--	--	--
AUG	29...	1	36.1	122	4.77	4.65	97.6	.39	380	284	273	<.04	.27

Date	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
OCT	11...	--	--	--	--
JAN	31...	--	--	--	--
MAR	21...	--	--	--	--
MAY	22...	--	--	--	--
JUL	31...	--	--	--	--
AUG	29...	<.008	<.06	<.02	<.06

09217010 GREEN RIVER BELOW GREEN RIVER, WY

LOCATION.--Lat 41°29'46", long 109°26'17", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT												
11...	1145	541	614	10.0	6.0	<.04	.40	.08	<.008	E.04	.04	.06
JAN												
31...	1705	279	730	-12.0	.0	.10	.55	.21	<.008	E.04	.04	.10
MAR												
21...	1515	540	770	6.5	.0	.05	.48	.14	<.008	E.03	.02	.09
MAY												
22...	1145	1150	598	7.0	8.4	<.04	.30	E.04	<.008	<.06	E.01	E.04
JUL												
31...	1820	477	515	31.0	22.0	<.04	.29	.08	.009	<.06	<.02	<.06
AUG												
29...	1510	495	504	21.0	16.4	<.04	.36	.05	E.004	E.04	E.01	E.03

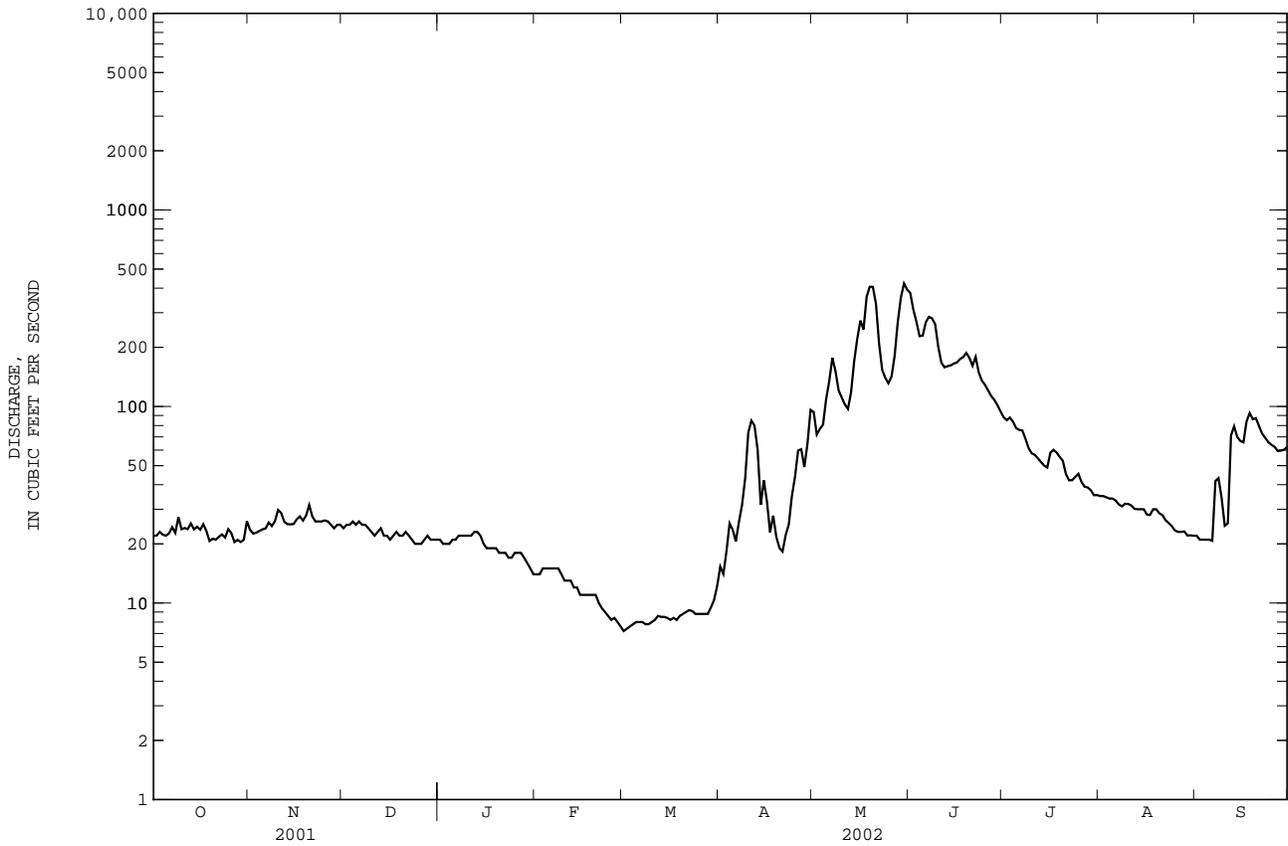
E -- Estimated value



09217900 BLACKS FORK NEAR ROBERTSON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1966 - 2002	
ANNUAL TOTAL	35995		20835.0		--	
ANNUAL MEAN	98.62		57.08		157.7	
HIGHEST ANNUAL MEAN	--		--		228 1983	
LOWEST ANNUAL MEAN	--		--		57.1 2002	
HIGHEST DAILY MEAN	1180	May 16	423	May 30	1880	Jun 19 1983
LOWEST DAILY MEAN	13	Mar 13,14,17,18	7.2 <sup>e</sup>	Mar 1	3.2	Apr 2 1994
ANNUAL SEVEN-DAY MINIMUM	13	Mar 12	7.7	Feb 27	3.9	Apr 2 1994
MAXIMUM PEAK FLOW	--		555	May 31	2480 <sup>a</sup>	Jun 19 1983
MAXIMUM PEAK STAGE	--		3.26	May 31	5.17 <sup>b</sup>	Jun 15 1995
ANNUAL RUNOFF (AC-FT)	71400		41330		114200	
10 PERCENT EXCEEDS	278		159		480	
50 PERCENT EXCEEDS	26		25		45	
90 PERCENT EXCEEDS	19		9.8		21	

a Gage height, 4.91 ft, site and datum then in use.  
 b Discharge, 2,210 ft<sup>3</sup>/s.  
 e Estimated.



GREEN RIVER BASIN

09220000 EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY

LOCATION.--Lat 41°03'15", long 100°23'52", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 Oct. 1, 1978, published as East Fork of Smith Fork near Robertson.

REVISED RECORDS.--WSP 979: Drainage area.

GAGE.--Water-stage recorder. 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 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	11	e5.1	e8.0	e6.4	e5.6	e8.6	e6.4	e230	e65	e25	e7.0
2	28	11	e5.3	e7.8	e6.8	e5.7	e9.0	e6.0	e220	e39	e25	e7.0
3	14	11	e5.4	e7.5	e7.2	e5.9	e9.6	e6.4	e190	e40	e25	e7.0
4	13	12	e5.5	e7.4	e7.4	e6.1	e9.2	e6.8	e170	e39	e24	e7.0
5	14	11	e5.3	e7.5	e7.4	e6.2	e11	e7.4	e170	e38	e24	e7.0
6	15	11	e5.5	e7.7	e7.4	e6.4	e12	e8.2	e185	e37	e24	e7.4
7	15	7.7	e5.7	e7.9	e7.6	e6.4	e11	e7.6	e190	e37	e14	e8.4
8	15	e7.2	e5.4	e8.1	e7.6	e6.3	e12	e7.0	e185	e37	e14	e10
9	16	e6.4	e5.2	e8.1	e7.4	e6.2	e13	e6.7	e175	e37	e14	e9.6
10	15	e6.7	e5.1	e8.2	e7.0	e6.2	e14	e6.4	e165	e36	e13	e8.2
11	15	e7.0	e5.0	e8.6	e6.8	e6.4	e16	e6.2	e110	e36	e13	e7.6
12	15	e7.2	e5.2	e8.8	e6.8	e6.5	e17	e6.0	e92	e36	e12	7.1
13	15	e7.0	e5.5	e8.8	e6.6	e6.7	e16	e6.6	e92	e36	e12	6.9
14	15	e6.6	e5.6	e8.4	e6.4	e6.7	e14	e8.6	e93	e36	e12	6.7
15	15	e6.7	e5.5	e8.0	e6.3	e6.8	e12	e50	e94	e36	e12	6.7
16	15	e6.9	e5.4	e7.8	e6.3	e6.8	e12	e56	e94	e37	e12	6.8
17	15	e6.7	e5.2	e7.8	e6.4	e6.9	e10	e71	e94	e38	e12	12
18	15	e6.5	e5.1	e7.8	e6.5	e7.0	e11	e78	e76	e40	e12	19
19	15	e6.2	e5.2	e7.4	e6.6	e7.2	e8.6	e90	e72	e38	e12	18
20	15	e6.4	5.2	e7.2	e6.6	e7.6	e7.8	e102	e63	e38	e12	18
21	15	e6.5	5.3	e7.0	e6.4	e7.8	e7.0	e94	e62	e37	e12	18
22	15	e6.2	5.7	e7.1	e6.3	e8.0	e6.2	e88	e60	e37	e12	18
23	15	e6.0	6.2	e7.2	e6.3	e8.2	e5.8	e80	e62	e37	e12	18
24	17	e5.8	7.2	e7.2	e6.2	e8.0	e5.5	e76	e64	e35	e12	18
25	16	e5.6	7.9	e7.0	e6.2	e8.0	e5.7	e71	e65	e34	e11	19
26	15	e5.3	e8.0	e6.8	e6.0	e8.0	e6.0	e76	e67	e33	e10	19
27	15	e5.2	e8.2	e6.6	e5.8	e8.0	e6.2	e88	e67	e33	e10	19
28	15	e5.0	e8.0	e6.6	e5.7	e8.0	e5.6	e102	e66	e33	e10	19
29	15	e5.2	e7.8	e6.4	---	e8.2	e5.9	e110	e66	e33	e7.4	19
30	14	e5.3	e7.8	e6.2	---	e8.2	e6.5	e125	e66	e26	e7.2	19
31	11	---	e8.0	e6.2	---	e8.4	---	e165	---	e26	e7.0	---
TOTAL	493	218.3	186.5	233.1	186.4	218.4	294.2	1618.3	3405	1140	433.6	373.4
MEAN	15.90	7.277	6.016	7.519	6.657	7.045	9.807	52.20	113.5	36.77	13.99	12.45
MAX	35	12	8.2	8.8	7.6	8.4	17	165	230	65	25	19
MIN	11	5.0	5.0	6.2	5.7	5.6	5.5	6.0	60	26	7.0	6.7
AC-FT	978	433	370	462	370	433	584	3210	6750	2260	860	741

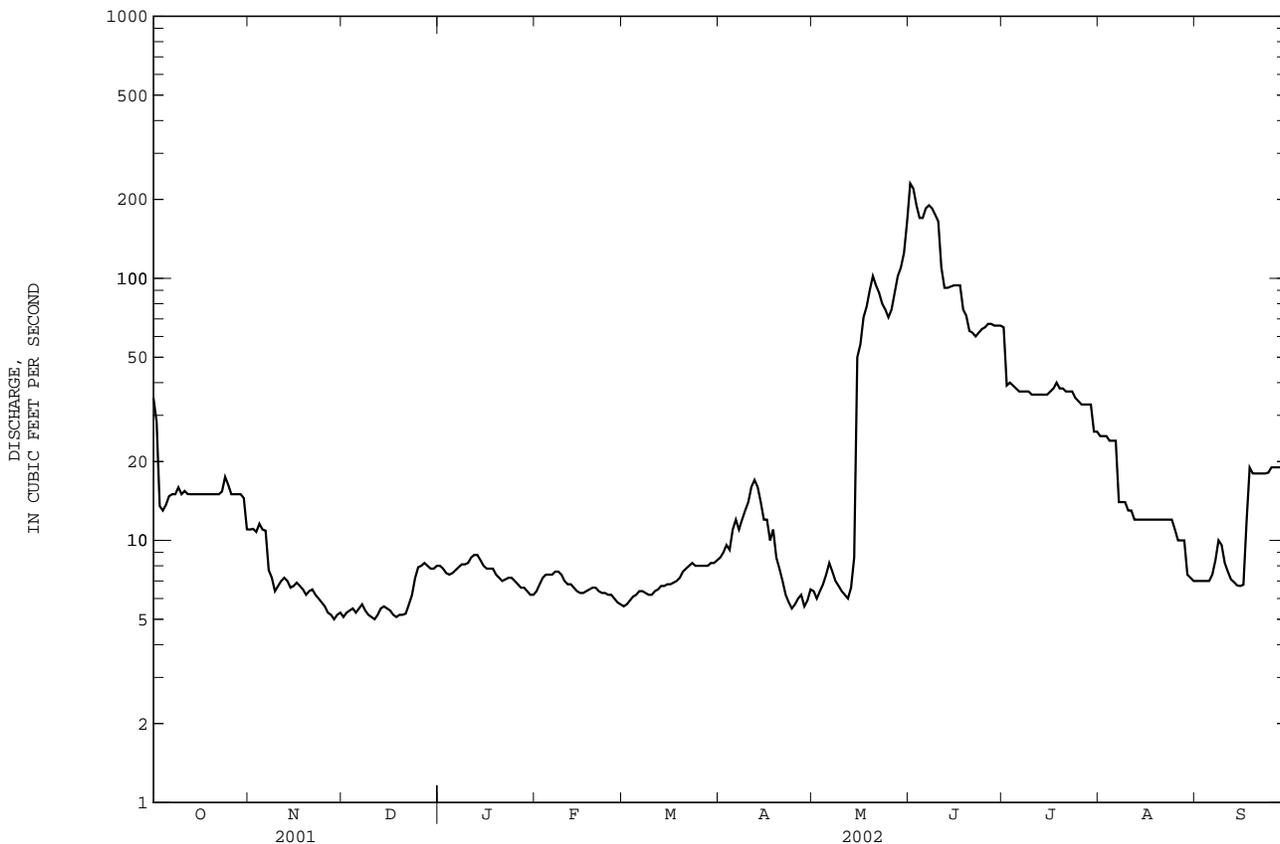
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

MEAN	15.92	10.80	8.040	7.161	7.170	7.970	18.92	104.0	214.6	104.9	42.05	27.72
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 2002 WATER YEAR	WATER YEARS 1939 - 2002	
ANNUAL TOTAL	8800.2	--	
ANNUAL MEAN	24.11	46.45	
HIGHEST ANNUAL MEAN	--	88.9	1965
LOWEST ANNUAL MEAN	--	24.1	2002
HIGHEST DAILY MEAN	230 <sup>e</sup> Jun 1	1200	Jun 24 1983
LOWEST DAILY MEAN	5.0 <sup>e</sup> Nov 28, Dec 11	1.0	Dec 17 1962
ANNUAL SEVEN-DAY MINIMUM	5.2 Nov 26	1.0	Dec 17 1962
MAXIMUM PEAK FLOW	230 Jun 1	1450	Jun 10 1965
MAXIMUM PEAK STAGE	5.03 Jun 1	6.75	Jun 10 1965
ANNUAL RUNOFF (AC-FT)	17460	33650	
10 PERCENT EXCEEDS	66	140	
50 PERCENT EXCEEDS	8.4	13	
90 PERCENT EXCEEDS	5.8	5.6	

e Estimated.



GREEN RIVER BASIN

09222000 BLACKS FORK NEAR LYMAN, WY

LOCATION.--Lat 41°27'08", long 110°10'20", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.15, T.17 N., R.113 N., 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<sup>2</sup>.

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
NOV													
27...	1500	23	603	12.3	107	8.2	2380	.0	.0	<1	E38k	235	14.3
MAR													
26...	1410	81	599	10.8	94	8.1	1040	10.5	.0	<1	<1	1320	290
MAY													
29...	1255	12	605	8.2	115	8.0	2720	18.0	20.0	E6k	90	35	1.1
AUG													
27...	1205	.0	--	--	--	--	--	--	--	--	--	--	--

E -- Estimated value

k -- Counts outside acceptable range (Non-ideal colony count)

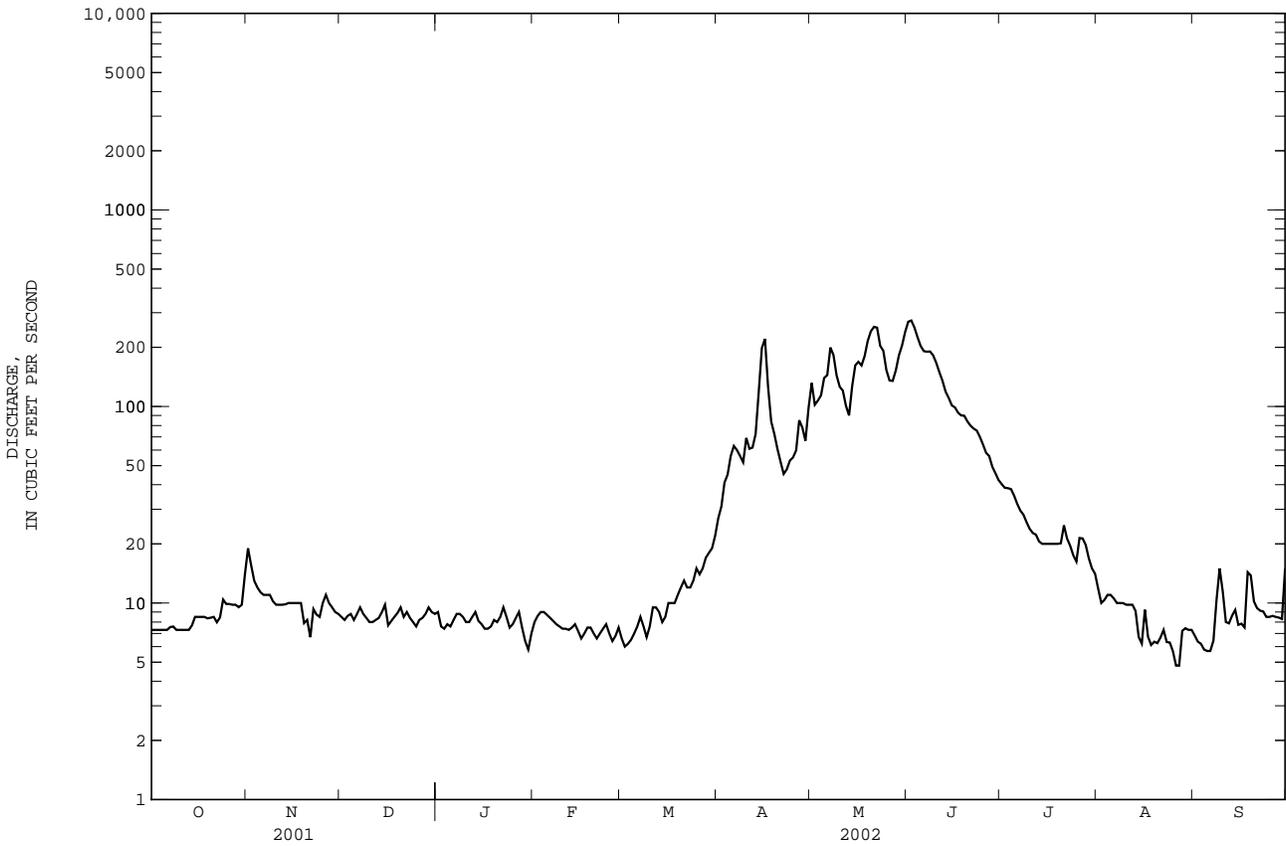


GREEN RIVER BASIN

09223000 HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1953 - 2002	
ANNUAL TOTAL	12349.94		14011.0		--	
ANNUAL MEAN	33.84		38.39		96.73	
HIGHEST ANNUAL MEAN	--		--		214 1971	
LOWEST ANNUAL MEAN	--		--		17.7 1977	
HIGHEST DAILY MEAN	309	May 16	274	Jun 2	2000	Jun 5 1986
LOWEST DAILY MEAN	0.92	Aug 30, 31	4.8	Aug 26, 27	0.10	Aug 17 1977
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 28	6.0	Aug 21	0.62	Aug 11 1977
MAXIMUM PEAK FLOW	--		279	Jun 1	2230 <sup>a</sup>	Jun 5 1986
MAXIMUM PEAK STAGE	--		3.72	Jun 1	8.10 <sup>b</sup>	May 28 1971
ANNUAL RUNOFF (AC-FT)	24500		27790		70080	
10 PERCENT EXCEEDS	133		133		299	
50 PERCENT EXCEEDS	12		9.8		22	
90 PERCENT EXCEEDS	5.7		7.0		12	

a Gage height, 6.72 ft.  
 b Site then in use.  
 e Estimated.



09224050 HAMS FORK NEAR DIAMONDVILLE, WY

LOCATION.--Lat 41°45'06", long 110°31'57", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L) (00671)
NOV 27...	1650	18	603	10.2	88	8.2	617	-1.0	.0	<.04	.72	E.005	.04
MAR 26...	1600	26	599	10.3	90	8.0	654	7.0	.0	E.02	.63	<.008	.05
MAY 29...	1535	118	605	11.8	151	8.5	440	18.0	16.0	<.04	E.04	<.008	E.01
AUG 27...	1325	15	615	9.3	125	8.3	385	19.0	19.0	<.04	.40	.014	.03

Date	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)
NOV 27...	E12k	E31k
MAR 26...	E3k	E6k
MAY 29...	E1k	E14k
AUG 27...	E11k	28

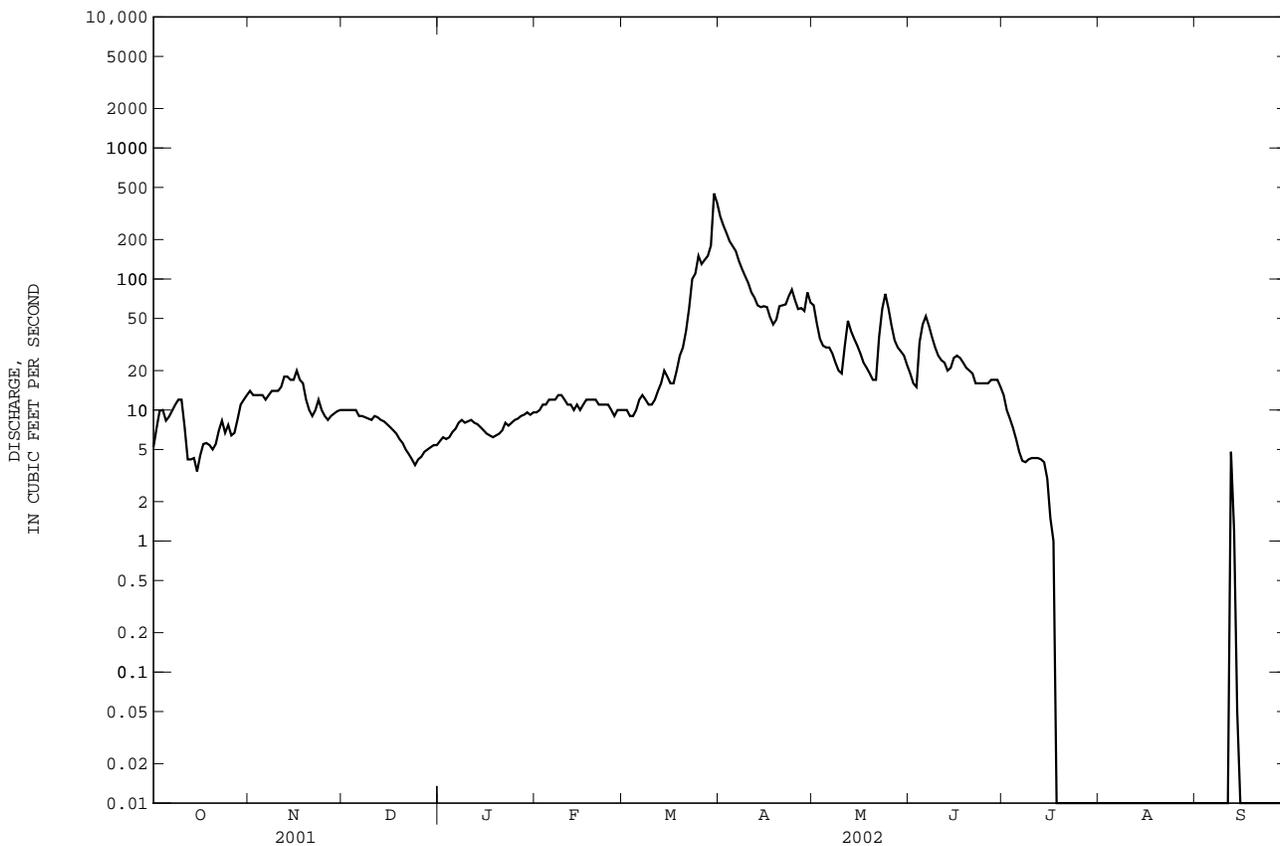
E -- Estimated value  
 k -- Counts outside acceptable range (Non-ideal colony count)



09224700 BLACKS FORK NEAR LITTLE AMERICA, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1962 - 2002	
ANNUAL TOTAL	38918.88	8479.06	--	
ANNUAL MEAN	106.6	23.23	317.6	
HIGHEST ANNUAL MEAN	--	--	888	1983
LOWEST ANNUAL MEAN	--	--	23.2	2002
HIGHEST DAILY MEAN	2250 Mar 23	450 <sup>e</sup> Mar 30	9340	Jun 13 1965
LOWEST DAILY MEAN	0.26 Aug 20	0.00 Many days	0.00	Many days, several years
ANNUAL SEVEN-DAY MINIMUM	0.40 Aug 14	0.00 Jul 18	0.00	Several years
MAXIMUM PEAK FLOW	--	450 Mar 30	9980 <sup>a</sup>	Jun 13 1965
MAXIMUM PEAK STAGE	--	6.35 <sup>b</sup> Mar 30	11.18 <sup>b</sup>	Mar 13 1997
ANNUAL RUNOFF (AC-FT)	77200	16820	230100	
10 PERCENT EXCEEDS	292	60	913	
50 PERCENT EXCEEDS	33	10	113	
90 PERCENT EXCEEDS	4.2	0.00	17	

a Gage height, 10.90 ft.  
 b Backwater from ice.  
 e Estimated.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1951 to September 1999.

WATER TEMPERATURES: March 1951 to September 1963, December 1964 to September 1999.

REMARKS.--Published as "near Green River" prior to October 1953 and as "near Marston" October 1953 to September 1964. Partial record of specific conductance and temperature for water years 1979 and 1980 are available at District Office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 6,010 microsiemens/cm, Oct. 1, 1953; minimum daily, 194 microsiemens/cm, May 17, 1984.

WATER TEMPERATURES: Maximum, 40.0°C, July 31, Aug. 1-4, 1984; minimum, 0.0°C on many days during winter period most years.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT 11...	0910	10	2780	6.0	5.0	740	174	75.5	6.23	6	366	165	114
JAN 11...	0900	8.4	2140	-4.0	.0	560	141	50.0	3.31	3	178	237	65.0
FEB 05...	0840	E12	--	-15.0	.0	730	187	63.3	5.54	3	183	307	90.5
APR 15...	1445	61	1860	12.0	4.0	520	116	56.5	9.15	4	196	197	124
MAY 30...	1000	25	1660	23.0	16.0	480	105	53.8	8.82	4	190	207	107
JUN 27...	1330	18	--	32.0	22.0	670	147	73.8	8.57	5	284	197	112
AUG 08...	1200	.0	--	--	--	--	--	--	--	--	--	--	--

Date	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	BORON, DIS-SOLVED (UG/L AS B) (01020)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
OCT 11...	.8	2.5	1170	2.73	55.8	2010	510	<30
JAN 11...	.7	8.7	750	1.82	30.3	1340	570	<10
FEB 05...	.8	9.7	745	2.00	--	1470	1140	<10
APR 15...	.4	6.6	540	1.59	191	1170	580	<10
MAY 30...	.4	7.6	487	1.48	73.8	1080	510	51
JUN 27...	.6	7.8	951	2.32	83.7	1700	510	<10
AUG 08...	--	--	--	--	--	--	--	--

E -- Estimated value

09229500 HENRY'S FORK NEAR MANILA, UT

LOCATION.--Lat 41°00'45", long 109°40'20", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>, 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, 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	e26	58	e56	e30	e38	52	3.5	e5.8	2.9	1.2	1.2
2	5.5	e25	64	e55	e31	e33	52	3.4	e5.4	2.9	1.3	1.1
3	5.2	26	62	e54	e32	e28	47	3.3	e5.0	2.7	1.6	1.2
4	5.1	27	62	e53	e32	e29	41	3.3	e4.6	2.5	3.1	1.2
5	5.2	28	e64	e51	e33	e32	39	3.5	e4.9	2.5	1.8	1.2
6	5.0	31	e60	e50	e35	e34	36	3.6	e5.2	2.5	1.5	1.2
7	5.4	32	e54	e51	e38	e38	34	3.5	e5.4	2.4	1.9	1.3
8	5.7	33	e56	e53	e37	e35	31	3.7	e5.6	2.3	2.2	1.4
9	7.7	29	e58	e56	e39	e38	29	3.7	e5.2	2.1	1.2	2.5
10	6.7	27	e52	e59	e33	e40	29	3.8	e4.7	2.0	1.0	3.8
11	e6.8	29	e48	e58	e36	e38	29	3.8	e4.4	1.9	0.98	5.1
12	e7.0	34	e42	e54	e35	e42	26	3.6	e4.0	1.9	0.88	4.3
13	e7.2	43	e39	e47	e34	e45	27	3.6	e3.4	1.8	0.83	6.3
14	e7.2	44	e41	e42	e33	e50	25	3.5	e3.6	1.8	0.79	2.9
15	e6.8	43	e44	e40	e34	55	20	3.3	e3.7	1.6	0.71	2.5
16	e7.2	41	e48	e38	e36	59	15	3.3	e3.6	1.6	0.70	2.5
17	e7.6	40	e50	e35	e38	54	16	3.3	e3.5	1.5	0.69	2.7
18	e8.2	42	e54	e32	e36	60	13	3.2	3.6	1.5	0.72	3.0
19	e9.0	43	e50	e31	e35	61	12	2.9	3.6	1.8	0.72	3.4
20	e10	41	e49	e31	e33	61	18	3.0	3.5	1.9	0.85	3.5
21	e11	45	e48	e31	e32	70	8.5	3.0	3.5	1.8	1.0	3.7
22	e12	50	e52	e34	e34	96	10	3.0	3.5	1.7	1.1	3.9
23	e11	52	e47	e37	e37	104	15	e3.2	3.5	2.1	1.0	4.1
24	e10	43	e50	e35	e40	99	13	e3.6	3.3	1.8	1.1	4.0
25	e12	49	e49	e32	e43	75	7.6	e3.8	3.3	1.6	1.1	4.9
26	e14	48	e52	e36	e40	60	6.4	e4.0	3.0	1.5	1.2	5.7
27	e16	65	e54	e38	e37	61	4.8	e4.6	2.8	1.4	1.2	6.2
28	e18	47	e54	e40	e36	49	4.5	e5.0	2.8	1.4	1.1	6.1
29	e21	53	e52	e38	---	54	3.9	e5.4	2.8	1.4	1.0	6.3
30	e25	61	e53	e36	---	50	3.5	e5.8	2.9	1.3	1.1	7.2
31	e27	---	e54	e32	---	58	---	e6.2	---	1.2	1.2	---
TOTAL	310.9	1197	1620	1335	989	1646	668.2	116.4	120.1	59.3	36.77	104.4
MEAN	10.03	39.90	52.26	43.06	35.32	53.10	22.27	3.755	4.003	1.913	1.186	3.480
MAX	27	65	64	59	43	104	52	6.2	5.8	2.9	3.1	7.2
MIN	5.0	25	39	31	30	28	3.5	2.9	2.8	1.2	0.69	1.1
AC-FT	617	2370	3210	2650	1960	3260	1330	231	238	118	73	207

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

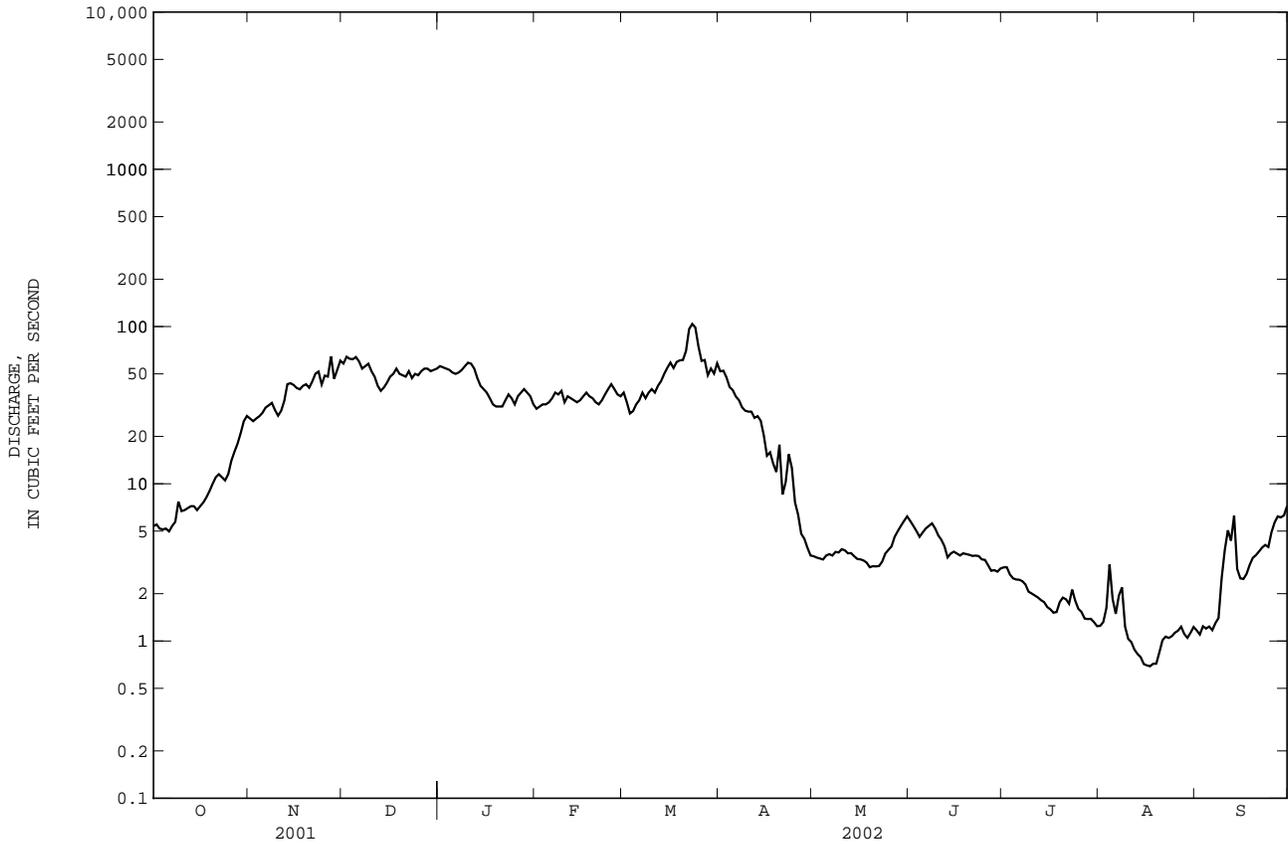
MEAN	47.22	55.40	47.71	42.74	46.00	69.52	84.51	154.7	272.6	92.51	49.55	33.72
MAX	176	117	105	103	88.6	165	196	541	1375	703	323	191
(WY)	1983	1984	1985	1984	1984	1929	1944	1984	1983	1975	1965	1929
MIN	0.000	12.8	20.5	15.2	15.0	24.9	3.94	3.79	0.10	0.000	0.090	0.000
(WY)	1935	1935	1933	1933	1933	1957	1935	1977	1934	1934	1940	1934

GREEN RIVER BASIN

09229500 HENRYS FORK NEAR MANILA, UT--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR	WATER YEARS 1929 - 2002	
ANNUAL TOTAL	8203.07	--	
ANNUAL MEAN	22.47	83.78	
HIGHEST ANNUAL MEAN	--	273	1983
LOWEST ANNUAL MEAN	--	16.5	1934
HIGHEST DAILY MEAN	104 Mar 23	3780	Jun 13 1965
LOWEST DAILY MEAN	0.69 Aug 17	0.00	Sep 20 1933
ANNUAL SEVEN-DAY MINIMUM	0.74 Aug 13	0.00	Jun 6 1934
MAXIMUM PEAK FLOW	138 <sup>a</sup> Mar 23	6750 <sup>b</sup>	Aug 3 1936
MAXIMUM PEAK STAGE	4.00 <sup>c</sup> Dec 17	9.42 <sup>d</sup>	Jul 15 1959
ANNUAL RUNOFF (AC-FT)	16270	60700	
10 PERCENT EXCEEDS	54	171	
50 PERCENT EXCEEDS	11	48	
90 PERCENT EXCEEDS	1.4	4.5	

- a Gage height, 3.80 ft.
- b Maximum discharge determined, gage height, 7.19 ft, site and datum then in use, from floodmarks, from rating curve extended above 57 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- c Backwater from ice.
- d Site and datum then in use. Discharge not determined.
- e Estimated.



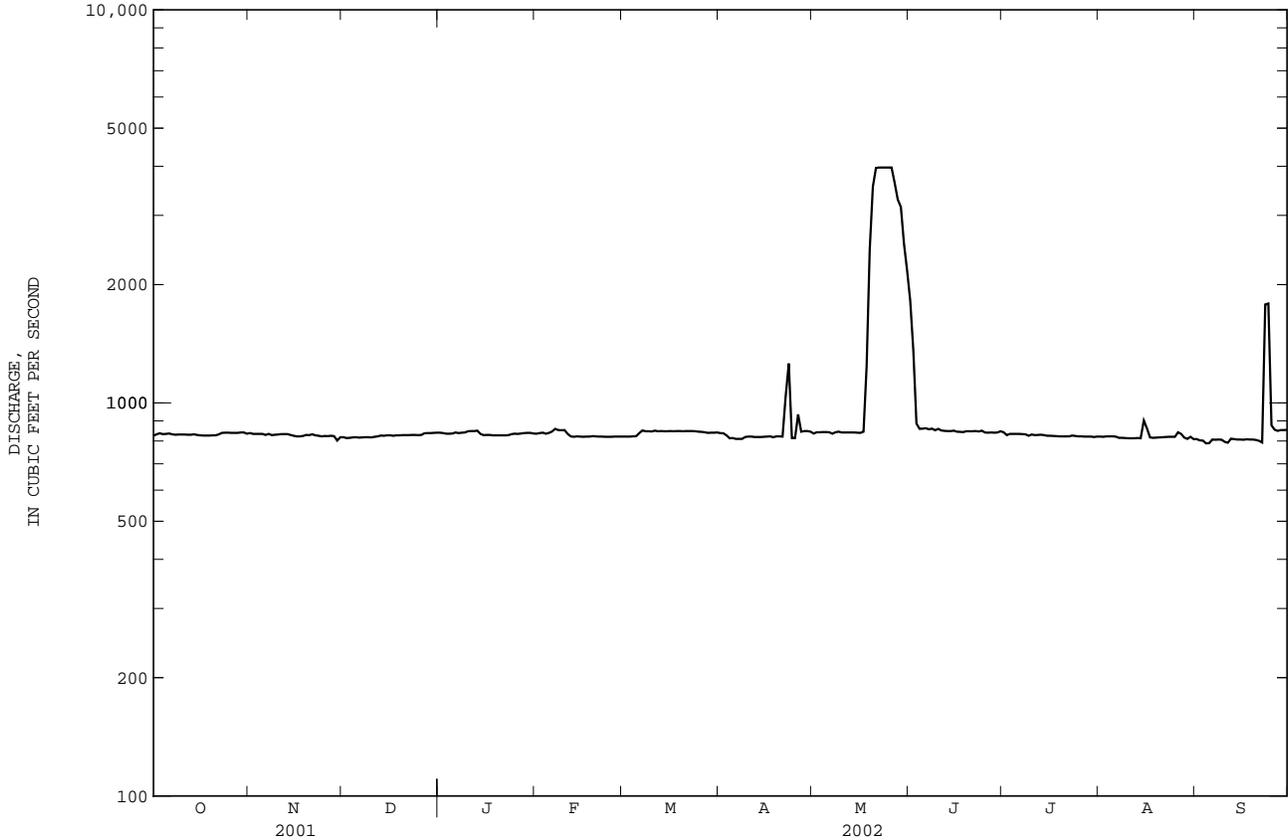


GREEN RIVER BASIN

09234500 GREEN RIVER NEAR GREENDALE, UT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1964 - 2002	
ANNUAL TOTAL	383105	341571	--	
ANNUAL MEAN	1050	935.8	2108	
HIGHEST ANNUAL MEAN	--	--	4270	1983
LOWEST ANNUAL MEAN	--	--	938	2002
HIGHEST DAILY MEAN	4490	May 22	3970	May 22-26
LOWEST DAILY MEAN	784	Jul 16,19,22,30	789	Sep 4
ANNUAL SEVEN-DAY MINIMUM	785	Jul 16	800	Sep 4
MAXIMUM PEAK FLOW	--	4050	May 20	19600 <sup>a</sup>
MAXIMUM PEAK STAGE	--	11.30	May 20	14.51
				Jun 12 1957 <sup>b</sup>
				Jun 6 1986 <sup>b</sup>
ANNUAL RUNOFF (AC-FT)	759900	677500	1527000	
10 PERCENT EXCEEDS	1170	853	3720	
50 PERCENT EXCEEDS	857	831	1830	
90 PERCENT EXCEEDS	802	814	877	

a Gage height, 10.60 ft.  
 b For period of operation, 1950 to current year, site and datum then in use.





GREEN RIVER BASIN

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO--Continued

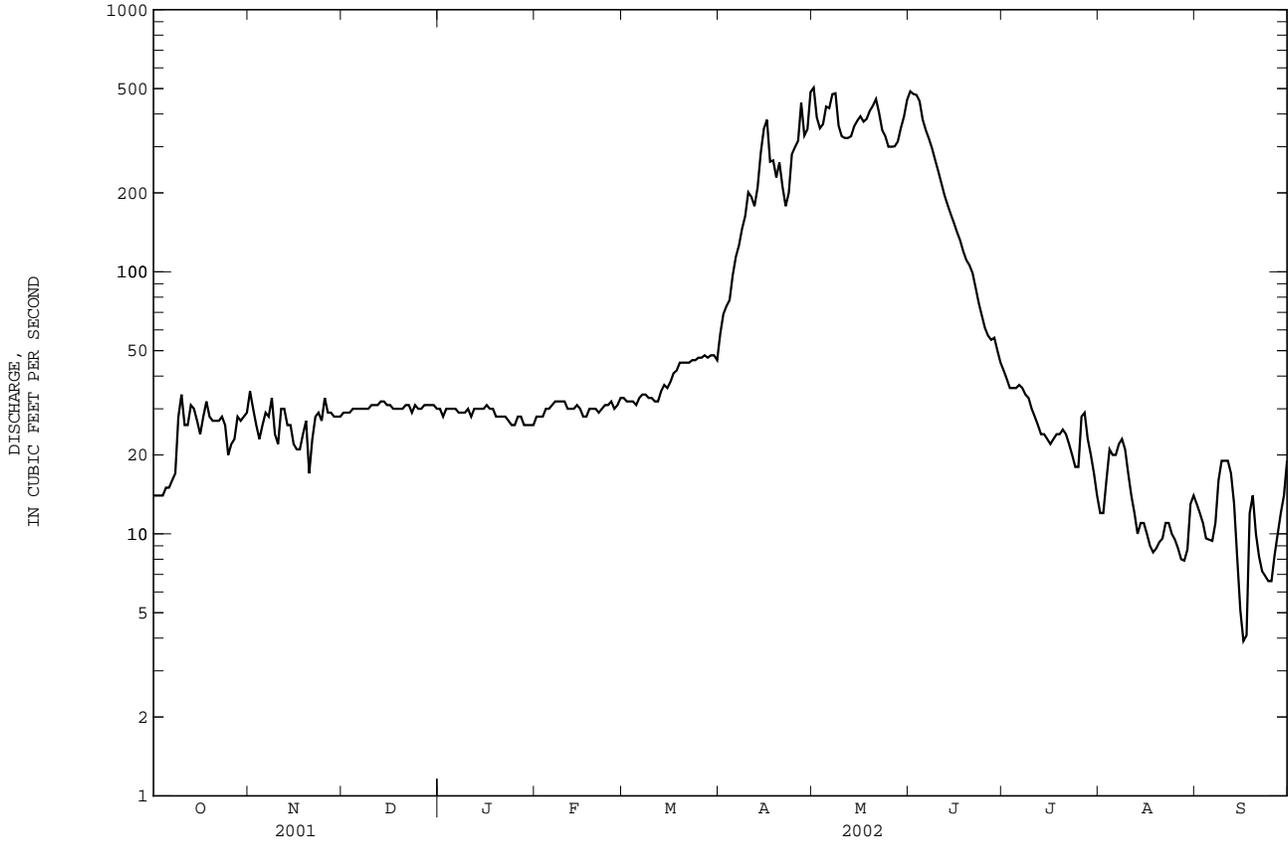
SUMMARY STATISTICS

FOR 2002 WATER YEAR

WATER YEARS 1944 - 2002

ANNUAL TOTAL	31522.6	--	
ANNUAL MEAN	86.36	229.1	
HIGHEST ANNUAL MEAN	--	423	1984
LOWEST ANNUAL MEAN	--	86.3	2002
HIGHEST DAILY MEAN	504	3960	May 24 1984
LOWEST DAILY MEAN	3.9	3.9	Sep 16 2002
ANNUAL SEVEN-DAY MINIMUM	7.7	6.2	Sep 4 1988
MAXIMUM PEAK FLOW	725	4780 <sup>a</sup>	May 23 1984
MAXIMUM PEAK STAGE	5.40	8.78 <sup>b</sup>	May 23 1984
ANNUAL RUNOFF (AC-FT)	62530	165900	

a Gage height, 8.78 ft.  
 b 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 SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
MAY 23...	0845	48	558	10.6	102	--	26	-1.0	1.0	10	2.81	.652	.26	
AUG 27...	0900	1.7	564	8.8	100	8.1	46	8.5	7.5	19	5.58	1.22	.48	
Date		SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	
MAY 23...	.1	.85	11	E.23	<.1	6.9	1.5	--	--	--	--	--	--	
AUG 27...	.1	1.41	22	<.30	<.1	9.33	2.2	38	<.04	<.10	E.08	<.05	<.008	
Date		PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
MAY 23...	--	--	--	27	.05	E.1	8	<.06	<10	E.03	<.8	.13	26.5	
AUG 27...	.006	<.02	.007	5	E.03	.2	17	<.06	<10	<.04	<.8	.05	15.1	
Date		IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
MAY 23...	22	E.06	<4	1.2	<.01	<.2	.56	<.3	<1	12.8	<8	2	.03	
AUG 27...	29	<.08	<4	4.1	E.01	<.2	.55	<.3	<1	23.8	<8	1	E.02	

E -- Estimated value

GREEN RIVER BASIN

09253465 WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY

LOCATION.--Lat 41°05'37", long 107°09'31", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
MAY 23...	1115	64	584	10.2	100	--	32	9.0	3.5	12	3.68	.749	.26	
AUG 27...	1130	.33	587	6.3	83	7.6	297	17.5	15.5	120	38.5	6.45	1.05	
Date		SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS AL) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	
MAY 23...	.1	1.07	13	.39	<.1	7.1	2.2	.03	4.05	24	24	.06	E.2	
AUG 27...	.4	11.0	75	7.41	.5	10.0	56.9	.24	.16	177	3	E.04	.3	
Date		BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
MAY 23...	9	<.06	<10	.06	<.8	.05	12.2	21	.37	<4	1.3	<.01	<.2	
AUG 27...	70	<.06	30	E.03	<.8	.10	2.9	15	<.08	E4	15.7	E.01	1.4	
Date				NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)				
MAY 23...				.42	<.3	<1	20.1	<8	10	.03				
AUG 27...				.54	<.3	<1	265	<8	2	.28				

E -- Estimated value

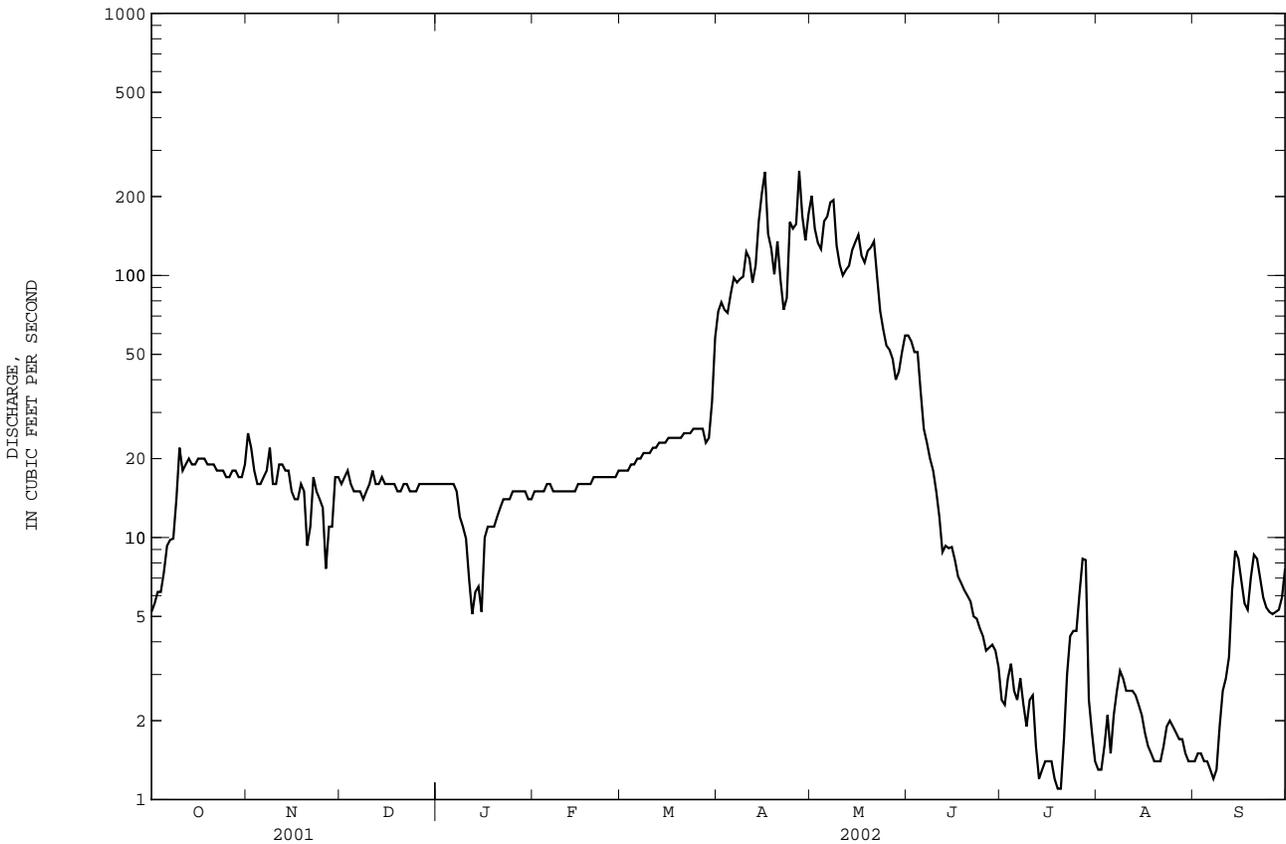


GREEN RIVER BASIN

09255000 SLATER FORK NEAR SLATER, CO--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1932 - 2002	
ANNUAL TOTAL	21765.2		11054.9		--	
ANNUAL MEAN	59.63		30.29		77.70	
HIGHEST ANNUAL MEAN	--		--		157 1984	
LOWEST ANNUAL MEAN	--		--		20.5 1934	
HIGHEST DAILY MEAN	655	May 19	250	Apr 27	1500	May 16 1984
LOWEST DAILY MEAN	2.5	Aug 31	1.1	Jul 19, 20	0.00 <sup>a</sup>	Aug 2 1934
ANNUAL SEVEN-DAY MINIMUM	3.9	Jul 30	1.3	Jul 14	0.00	Aug 2 1934
MAXIMUM PEAK FLOW	--		337		2250 <sup>b</sup> May 16 1984	
MAXIMUM PEAK STAGE	--		5.18		11.78 <sup>c</sup> May 16 1984	
10 PERCENT EXCEEDS	210		103		254	
50 PERCENT EXCEEDS	19		16		20	
90 PERCENT EXCEEDS	5.9		1.8		7.0	

- a Also occurred several days during years 1936, 1954, and 1977.
- b From rating curve extended above 1,000 ft<sup>3</sup>/s.
- c From floodmark.
- e Estimated.



09259050 LITTLE SNAKE RIVER BELOW BAGGS, WY

LOCATION.--Lat 41°01'43", long 107°41'14", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
APR 17...	1100	926	602	9.7	100	8.3	226	11.0	6.5	88	24.3	6.54	1.71
MAY 23...	1420	501	607	10.0	112	7.6	178	14.0	10.0	70	19.4	5.24	1.66
JUL 17...	1000	.99	613	9.8	152	8.5	611	23.0	26.0	200	46.0	19.6	3.16
AUG 27...	1330	.0	--	--	--	--	--	--	--	--	--	--	--

Date	SODIUM AD-SORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
APR 17...	.4	9.55	74	2.56	E.1	12.8	35.5	.19	343	137	182	455
MAY 23...	.5	9.13	70	2.26	.2	11.6	17.8	.15	147	109	13	17.6
JUL 17...	2	57.6	232	14.6	.5	5.4	75.9	.49	.97	362	11	.03
AUG 27...	--	--	--	--	--	--	--	--	--	--	--	--

E -- Estimated value

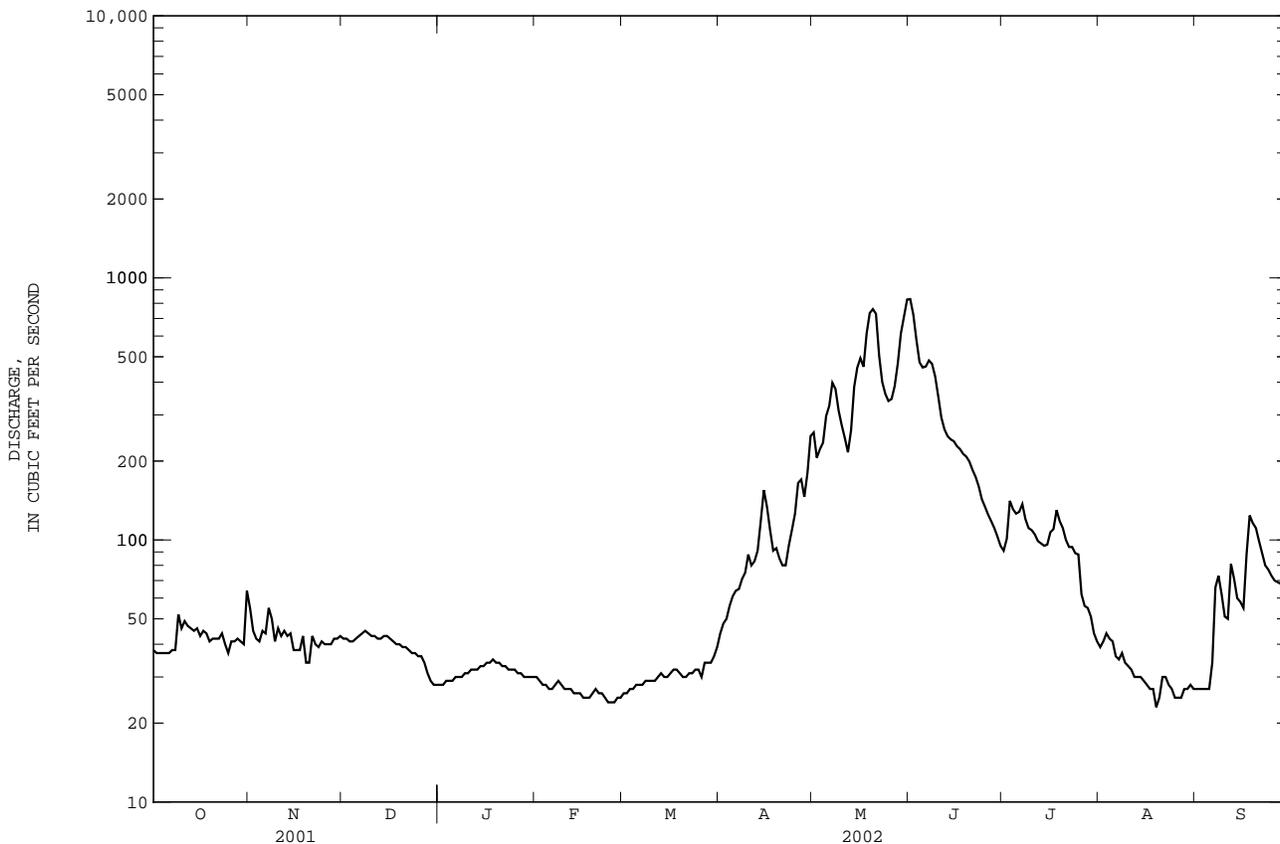


BEAR RIVER BASIN

10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1943 - 2002	
ANNUAL TOTAL	44043		37704		--	
ANNUAL MEAN	120.7		103.3		193.4	
HIGHEST ANNUAL MEAN	--		--		335 1986	
LOWEST ANNUAL MEAN	--		--		81.5 1977	
HIGHEST DAILY MEAN	1500	May 16	830	Jun 1	2680	Jun 4 1986
LOWEST DAILY MEAN	27 <sup>e</sup>	Jan 8	23	Aug 19	18	Jan 3 1960
ANNUAL SEVEN-DAY MINIMUM	29	Jan 6	25	Feb 22	21	Dec 28 1959
MAXIMUM PEAK FLOW	--		1060	Jun 1	3230	Jun 6 1986
MAXIMUM PEAK STAGE	--		5.75	Jun 1	4.05 <sup>a</sup>	Jun 6 1986
ANNUAL RUNOFF (AC-FT)	87360		74790		140100	
10 PERCENT EXCEEDS	317		263		600	
50 PERCENT EXCEEDS	44		42		58	
90 PERCENT EXCEEDS	34		27		34	

a Datum then in use.  
e Estimated.



## BEAR RIVER BASIN

10016900 BEAR RIVER AT EVANSTON, WY

LOCATION.--Lat 41°16'13", long 110°57'47", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--May 1984 to September 2002 (no winter records 1984 to 2001).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,730 ft above NGVD of 1929, from topographic map.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	32	e12	e28	e25	e23	161	314	727	44	12	11
2	13	32	e14	e25	e25	e23	264	237	671	42	12	11
3	12	23	e16	e22	e26	e24	307	228	538	43	12	12
4	14	17	e22	e24	e26	e23	289	212	400	57	13	13
5	14	14	e21	e26	e26	e25	300	273	325	49	12	13
6	12	16	e20	e27	e27	e26	244	310	300	44	9.1	15
7	7.8	21	e20	e26	e27	e28	187	414	295	51	9.8	16
8	7.0	36	e20	e24	e25	e29	162	412	274	46	8.6	18
9	6.9	29	e23	e26	e26	e29	141	322	250	37	7.8	24
10	12	17	e27	e24	e27	e27	183	260	225	36	8.5	17
11	15	20	e32	e23	e28	e30	167	201	202	40	6.4	12
12	9.2	19	e38	e22	e29	e32	134	185	152	37	6.2	18
13	8.8	21	e36	e21	e26	e34	129	164	115	32	14	37
14	8.5	20	e35	e20	e28	e32	144	241	110	30	14	36
15	8.4	21	e37	e20	e29	e32	195	334	90	29	12	26
16	7.5	18	e35	e19	e27	e34	219	403	70	28	15	22
17	7.1	13	e34	e20	e26	e35	191	313	57	27	16	26
18	5.2	14	e33	e21	e25	e36	148	394	51	43	15	64
19	3.6	18	e33	e22	e26	e37	169	555	79	64	16	92
20	3.2	15	e34	e24	e28	38	163	690	77	44	18	74
21	9.5	10	e35	e26	e29	43	133	815	73	35	19	71
22	15	e11	e33	e27	e30	53	156	559	61	25	17	62
23	17	e12	e30	e24	e31	59	175	439	61	22	17	51
24	20	e11	e27	e22	e28	63	154	364	59	23	17	41
25	17	e10	e25	e24	e25	68	152	298	50	22	17	38
26	11	e9.6	e24	e26	e23	71	158	263	51	22	14	36
27	14	e9.0	e25	e28	e20	67	214	279	57	20	11	36
28	16	e8.4	e26	e27	e22	87	179	301	58	18	14	39
29	16	e9.4	e27	e27	---	91	166	412	51	17	13	37
30	16	e10	e28	e26	---	96	231	523	46	19	10	40
31	18	---	e28	e26	---	116	---	673	---	15	9.3	---
TOTAL	356.7	516.4	850	747	740	1411	5615	11388	5575	1061	395.7	1008
MEAN	11.51	17.21	27.42	24.10	26.43	45.52	187.2	367.4	185.8	34.23	12.76	33.60
MAX	20	36	38	28	31	116	307	815	727	64	19	92
MIN	3.2	8.4	12	19	20	23	129	164	46	15	6.2	11
AC-FT	708	1020	1690	1480	1470	2800	11140	22590	11060	2100	785	2000

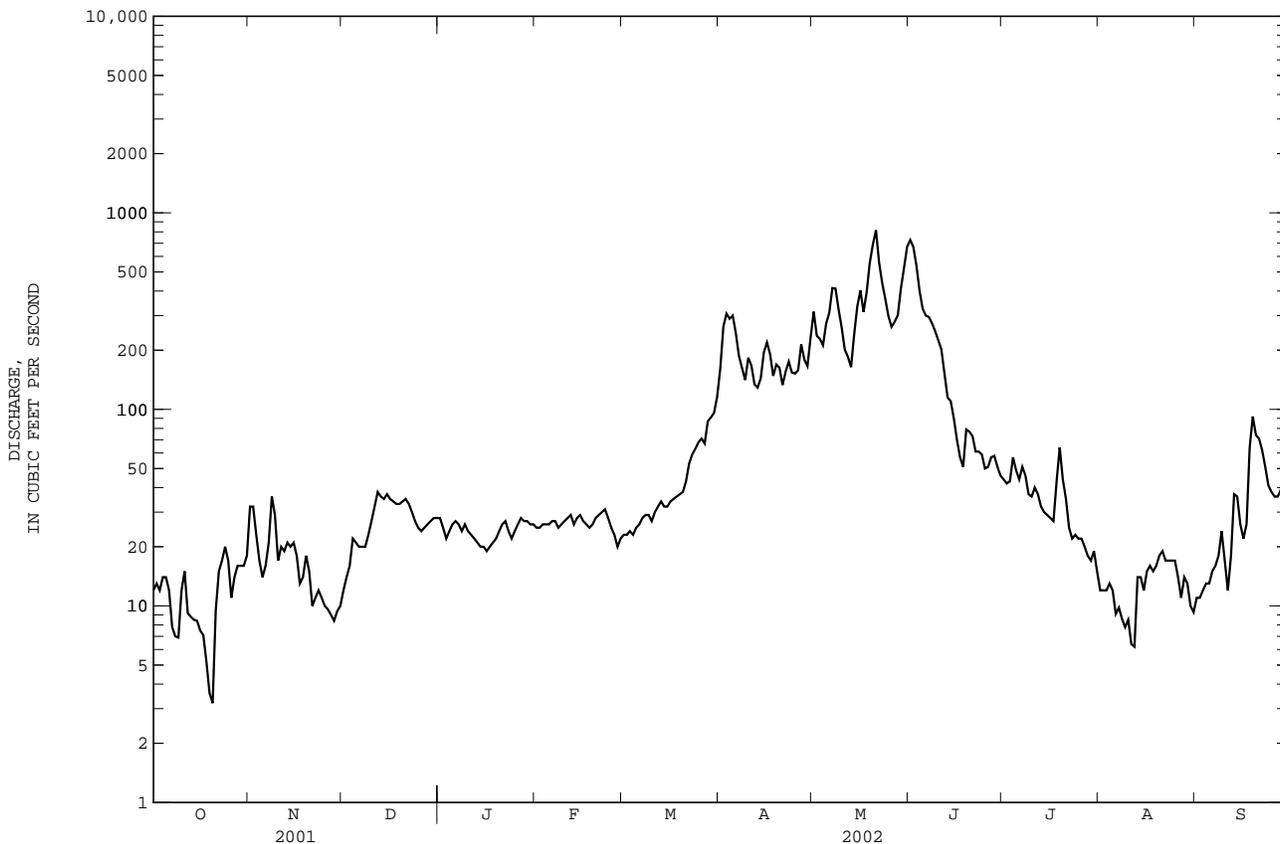
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	11.51	17.21	27.42	24.10	26.43	45.52	305.2	754.3	772.1	202.9	65.61	56.75							
MAX	11.5	17.2	27.4	24.1	26.4	45.5	602	1291	1890	980	181	225							
(WY)	2002	2002	2002	2002	2002	2002	1985	1986	1986	1995	1984	1984							
MIN	11.5	17.2	27.4	24.1	26.4	45.5	133	330	121	31.9	12.8	11.8							
(WY)	2002	2002	2002	2002	2002	2002	1995	1990	1992	2000	2002	1988							

10016900 BEAR RIVER AT EVANSTON, WY--Continued

SUMMARY STATISTICS	FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	29663.8		--	
ANNUAL MEAN	81.27		81.27	
HIGHEST ANNUAL MEAN	--		81.3 2002	
LOWEST ANNUAL MEAN	--		81.3 2002	
HIGHEST DAILY MEAN	815	May 21	3160	May 16 1984
LOWEST DAILY MEAN	3.2	Oct 20	3.2	Oct 20 2001
ANNUAL SEVEN-DAY MINIMUM	6.2	Oct 14	5.3	Aug 18 1988
MAXIMUM PEAK FLOW	963	May 21	3680	May 16 1984
MAXIMUM PEAK STAGE	3.82	May 21	7.35	May 16 1984
ANNUAL RUNOFF (AC-FT)	58840		58880	
10 PERCENT EXCEEDS	254		254	
50 PERCENT EXCEEDS	27		27	
90 PERCENT EXCEEDS	12		12	

e Estimated.

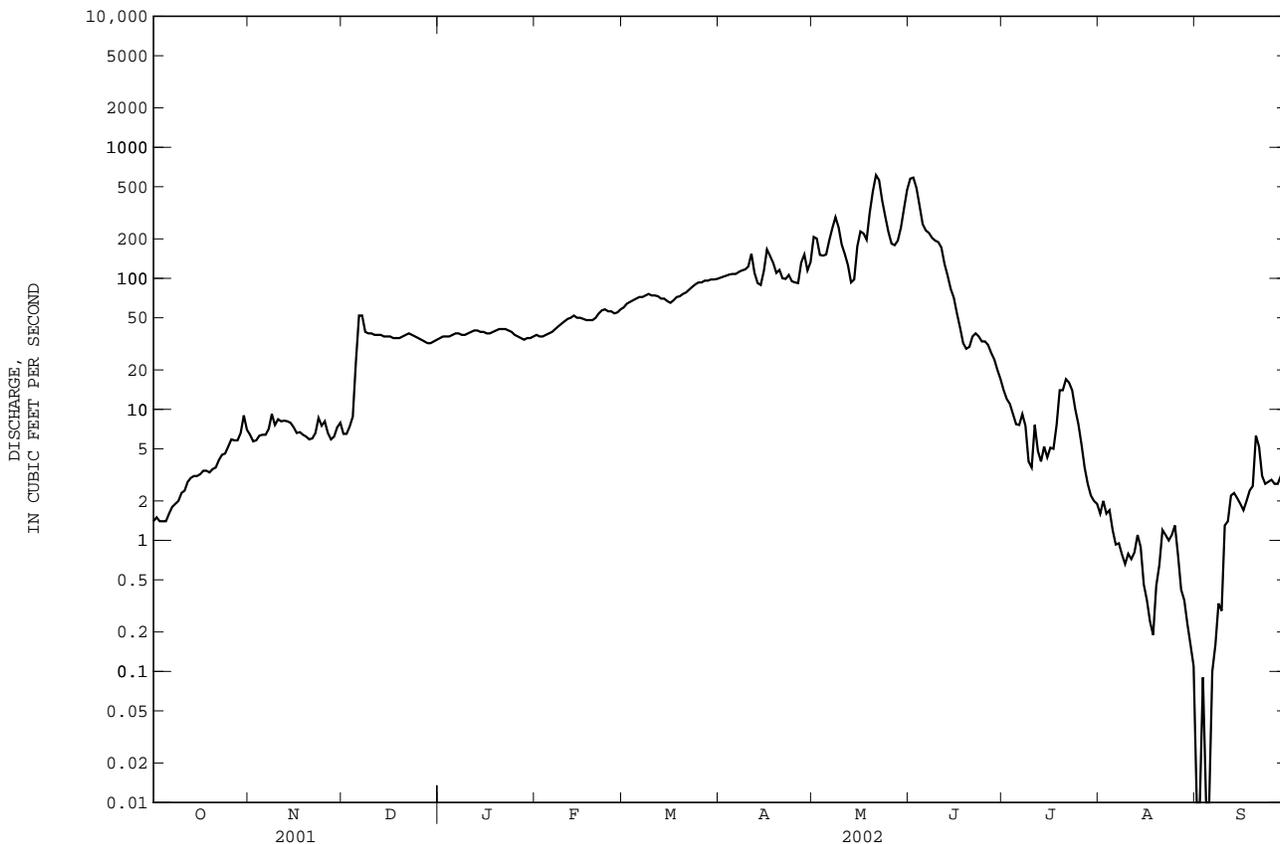




10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	34352.45		22167.88		--	
ANNUAL MEAN	94.12		60.73		233.6	
HIGHEST ANNUAL MEAN	--		--		583 1986	
LOWEST ANNUAL MEAN	--		--		45.1 1977	
HIGHEST DAILY MEAN	1400 <sup>e</sup>	May 17	613	May 21	3900	Jun 2 1983
LOWEST DAILY MEAN	0.11	Aug 31	0.00	Sep 1,2,4,5	0.00	Many days, 1988
ANNUAL SEVEN-DAY MINIMUM	0.14	Aug 26	0.04	Aug 31	0.00	Aug 30 1988
MAXIMUM PEAK FLOW	--		728	May 21	4150	Jun 2 1983
MAXIMUM PEAK STAGE	--		3.36	May 21	6.17	Jun 2 1983
ANNUAL RUNOFF (AC-FT)	68140		43970		169300	
10 PERCENT EXCEEDS	269		159		690	
50 PERCENT EXCEEDS	32		35		84	
90 PERCENT EXCEEDS	1.4		1.3		8.6	

e Estimated.



BEAR RIVER BASIN

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-AIRE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
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NOV 28...	1520	9.2	603	11.6	101	8.3	675	2.0	.0	280	59.9	30.6	3.54
MAR 27...	1045	215	600	11.7	102	8.5	406	10.0	.0	200	48.1	20.0	3.51
MAY 30...	1555	352	602	10.2	140	8.2	229	28.0	19.0	110	27.8	9.40	1.17
AUG 28...	1720	.25	614	9.1	128	8.8	993	25.0	21.0	270	29.0	46.9	10.3

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
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NOV 28...	.8	31.0	265	45.8	.1	13.0	48.2	.53	9.68	--	391	<.04	--
MAR 27...	.5	16.4	197	23.8	.1	7.9	19.7	.35	150	--	258	<.04	--
MAY 30...	.2	5.97	107	7.08	E.1	5.5	6.9	.17	122	--	128	<.04	--
AUG 28...	3	107	245	164	.4	11.3	51.9	.84	.42	615	567	<.04	1.1

Date	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	SEDI-MENT, SUS-PENDEDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDEDED (T/DAY) (80155)
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NOV 28...	--	<.05	<.008	--	<.02	--	--	--	31	.77
MAR 27...	--	.07	<.008	--	E.01	--	--	--	25	14.5
MAY 30...	--	<.05	<.008	--	<.02	--	--	--	45	42.8
AUG 28...	1.1	<.05	<.008	.018	<.02	.030	14	14.8	4.0	--

E -- Estimated value

10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT

LOCATION.--Lat 41°30'20", long 111°00'50", in NE 1/4 NE 1/4 NW 1/4 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 Wyoming-Utah State line, and 7.7 mi east of Woodruff.

DRAINAGE AREA.--784 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	9.8	14	14	15	16	18	19	1150	11	9.6	8.4
2	5.1	9.8	13	14	15	17	18	17	1130	11	9.7	8.4
3	4.9	10	13	14	15	17	19	17	1110	11	9.4	8.3
4	4.6	10	14	14	15	17	19	17	1090	11	9.4	8.4
5	4.4	10	14	14	16	17	20	17	1040	11	9.2	6.1
6	12	10	14	14	15	17	20	17	1000	11	9.3	3.4
7	17	10	14	14	15	17	20	17	963	11	9.1	7.9
8	17	10	14	14	15	16	20	17	917	11	9.2	12
9	17	11	14	14	15	16	20	17	870	11	9.1	12
10	15	11	14	15	15	16	20	17	400	11	9.1	12
11	8.8	11	14	15	15	16	20	17	120	11	9.2	12
12	8.1	11	14	15	15	16	20	17	120	11	9.2	12
13	8.0	11	14	15	15	16	20	18	120	11	9.0	12
14	6.6	11	14	15	15	16	20	18	120	11	9.3	12
15	5.4	11	14	15	15	17	20	18	71	11	8.8	11
16	5.3	12	14	15	15	17	20	18	38	10	8.9	9.9
17	5.3	12	14	15	15	17	20	18	38	11	8.6	9.8
18	5.4	12	14	15	15	17	20	19	38	11	8.7	9.8
19	5.3	12	14	15	15	17	21	19	38	10	8.6	9.9
20	5.4	12	14	15	15	17	21	19	38	11	8.2	9.9
21	5.5	12	14	15	15	17	21	19	37	10	8.1	9.8
22	5.5	12	14	15	15	17	21	19	32	10	8.1	9.6
23	5.3	12	14	15	15	17	21	19	28	9.9	8.1	9.8
24	5.5	12	14	15	16	17	21	19	28	10	7.8	9.8
25	5.6	12	14	15	16	17	21	20	28	9.6	7.8	9.8
26	5.6	13	14	15	16	17	21	20	27	9.7	8.1	10
27	5.6	13	14	15	16	17	22	20	27	9.6	8.2	10
28	7.4	13	14	15	16	17	22	41.4	27	9.5	8.4	10
29	9.4	13	14	15	---	17	22	1220	27	9.5	8.3	9.9
30	9.5	13	14	15	---	17	22	1200	23	9.4	8.4	10
31	9.8	---	14	15	---	18	---	1170	---	9.6	8.4	---
TOTAL	240.3	341.6	432	456	426	520	610	4493	10695	324.8	271.3	293.9
MEAN	7.752	11.39	13.94	14.71	15.21	16.77	20.33	144.9	356.5	10.48	8.752	9.797
MAX	17	13	14	15	16	18	22	1220	1150	11	9.7	12
MIN	4.4	9.8	13	14	15	16	18	17	23	9.4	7.8	3.4
AC-FT	477	678	857	904	845	1030	1210	8910	21210	644	538	583

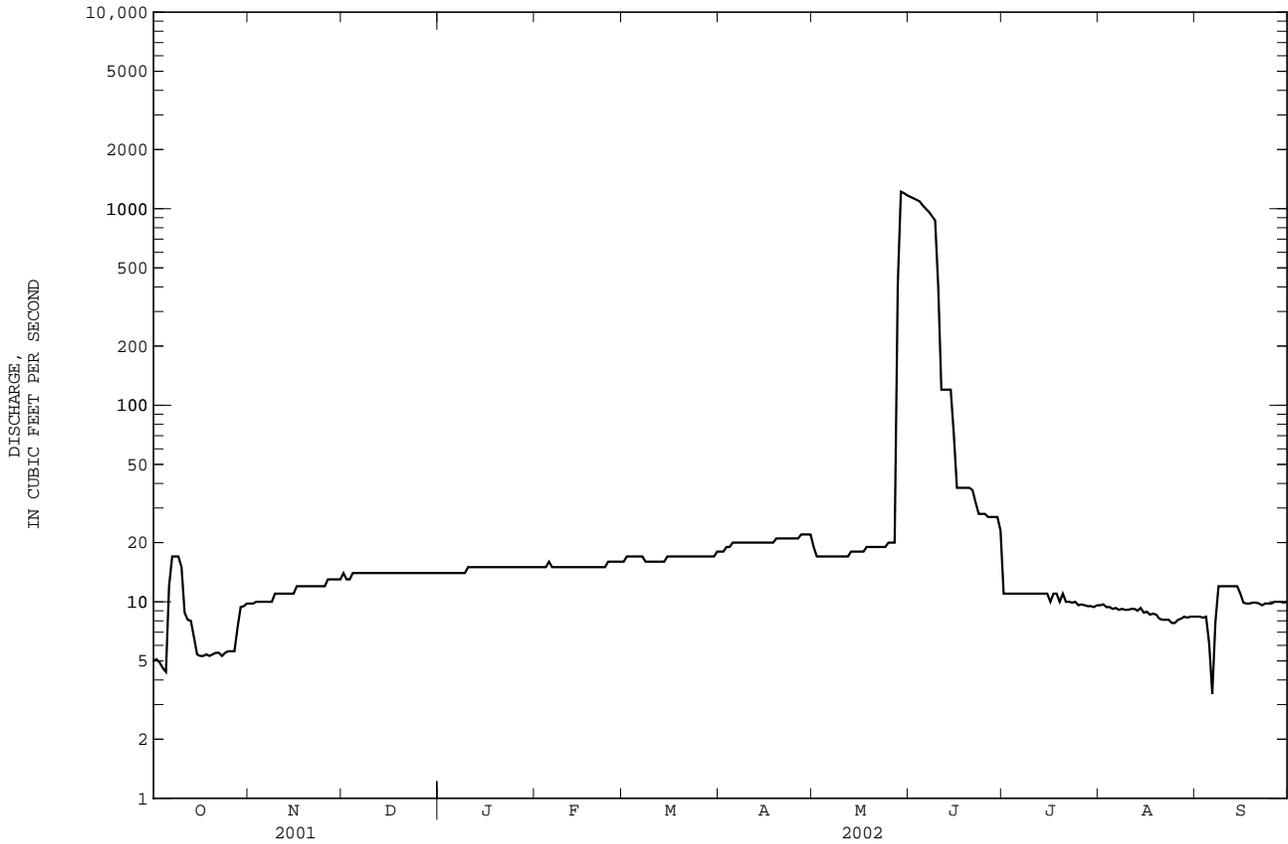
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2002, BY WATER YEAR (WY)

	MEAN	58.78	54.41	47.31	45.01	47.87	97.07	279.1	775.2	980.7	287.1	78.44	60.71
MAX	425	421	184	153	171	473	891	1828	2437	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	10.3	3.91	3.65	
(WY)	1990	1981	1978	1978	1978	1978	1977	1977	2002	2002	1979	1979	

BEAR RIVER BASIN

10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1962 - 2002	
ANNUAL TOTAL	34883.5		19103.9		--	
ANNUAL MEAN	95.57		52.34		234.5	
HIGHEST ANNUAL MEAN	--		--		509 1983	
LOWEST ANNUAL MEAN	--		--		44.3 1977	
HIGHEST DAILY MEAN	1250	May 26	1220	May 29	3630	Jun 3 1983
LOWEST DAILY MEAN	4.4	Oct 5	3.4	Sep 6	0.00	Jul 4 1962
ANNUAL SEVEN-DAY MINIMUM	5.3	Sep 29	5.4	Oct 15	0.07	Nov 26 1980
MAXIMUM PEAK FLOW	--		1220		3820	
MAXIMUM PEAK STAGE	--		--		8.26	
ANNUAL RUNOFF (AC-FT)	69190		37890		169900	
10 PERCENT EXCEEDS	57		22		799	
50 PERCENT EXCEEDS	23		14		41	
90 PERCENT EXCEEDS	8.3		8.4		9.5	



10027000 TWIN CREEK AT SAGE, WY

LOCATION.--Lat 41°48'36", long 110°58'12", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.7, T.21 N., R.119 W., Lincoln County, Hydrologic Unit 16010101, 0.5 mi downstream from Bulldog Hollow, 0.5 mi southwest of Sage, 0.8 mi southeast of junction of U.S. Highway 30 and State Highway 89, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--246 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1975 to 1981, October 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 28...	1340	3.0	605	11.6	100	8.0	854	-8.0	.0	350	84.6	33.8	3.06
MAR 27...	0840	9.8	600	10.9	95	8.4	757	7.0	.0	350	80.6	35.7	3.37
APR 18...	1010	4.6	604	9.5	92	8.3	1040	5.0	4.0	460	100	50.6	3.64
MAY 30...	0935	5.4	605	8.7	107	7.9	905	19.0	14.0	350	73.4	41.6	3.12
JUN 26...	1420	4.7	606	9.9	142	8.4	828	31.0	21.5	320	60.9	41.3	2.62

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
NOV 28...	.7	32.3	166	29.4	.4	10.8	216	.69	4.15	510	<.04	<.05	E.004
MAR 27...	1	46.6	194	30.1	.4	8.5	230	.75	14.6	552	<.04	.06	<.008
APR 18...	2	74.4	238	46.4	.4	9.4	305	1.00	9.10	733	<.04	<.05	<.008
MAY 30...	1	49.7	195	35.5	.4	7.9	250	.79	8.46	578	<.04	<.05	<.008
JUN 26...	1	52.2	142	31.5	.5	7.0	247	.72	6.69	528	<.04	<.05	<.008

Date	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
NOV 28...	<.02	45	.37
MAR 27...	<.02	119	3.2
APR 18...	<.02	36	.45
MAY 30...	<.02	91	1.3
JUN 26...	<.02	32	.41

E -- Estimated value

## BEAR RIVER BASIN

10028500 BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY

LOCATION.--Lat 41°56'20", long 110°59'05", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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 good. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	93	1.5	1.3	0.57	0.86	0.11
2	---	---	---	---	---	---	59	1.2	1.2	0.63	0.78	0.15
3	---	---	---	---	---	---	35	1.9	1.3	0.86	0.79	0.21
4	---	---	---	---	---	---	38	1.7	1.1	0.76	0.72	0.18
5	---	---	---	---	---	---	38	1.6	0.97	0.89	0.67	0.12
6	---	---	---	---	---	---	37	1.4	1.0	1.0	0.64	0.11
7	---	---	---	---	---	---	36	1.6	0.92	1.2	0.62	e0.08
8	---	---	---	---	---	---	27	1.5	1.1	1.1	0.60	0.09
9	---	---	---	---	---	---	14	1.5	1.3	1.3	0.66	0.10
10	---	---	---	---	---	---	16	2.0	1.3	1.5	0.72	0.25
11	---	---	---	---	---	---	16	2.3	1.3	1.8	0.63	0.26
12	---	---	---	---	---	---	14	2.1	1.3	1.7	0.69	0.24
13	---	---	---	---	---	---	12	2.3	1.5	1.7	0.74	0.19
14	---	---	---	---	---	---	8.9	2.3	1.5	1.5	0.85	0.22
15	---	---	---	---	---	---	9.0	2.3	1.4	1.3	0.86	0.21
16	---	---	---	---	---	---	8.2	2.3	1.2	0.97	0.89	0.24
17	---	---	---	---	---	---	8.5	2.2	0.96	1.0	0.92	0.16
18	---	---	---	---	---	---	8.9	2.2	0.67	1.2	1.0	0.15
19	---	---	---	---	---	---	10	2.0	0.69	1.3	1.0	0.14
20	---	---	---	---	---	---	11	1.8	0.86	1.5	0.98	0.15
21	---	---	---	---	---	---	11	1.7	0.99	1.6	0.87	0.16
22	---	---	---	---	---	---	11	0.89	1.1	1.9	0.94	0.16
23	---	---	---	---	---	---	9.6	1.8	1.1	1.5	1.1	e0.19
24	---	---	---	---	---	---	8.2	1.6	0.96	1.5	0.73	0.15
25	---	---	---	---	---	---	8.0	1.6	0.96	1.5	0.65	0.29
26	---	---	---	---	---	---	6.0	1.7	0.98	1.2	0.55	0.41
27	---	---	---	---	---	---	1.6	1.9	0.84	1.0	0.46	0.44
28	---	---	---	---	---	---	1.4	1.9	0.67	0.99	0.49	0.41
29	---	---	---	---	---	---	1.3	2.0	0.56	0.95	0.38	0.26
30	---	---	---	---	---	---	0.98	1.9	0.58	0.78	0.30	0.24
31	---	---	---	---	---	---	---	1.7	---	0.80	0.21	---
TOTAL	---	---	---	---	---	---	558.58	56.39	31.61	37.50	22.30	6.09
MEAN	---	---	---	---	---	---	18.62	1.819	1.054	1.210	0.719	0.203
MAX	---	---	---	---	---	---	93	2.3	1.5	1.9	1.1	0.44
MIN	---	---	---	---	---	---	0.98	0.89	0.56	0.57	0.21	0.09
AC-FT	---	---	---	---	---	---	1110	112	63	74	44	12

10028500 BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY--Continued

SUMMARY STATISTICS

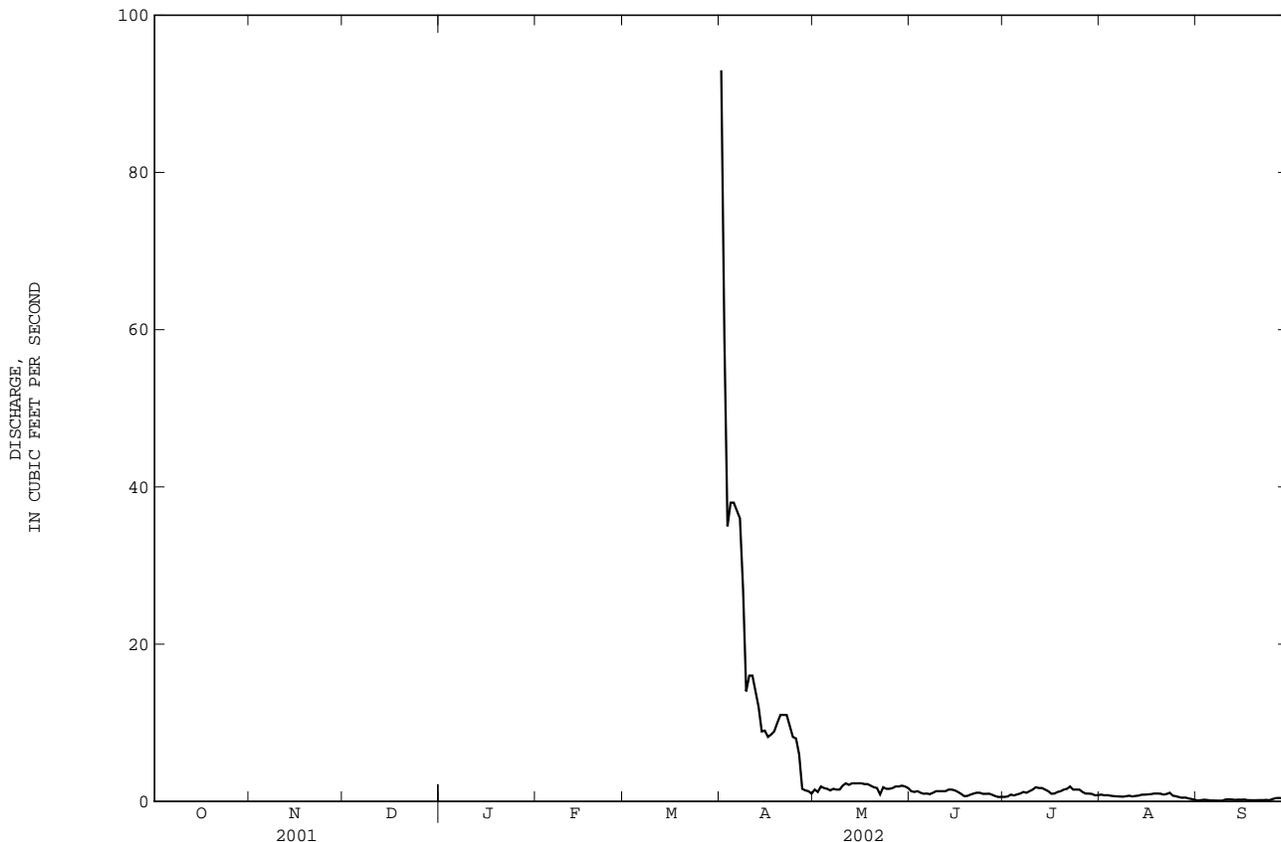
FOR 2002 WATER YEAR\*

WATER YEARS 1966 - 2001\*

HIGHEST DAILY MEAN	93	Apr 1	2040	Jun 5 1983
LOWEST DAILY MEAN	0.08 <sup>e</sup>	Sep 7	0.09	Sep 8 2002
MAXIMUM PEAK FLOW	--		2300	Mar 25 1956
MAXIMUM PEAK STAGE	--		--	

\* For period of operation.

e Estimated.

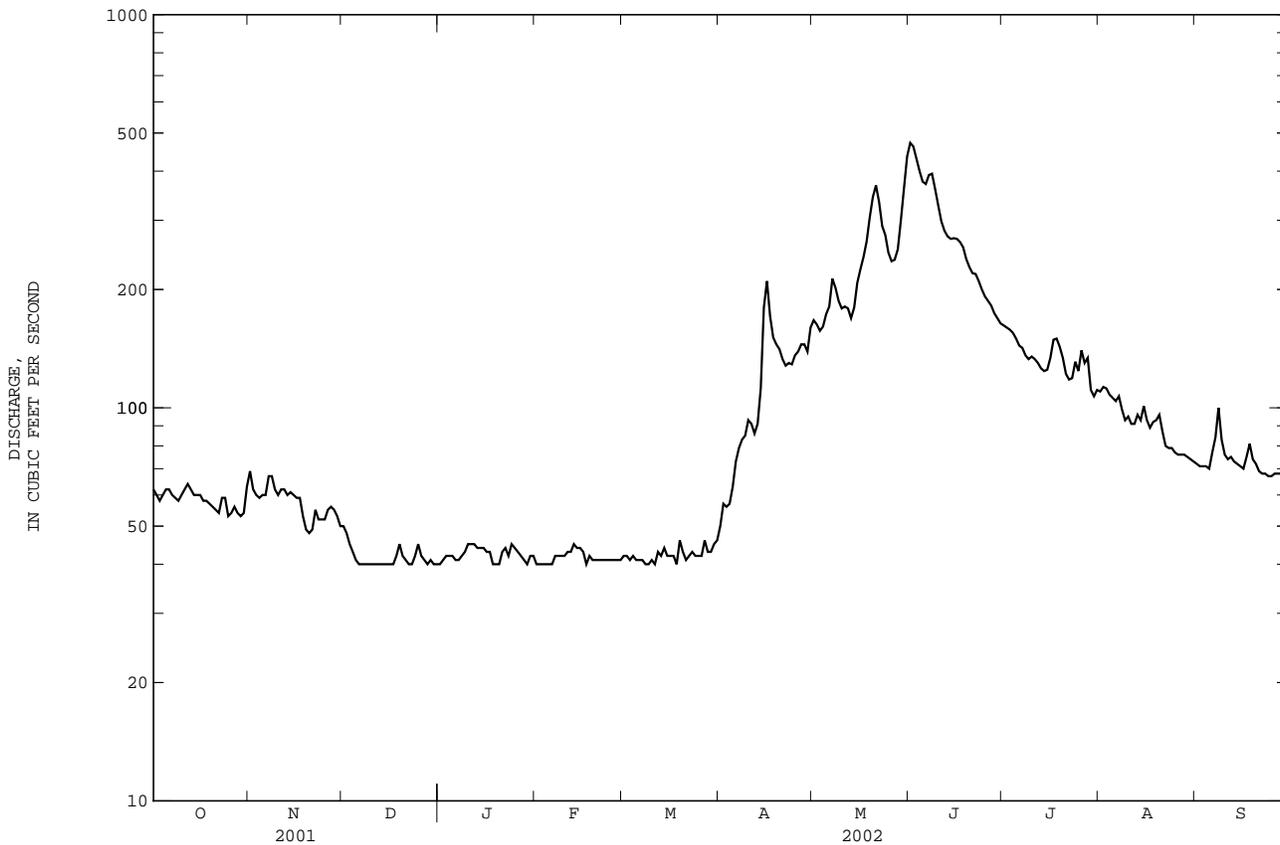




10032000 SMITHS FORK NEAR BORDER, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1943 - 2002	
ANNUAL TOTAL	34497		37244		--	
ANNUAL MEAN	94.51		102.0		192.5	
HIGHEST ANNUAL MEAN	--		--		324 1986	
LOWEST ANNUAL MEAN	--		--		71.1 1977	
HIGHEST DAILY MEAN	403	May 17	472	Jun 1	2000	Jun 4 1986
LOWEST DAILY MEAN	40 <sup>e</sup>	Several days	40 <sup>e</sup>	Several days	32	Dec 6 1993
ANNUAL SEVEN-DAY MINIMUM	40	Dec 6	40	Dec 6	35	Dec 1 1993
MAXIMUM PEAK FLOW	--		485	Jun 1	2100	Jun 4 1986
MAXIMUM PEAK STAGE	--		2.39	Jun 1	5.66	Jun 4 1986
ANNUAL RUNOFF (AC-FT)	68420		73870		139500	
10 PERCENT EXCEEDS	200		222		512	
50 PERCENT EXCEEDS	65		63		90	
90 PERCENT EXCEEDS	49		41		58	

e Estimated.



BEAR RIVER BASIN

10035000 SMITHS FORK AT COKEVILLE, WY

LOCATION.--Lat 42°05'47", long 110°56'24", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--Water years 1983-88, 1989-1992, October 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
NOV 28...	1015	29	610	11.8	101	7.5	442	-7.0	.0	<.04	E.03	<.008	<.02
APR 18...	1205	142	605	9.2	91	8.2	370	6.0	5.0	<.04	.06	<.008	<.02
MAY 30...	1150	334	606	9.5	113	7.9	327	23.0	12.5	<.04	<.05	<.008	<.02
JUN 26...	1300	180	606	9.0	118	8.2	360	29.0	17.0	<.04	<.05	<.008	<.02

Date	SEDI-MENT, DIS-SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
NOV 28...	28	2.2
APR 18...	42	16.1
MAY 30...	205	185
JUN 26...	25	12.2

E -- Estimated value

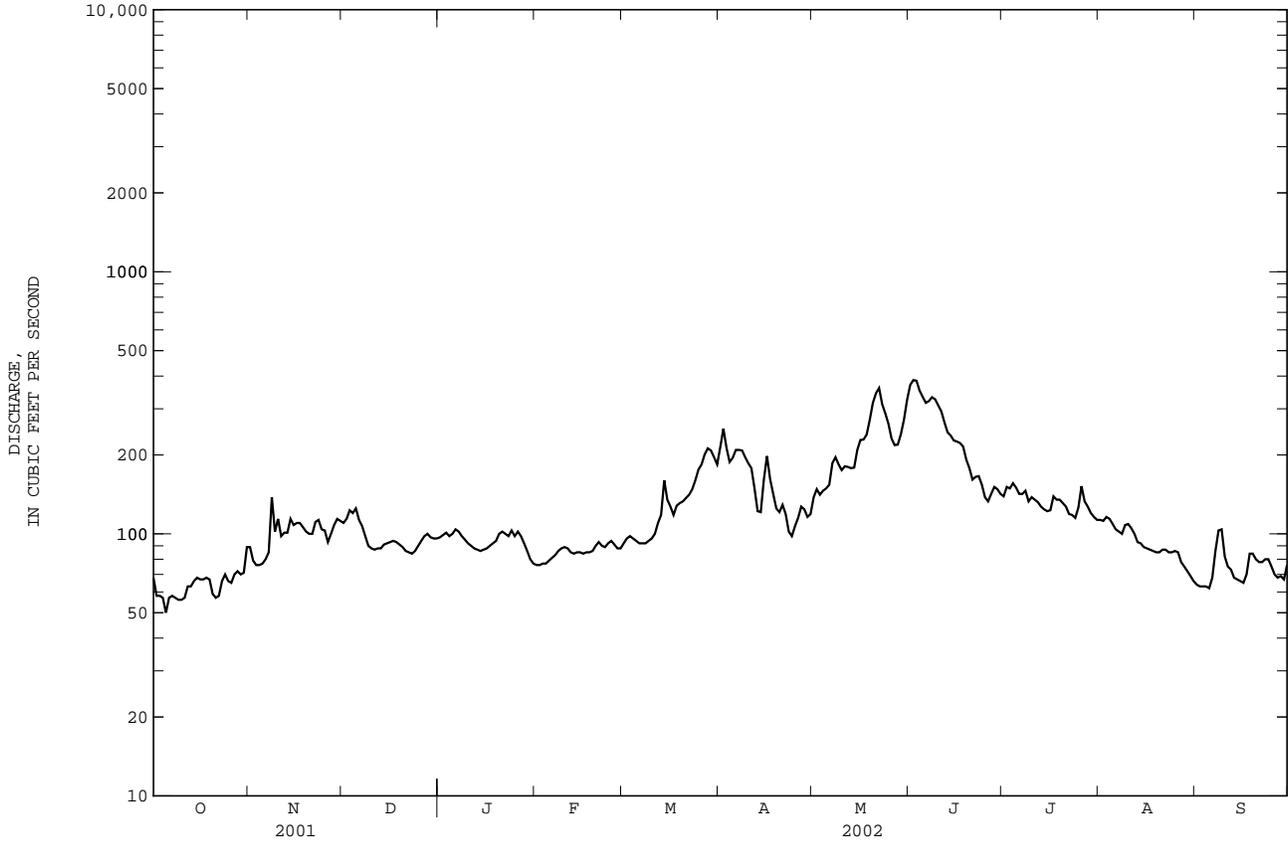


BEAR RIVER BASIN

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1955 - 2002	
ANNUAL TOTAL	52728		45523		--	
ANNUAL MEAN	144.5		124.7		438.9	
HIGHEST ANNUAL MEAN	--		--		1049 1984	
LOWEST ANNUAL MEAN	--		--		112 1977	
HIGHEST DAILY MEAN	679	Mar 27	386	Jun 2	5400	Jun 7 1983
LOWEST DAILY MEAN	50	Oct 5	50	Oct 5	31	Oct 5 1977
ANNUAL SEVEN-DAY MINIMUM	56	Oct 4	56	Oct 4	36	Oct 1 1977
MAXIMUM PEAK FLOW	--		405	Jun 3	5620	Jun 7 1983
MAXIMUM PEAK STAGE	--		3.53	Jun 3	8.75	Jun 7 1983
ANNUAL RUNOFF (AC-FT)	104600		90290		318000	
10 PERCENT EXCEEDS	234		213		1070	
50 PERCENT EXCEEDS	130		101		223	
90 PERCENT EXCEEDS	70		68		110	

e Estimated.



10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued  
(National Water-Quality Assessment Program Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT DIS FIELD CACO3 (39086)	BICAR-BONATE WATER FIELD HCO3 (00453)	CAR-BONATE WATER FIELD CO3 (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)
OCT													
11...	1540	53	603	10.8	109	8.4	505	4.5	5.7	178	217	--	14.9
NOV													
16...	1040	110	615	11.9	110	8.3	591	.0	3.3	219	261	3	25.9
DEC													
18...	1620	93	614	15.2	129	8.0	648	-1.0	.1	235	287	--	28.3
JAN													
15...	1430	87	608	12.2	105	8.1	637	-5.0	.3	227	277	--	23.8
MAR													
25...	1430	155	611	12.7	120	8.1	531	3.0	3.6	195	238	--	21.9
MAY													
23...	0810	320	610	9.3	92	8.2	417	2.0	5.6	163	198	--	8.69
JUL													
24...	1200	110	617	11.7	156	8.4	455	29.0	19.2	149	173	4	10.1
AUG													
07...	1430	99	--	11.3	--	--	428	--	19.2	--	--	--	--
SEP													
12...	1130	75	614	9.7	115	8.3	450	16.5	13.4	157	191	--	9.22

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, SUS-PENDED (T/DAY) (80155)
OCT										
11...	69.3	<.04	.16	E.04	<.008	<.02	.018	--	9.0	1.3
NOV										
16...	69.0	<.04	.28	.05	<.008	<.02	.034	--	.0	.0
DEC										
18...	79.9	<.04	.15	.13	<.008	<.02	.021	216	13	3.3
JAN										
15...	76.1	E.03	.16	.15	<.008	<.02	.018	6	99	23.3
MAR										
25...	65.8	E.03	.34	.09	<.008	<.02	.042	--	19	8.0
MAY										
23...	43.0	<.04	.48	.08	<.008	E.01	.167	70	97	83.8
JUL										
24...	56.4	<.04	.19	.05	<.008	<.02	.024	--	7.0	2.1
AUG										
07...	--	--	--	--	--	--	--	--	--	--
SEP										
12...	58.3	<.04	.17	E.03	<.008	<.02	.014	71	30	6.1

E -- Estimated value

## BEAR RIVER BASIN

10039500 BEAR RIVER AT BORDER, WY

LOCATION.--Lat 42°12'40", long 111°03'11", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.15, T.14 S., R. 46 E., Bear Lake County, Idaho, Hydrologic Unit 16010102, on left bank 0.2 mi west of Wyoming-Idaho State line, 0.5 mi west of Border, and 2.1 mi upstream from Thomas Fork.

DRAINAGE AREA.--2,486 mi<sup>2</sup>.

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. Datum 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	e40	e105	e98	e76	e94	183	121	304	103	75	37
2	46	38	e110	e100	e76	e96	234	107	331	102	74	36
3	43	36	e123	e102	e77	e98	215	104	336	108	75	34
4	44	35	e121	e100	e79	e96	170	103	311	113	77	29
5	43	36	e120	e103	e81	e95	160	102	305	122	73	30
6	46	37	e116	e104	e82	e93	137	109	283	139	69	e31
7	52	40	e105	e103	e84	e93	141	120	279	136	65	e37
8	51	53	e98	e100	e86	e94	141	139	292	127	61	e44
9	51	62	e90	e95	e89	e96	141	139	294	89	61	e54
10	50	59	e89	e93	e90	e100	128	134	278	80	63	54
11	53	87	e88	e90	e87	e105	129	138	266	84	62	47
12	54	80	e90	e88	e86	e115	112	143	246	85	59	45
13	58	82	e91	e87	e86	e130	88	137	220	85	57	43
14	59	86	e92	e87	e86	e150	81	138	206	82	56	40
15	57	86	e93	e89	e86	e138	94	151	201	80	e55	38
16	40	85	e94	e90	e86	e127	140	178	192	79	e47	37
17	39	85	e94	e92	e86	e118	137	183	190	86	42	39
18	37	85	e94	e95	e87	e115	125	186	184	97	42	41
19	37	82	e91	e97	e87	e120	114	206	169	99	43	42
20	37	81	e88	e100	e90	e125	111	243	146	95	e42	40
21	35	83	e86	e102	e94	e135	116	281	131	93	43	38
22	36	88	e85	e100	e92	e145	117	321	125	91	42	37
23	38	93	e86	e100	e91	e150	108	300	129	88	42	38
24	35	89	e88	e102	e94	e160	94	268	124	88	42	e37
25	35	94	e92	e100	e93	e170	98	252	113	90	42	37
26	34	85	e95	e102	e91	e200	105	217	105	110	42	36
27	35	105	e98	e94	e89	e205	119	191	103	109	42	36
28	37	99	e100	e85	e90	e200	126	187	114	86	40	35
29	37	e118	e97	e80	---	e182	119	195	108	82	39	34
30	37	e110	e96	e77	---	e178	112	219	106	79	38	35
31	41	---	e97	e76	---	e165	---	254	---	77	37	---
TOTAL	1347	2239	3012	2931	2421	4088	3895	5566	6191	2984	1647	1161
MEAN	43.45	74.63	97.16	94.55	86.46	131.9	129.8	179.5	206.4	96.26	53.13	38.70
MAX	59	118	123	104	94	205	234	321	336	139	77	54
MIN	34	35	85	76	76	93	81	102	103	77	37	29
AC-FT	2670	4440	5970	5810	4800	8110	7730	11040	12280	5920	3270	2300

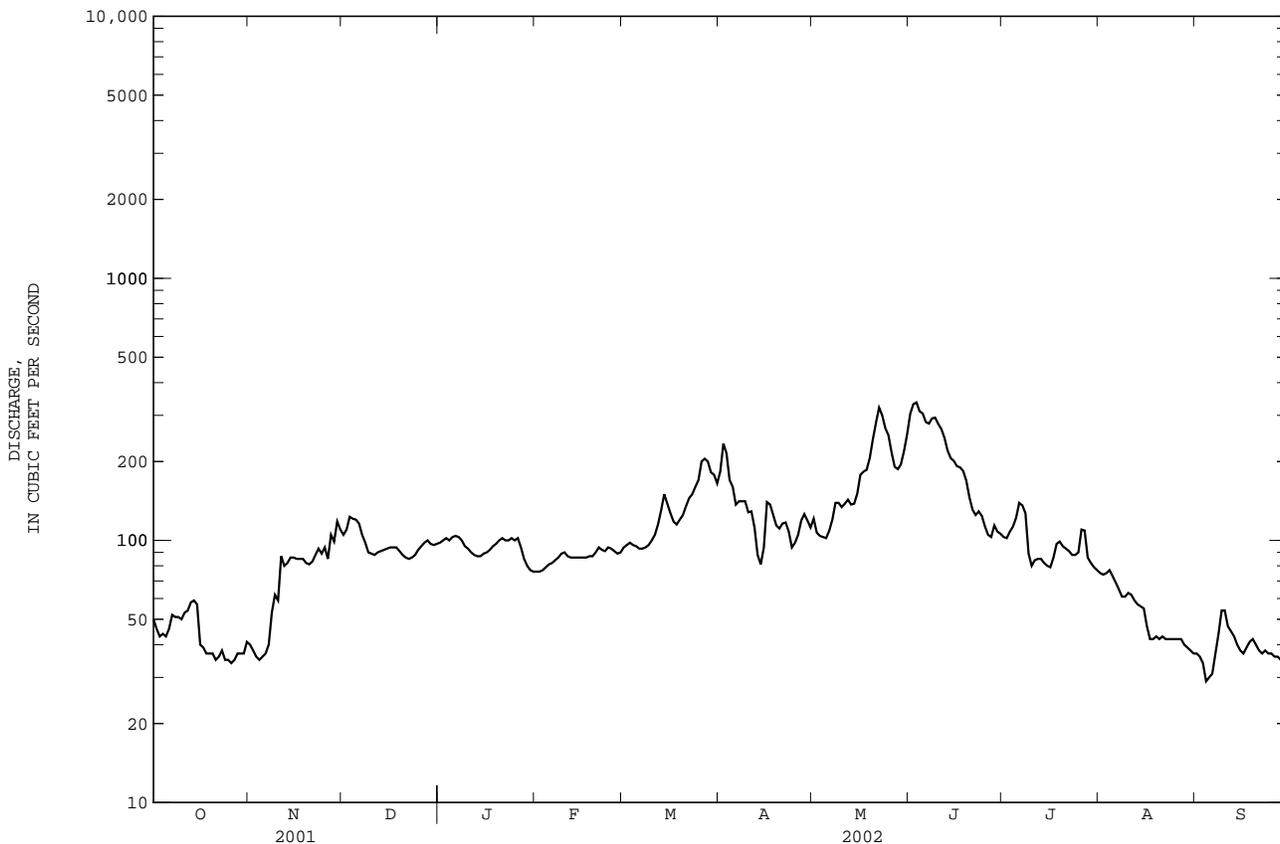
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2002, BY WATER YEAR (WY)\*

	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991
MEAN	210.2	225.8	197.2	182.3	207.8	379.9	744.1	1017	1164	531.7	226.1	179.3
MAX	751	693	563	381	479	1294	1979	3158	3829	1670	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 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1938 - 2002*	
ANNUAL TOTAL	46258		37482		--	
ANNUAL MEAN	126.7		102.7		428.1	
HIGHEST ANNUAL MEAN	--		--		1068 1983	
LOWEST ANNUAL MEAN	--		--		103 2002	
HIGHEST DAILY MEAN	646	Mar 27	336	Jun 3	4840	Jun 8 1983
LOWEST DAILY MEAN	34	Oct 26	29	Sep 4	25	Apr 29 1977
ANNUAL SEVEN-DAY MINIMUM	35	Oct 21	33	Aug 31	29	Apr 28 1977
MAXIMUM PEAK FLOW	--		342	Jun 3	4880	Jun 7 1983
MAXIMUM PEAK STAGE	--		2.39	Jun 3	9.69	Jun 7 1983
ANNUAL RUNOFF (AC-FT)	91750		74350		310100	
10 PERCENT EXCEEDS	223		185		1100	
50 PERCENT EXCEEDS	119		92		220	
90 PERCENT EXCEEDS	45		38		107	

\* For period of operation.  
e Estimated.



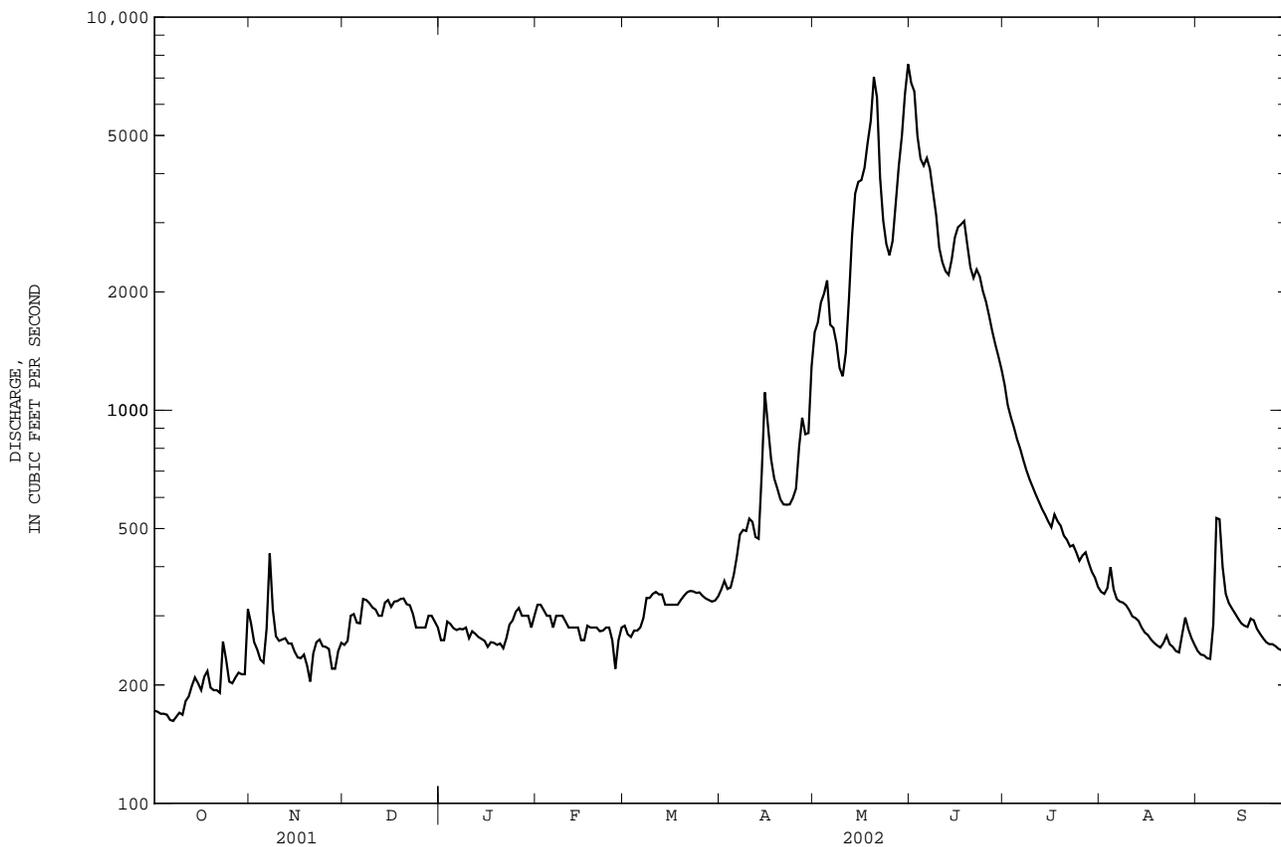


SNAKE RIVER BASIN

13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	189934		295844		--	
ANNUAL MEAN	520.4		810.5		896.9	
HIGHEST ANNUAL MEAN	--		--		1538 1997	
LOWEST ANNUAL MEAN	--		--		526 1988	
HIGHEST DAILY MEAN	5170	May 16	7590	May 31	11300	Jun 5 1996
LOWEST DAILY MEAN	161	Sep 4	162	Oct 7	161	Sep 6 1994
ANNUAL SEVEN-DAY MINIMUM	166	Aug 30	167	Oct 4	163	Sep 4 1994
ANNUAL RUNOFF (AC-FT)	376700		586800		649800	
10 PERCENT EXCEEDS	1120		2340		2420	
50 PERCENT EXCEEDS	290		310		399	
90 PERCENT EXCEEDS	182		233		260	

e Estimated.



13010065 SNAKE RIVER ABOVE JACKSON LAKE AT FLAGG RANCH, WY--Continued  
(National Water-Quality Assessment Program Station)

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BAROMETRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPER-AIR (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT														
22...	1120	190	587	9.0	95	8.1	354	3.8	6.2	76	23.3	4.26	5.17	
NOV														
07...	0910	473	599	10.1	101	7.6	264	2.0	5.0	66	20.4	3.73	3.81	
DEC														
11...	0930	306	588	10.5	94	7.9	308	-12.0	.2	61	18.9	3.36	5.44	
JAN														
15...	0910	260	590	11.5	103	7.7	330	-9.0	.5	62	19.1	3.53	5.46	
FEB														
27...	1110	276	611	11.3	100	7.9	332	-2.0	1.1	56	17.1	3.16	5.11	
MAR														
19...	1010	311	596	12.2	110	7.9	285	-2.0	.9	51	15.6	2.89	4.98	
APR														
16...	1030	909	587	11.4	105	7.6	193	1.0	1.2	50	15.1	2.84	2.83	
MAY														
21...	1200	5770	586	10.5	102	7.6	86	4.6	3.1	30	9.02	1.72	1.10	
JUN														
19...	0800	2720	597	10.1	105	7.7	100	9.8	6.3	31	9.55	1.81	1.26	
JUL														
16...	0800	501	598	9.2	122	7.6	223	18.2	17.1	54	16.6	3.10	3.28	
SEP														
17...	0940	281	592	8.5	102	7.9	293	11.4	12.2	65	20.1	3.68	4.63	
Date		SODIUM ADSORPTION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	CHLORIDE, DIS-SOLVED (MG/L AS Cl) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, DIS-SOLVED (MG/L AS N) (00631)
OCT														
22...	2	43.7	23.4	2.2	35.0	43.3	.31	117	228	234	<.04	<.10	E.04	
NOV														
07...	2	28.4	14.8	1.6	26.0	31.1	.25	235	184	174	<.04	.42	<.05	
DEC														
11...	2	38.9	20.4	2.5	38.0	33.4	.29	175	212	209	E.02	.34	E.04	
JAN														
15...	2	40.0	22.4	2.6	38.2	36.7	.30	154	220	219	E.03	.11	E.04	
FEB														
27...	2	37.5	22.7	2.8	39.0	33.8	.30	162	218	211	<.04	.13	E.03	
MAR														
19...	2	36.7	19.5	2.8	40.0	28.8	.28	173	206	195	<.04	.11	E.03	
APR														
16...	1	18.1	9.23	1.4	22.1	17.2	.16	294	120	127	<.04	.24	.06	
MAY														
21...	.4	5.27	3.24	.4	11.6	4.5	.09	977	63	56	<.04	.34	E.04	
JUN														
19...	.6	7.67	4.15	.7	15.1	6.5	.10	525	72	72	E.02	.12	<.05	
JUL														
16...	1	21.9	12.1	1.5	28.3	22.7	.21	206	152	148	<.04	E.09	<.05	
SEP														
17...	2	33.1	17.1	2.1	34.8	33.3	.28	157	207	194	<.04	E.08	E.03	



## SNAKE RIVER BASIN

13010065 SNAKE RIVER ABOVE JACKSON LAKE AT FLAGG RANCH, WY--Continued  
(National Water-Quality Assessment Program Station)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)
OCT 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 21...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUN 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 22...	--	--	--	2.0	1.0
NOV 07...	<.005	<.002	<.009	23	29.4
DEC 11...	--	--	--	1.0	.83
JAN 15...	--	--	--	1.0	.70
FEB 27...	--	--	--	2.0	1.5
MAR 19...	--	--	--	1.0	.84
APR 16...	--	--	--	13	31.9
MAY 21...	<.005	<.002	<.009	272	4240
JUN 19...	--	--	--	74	543
JUL 16...	--	--	--	2.0	2.7
SEP 10...	--	--	--	--	--
17...	--	--	--	2.0	1.5

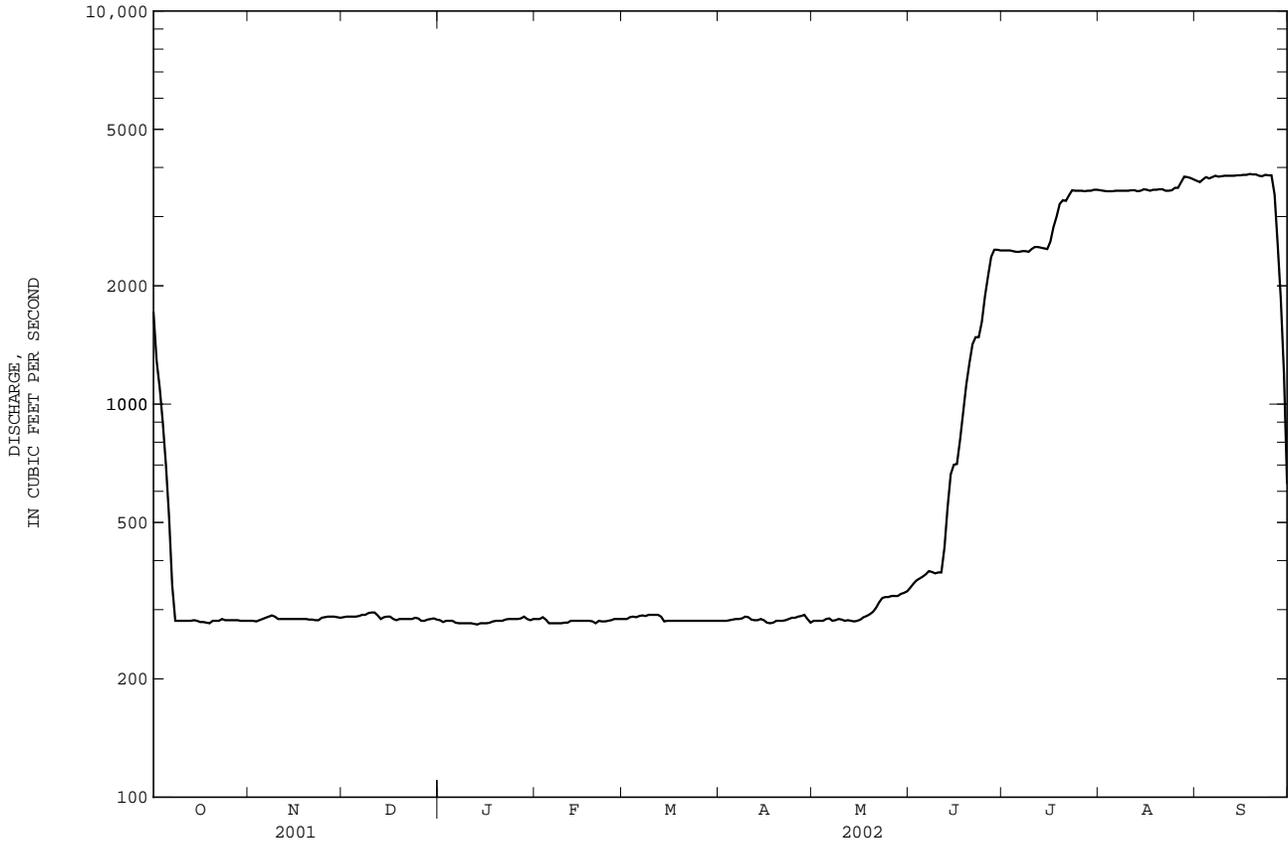
E -- Estimated value



SNAKE RIVER BASIN

13011000 SNAKE RIVER NEAR MORAN, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1904 - 2002	
ANNUAL TOTAL	571635		409216		--	
ANNUAL MEAN	1566		1121		1447	
HIGHEST ANNUAL MEAN	--		--		2548 1997	
LOWEST ANNUAL MEAN	--		--		687 1989	
HIGHEST DAILY MEAN	4410	Aug 15	3850	Sep 18	14700	Jun 13 1918
LOWEST DAILY MEAN	277	Oct 19	275	Jan 13	0.30	Oct 28 1969
ANNUAL SEVEN-DAY MINIMUM	279	Oct 15	277	Jan 7	1.4	Oct 24 1969
ANNUAL RUNOFF (AC-FT)	1134000		811700		1049000	
10 PERCENT EXCEEDS	3850		3510		4260	
50 PERCENT EXCEEDS	405		287		495	
90 PERCENT EXCEEDS	284		281		18	



## 13011500 PACIFIC CREEK AT MORAN, WY

LOCATION.--Lat 43°51'01", long 110°31'04"(revised), in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>. 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 with satellite telmetry. 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. Station equipment includes satellite telemetry.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	51	e36	e30	e28	e22	e56	456	2200	311	80	55
2	35	48	e38	e28	e26	e20	e60	477	1880	283	80	53
3	36	47	e36	e28	e26	e20	e70	548	1380	266	85	51
4	36	45	e34	e28	e28	e22	e80	579	1170	251	126	50
5	36	44	e36	e30	e28	e24	e100	652	1050	231	98	49
6	36	49	e34	e30	e28	e26	e120	521	1070	216	86	55
7	35	73	e34	e32	e30	e26	133	532	1060	204	81	137
8	35	60	e32	e32	e30	e24	131	513	940	191	78	154
9	36	51	e34	e34	e28	e24	129	422	843	179	75	105
10	36	47	e36	e32	e28	e26	140	390	709	168	73	82
11	37	48	e34	e30	e28	e28	137	405	648	157	70	73
12	37	48	e32	e32	e26	e30	131	500	597	147	68	67
13	38	47	e32	e32	e26	e28	137	742	572	139	67	62
14	39	47	e36	e30	e28	e28	195	948	600	133	64	59
15	39	46	e36	e28	e26	e26	329	1020	658	128	61	58
16	39	45	e34	e26	e26	e26	274	1030	685	127	59	56
17	43	45	e34	e28	e26	e28	213	1080	718	182	57	56
18	45	46	e36	e28	e28	e30	184	1220	746	177	56	65
19	44	43	e38	e26	e30	e32	169	1550	675	157	56	65
20	43	41	e38	e28	e30	e36	172	2150	609	143	55	59
21	43	42	e36	e28	e28	e36	170	2400	575	141	60	57
22	43	44	e34	e26	e26	e38	172	1520	592	125	61	55
23	48	44	e32	e26	e26	e40	172	1160	552	124	57	54
24	45	43	e30	e28	e24	e40	174	998	527	115	55	53
25	42	42	e28	e28	e22	e42	184	928	507	106	54	53
26	41	e40	e28	e28	e20	e44	226	981	472	108	53	53
27	42	e36	e30	e26	e18	e44	262	1060	431	111	54	52
28	43	e38	e34	e26	e20	e46	254	1280	398	102	74	52
29	43	e38	e32	e24	---	e48	265	1530	369	95	64	55
30	43	e38	e30	e24	---	e48	380	1960	340	88	64	71
31	48	---	e32	e28	---	e50	---	2380	---	84	58	---
TOTAL	1241	1376	1046	884	738	1002	5219	31932	23573	4989	2129	1966
MEAN	40.03	45.87	33.74	28.52	26.36	32.32	174.0	1030	785.8	160.9	68.68	65.53
MAX	48	73	38	34	30	50	380	2400	2200	311	126	154
MIN	35	36	28	24	18	20	56	390	340	84	53	49
AC-FT	2460	2730	2070	1750	1460	1990	10350	63340	46760	9900	4220	3900
CFSM	0.24	0.27	0.20	0.17	0.16	0.19	1.03	6.10	4.65	0.95	0.41	0.39
IN.	0.27	0.30	0.23	0.19	0.16	0.22	1.15	7.03	5.19	1.10	0.47	0.43

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2002, BY WATER YEAR (WY)

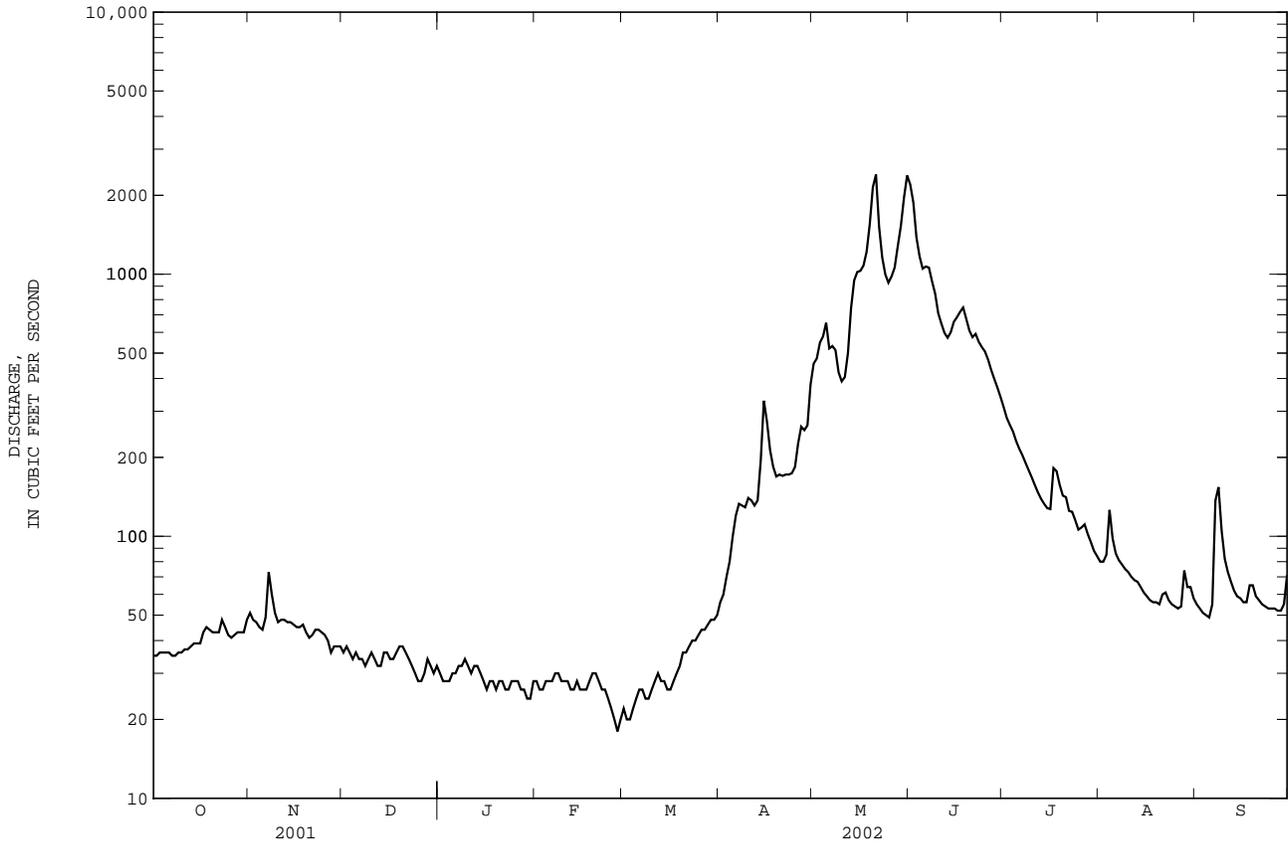
MEAN	64.71	54.46	48.46	44.27	45.67	52.40	156.2	978.8	1258	341.9	97.32	71.01
MAX	142	105	93.5	70.7	72.2	94.5	418	2314	2884	1527	191	127
(WY)	1973	1973	1984	1951	1995	1972	1946	1997	1997	1982	1982	1972
MIN	34.6	32.6	29.7	25.3	26.4	32.3	53.3	345	238	70.0	39.3	37.2
(WY)	1988	1953	1955	1979	2002	2002	1970	1975	1994	1994	2001	1994

SNAKE RIVER BASIN

13011500 PACIFIC CREEK AT MORAN, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1917 - 2002	
ANNUAL TOTAL	47764		76095		--	
ANNUAL MEAN	130.9		208.5		267.9	
HIGHEST ANNUAL MEAN	--		--		560 1997	
LOWEST ANNUAL MEAN	--		--		132 1994	
HIGHEST DAILY MEAN	1980	May 16	2400	May 21	4170	Jun 1 1997
LOWEST DAILY MEAN	20 <sup>e</sup>	Jan 17	18 <sup>e</sup>	Feb 27	18	Feb 27 2002
ANNUAL SEVEN-DAY MINIMUM	28	Jan 15	20	Feb 25	20	Feb 25 2002
ANNUAL RUNOFF (AC-FT)	94740		150900		194100	
10 PERCENT EXCEEDS	381		625		919	
50 PERCENT EXCEEDS	44		51		65	
90 PERCENT EXCEEDS	32		28		38	

e Estimated.



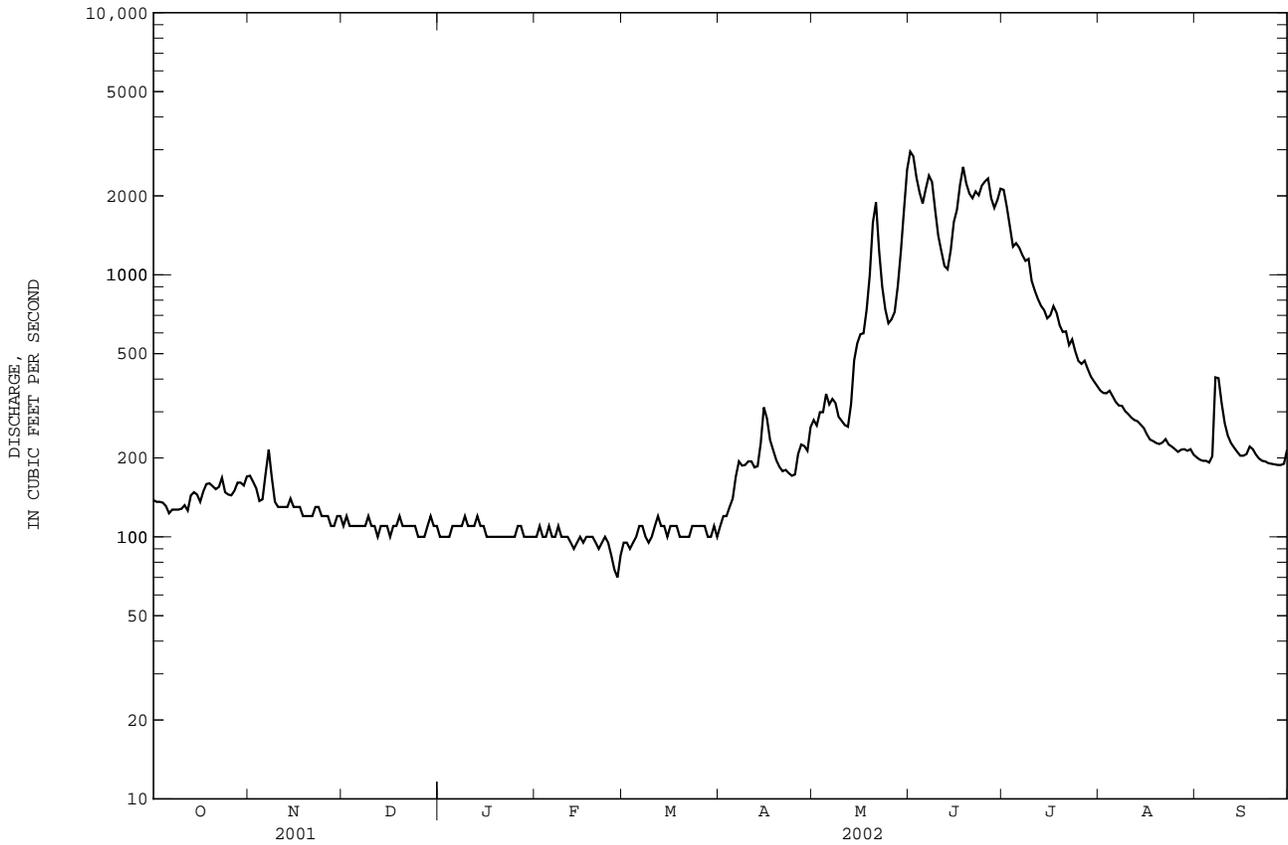


SNAKE RIVER BASIN

13011900 BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1966 - 2002	
ANNUAL TOTAL	106037		150456		--	
ANNUAL MEAN	290.5		412.2		537.5	
HIGHEST ANNUAL MEAN	--		--		890 1997	
LOWEST ANNUAL MEAN	--		--		286 1977	
HIGHEST DAILY MEAN	2300	May 16	2950	Jun 1	5880	Jun 9 1981
LOWEST DAILY MEAN	80 <sup>e</sup>	Jan 17	70 <sup>e</sup>	Feb 27	70	Feb 27 2002
ANNUAL SEVEN-DAY MINIMUM	99	Feb 24	85	Feb 25	81	Jan 23 1989
ANNUAL RUNOFF (AC-FT)	210300		298400		389400	
10 PERCENT EXCEEDS	765		1250		1640	
50 PERCENT EXCEEDS	140		168		192	
90 PERCENT EXCEEDS	106		100		110	

e Estimated.



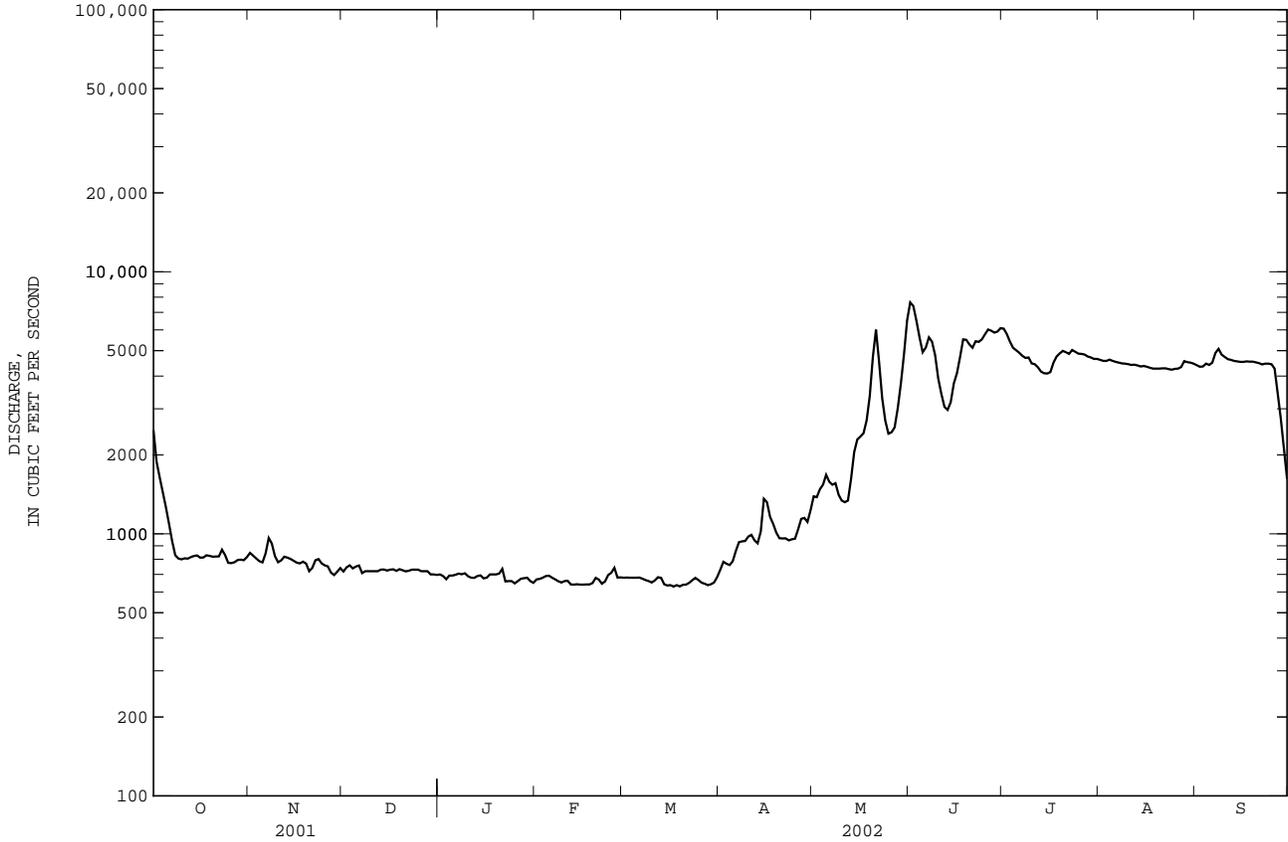


SNAKE RIVER BASIN

13013650 SNAKE RIVER AT MOOSE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1995 - 2002	
ANNUAL TOTAL	897606		816203		--	
ANNUAL MEAN	2459		2236		3360	
HIGHEST ANNUAL MEAN	--		--		4874 1997	
LOWEST ANNUAL MEAN	--		--		2236 2002	
HIGHEST DAILY MEAN	8240	May 16	7640	Jun 1	24500	Jun 11 1997
LOWEST DAILY MEAN	696	Nov 28	629	Mar 17	629	Mar 17 2002
ANNUAL SEVEN-DAY MINIMUM	712	Dec 25	635	Mar 15	635	Mar 15 2002
MAXIMUM PEAK FLOW	--		8670	Jun 1	25300	Jun 11 1997
MAXIMUM PEAK STAGE	--		11.50	Jun 1	15.25	Jun 11 1997
ANNUAL RUNOFF (AC-FT)	1780000		1619000		2434000	
10 PERCENT EXCEEDS	5180		4870		7730	
50 PERCENT EXCEEDS	882		936		2070	
90 PERCENT EXCEEDS	755		661		869	

e Estimated.



13013650 SNAKE RIVER AT MOOSE, WY--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April to September 2002 (no winter records).

PH: April to September 2002 (no winter records).

WATER TEMPERATURE: April to September 2002 (no winter records).

DISSOLVED OXYGEN: April to September 2002 (no winter records).

INSTRUMENTATION: Water-quality monitor.

REMARKS.--Water-temperature records represent water temperature at sensor within 0.2°C.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 235 microsiemens, April 10-14, 2002; minimum daily mean, 84 microsiemens, June 18, 19, 25, 26, and July 1, 2002.

PH: Maximum, 9.2, September 30, 2002; minimum, 7.7, June 26, 28, and July 5-8, 10-21, 2002.

WATER TEMPERATURE: Maximum daily mean, 18.2°C, July 19, 22, 2002; minimum daily mean, 3.5°C, April 16, 2002.

DISSOLVED OXYGEN: Maximum daily mean, 13.4 mg/L, May 22, 2002; minimum daily mean, 6.8 mg/L, June 13, 15, 2002.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily mean during period of operation, 235 microsiemens, April 10-14; minimum daily mean during period of operation, 84 microsiemens, June 18, 19, 25, 26, and July 1.

PH: Maximum during period of operation, 9.2, September 30; minimum during period of operation, 7.7, June 26, 28, and July 5-8, 10-21.

WATER TEMPERATURE: Maximum daily mean during period of operation, 18.2°C, July 19, 22; minimum daily mean during period of operation, 3.5°C, April 16.

DISSOLVED OXYGEN: Maximum daily mean during period of operation, 13.4 mg/L, May 22; minimum daily mean during period of operation, 6.8 mg/L, June 13, 15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT	23...	1600	890	600	11.0	107	8.3	198	- .5	4.0	82	24.1	5.34	1.97
NOV	21...	1125	797	604	11.2	102	8.1	205	.5	2.0	84	24.8	5.43	2.01
DEC	18...	1000	696	609	11.7	100	8.6	206	-2.5	.0	86	25.4	5.55	2.07
JAN	22...	1430	649	594	11.4	102	8.8	203	-8.0	.5	83	24.5	5.41	1.98
FEB	22...	0955	620	610	11.4	103	8.7	208	- .5	2.0	91	26.7	5.86	1.84
MAR	21...	1400	633	610	11.6	120	7.9	210	10.0	7.0	85	25.0	5.53	1.89
MAY	13...	1520	1680	600	9.1	106	8.1	189	20.0	11.5	85	24.9	5.41	1.41
JUL	22...	1515	4640	605	7.7	107	8.1	--	26.0	20.0	49	14.4	3.05	1.62
SEP	23...	1800	4450	608	8.8	106	8.5	169	17.5	13.5	57	17.0	3.51	1.88

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	
OCT	23...	.4	8.38	87	5.33	.6	16.1	11.0	.17	298	124	125	<.04	.18
NOV	21...	.4	8.79	94	5.41	.5	16.0	11.8	.17	267	124	131	--	.14
DEC	18...	.4	9.02	90	5.06	.5	16.7	12.1	.17	233	124	130	<.04	.23
JAN	22...	.4	9.11	89	5.59	.6	16.6	12.3	.18	238	136	130	<.04	.13
FEB	22...	.4	9.24	93	4.18	.6	17.4	12.7	.17	211	126	134	<.04	E.05
MAR	21...	.4	9.01	90	5.42	.6	16.5	12.1	.19	234	137	130	<.04	E.08
MAY	13...	.3	5.89	87	3.19	.3	12.0	9.7	.16	520	115	115	<.04	.32
JUL	22...	.5	7.89	58	4.44	.7	13.0	8.3	.13	1210	96	88	<.04	.10
SEP	23...	.6	10.7	E64	5.34	.8	14.8	10.7	--	--	105	--	<.04	.11



13013650 SNAKE RIVER AT MOOSE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 21...	<.007	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 23...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER-BUTHYL-AZINE, WATER, DISS, REC (UG/L) (04022)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI-MENT, DIS-CHARGE, SUS-PENDE (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDE (T/DAY) (80155)
OCT 23...	--	--	--	--	--	1.0	2.4
NOV 21...	<.02	U	<.005	<.002	<.009	1.0	2.2
DEC 18...	--	--	--	--	--	1.0	1.9
JAN 22...	--	--	--	--	--	1.0	1.8
FEB 22...	--	--	--	--	--	1.0	1.7
MAR 21...	--	--	--	--	--	2.0	3.4
MAY 13...	<.02	--	<.005	<.002	<.009	47	213
JUL 22...	--	--	--	--	--	23	288
SEP 23...	--	--	--	--	--	14	168

E -- Estimated value  
 U -- Analyzed for, not detected

SNAKE RIVER BASIN

13013650 SNAKE RIVER AT MOOSE, WY--Continued

SPECIFIC CONDUCTANCE (US/CM @ 25 DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	226	209	217
2	---	---	---	---	---	---	---	---	---	222	211	216
3	---	---	---	---	---	---	---	---	---	214	200	204
4	---	---	---	---	---	---	---	---	---	205	196	200
5	---	---	---	---	---	---	---	---	---	202	194	198
6	---	---	---	---	---	---	233	227	230	199	194	196
7	---	---	---	---	---	---	233	228	230	202	199	200
8	---	---	---	---	---	---	231	227	230	202	197	199
9	---	---	---	---	---	---	233	229	231	204	199	201
10	---	---	---	---	---	---	240	231	235	206	200	203
11	---	---	---	---	---	---	239	232	235	206	201	203
12	---	---	---	---	---	---	239	232	235	204	197	201
13	---	---	---	---	---	---	236	233	235	201	185	193
14	---	---	---	---	---	---	237	232	235	188	171	178
15	---	---	---	---	---	---	234	221	227	173	163	167
16	---	---	---	---	---	---	228	221	223	168	161	164
17	---	---	---	---	---	---	233	227	230	164	155	159
18	---	---	---	---	---	---	235	229	232	160	151	154
19	---	---	---	---	---	---	234	228	231	151	138	142
20	---	---	---	---	---	---	234	227	230	140	122	128
21	---	---	---	---	---	---	232	225	229	127	112	118
22	---	---	---	---	---	---	230	223	226	134	120	126
23	---	---	---	---	---	---	229	223	226	149	134	140
24	---	---	---	---	---	---	229	222	225	163	146	155
25	---	---	---	---	---	---	227	220	224	165	153	157
26	---	---	---	---	---	---	227	220	223	166	154	159
27	---	---	---	---	---	---	224	217	220	167	149	152
28	---	---	---	---	---	---	220	214	217	155	137	146
29	---	---	---	---	---	---	219	214	216	140	124	131
30	---	---	---	---	---	---	226	218	222	137	109	118
31	---	---	---	---	---	---	---	---	---	121	96	103
MONTH	---	---	---	---	---	---	240	214	228	226	96	169
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	104	91	96	90	79	84	124	122	123	156	156	156
2	101	89	94	90	82	86	126	124	124	157	156	156
3	104	94	98	92	86	89	128	125	126	157	156	157
4	104	96	100	97	92	95	130	127	129	157	156	157
5	126	102	113	97	91	94	132	129	131	157	157	157
6	121	94	106	95	92	94	134	131	132	158	155	157
7	97	84	90	97	93	95	136	133	134	157	155	156
8	93	87	90	98	96	97	137	134	135	157	153	155
9	102	91	96	99	92	95	138	137	137	156	154	155
10	111	102	107	98	95	98	140	138	139	156	155	156
11	117	111	113	99	98	99	142	140	141	157	156	156
12	122	117	119	102	99	101	144	141	143	157	156	157
13	123	122	122	102	100	101	145	143	144	158	157	157
14	124	114	119	103	101	102	147	145	146	158	157	158
15	117	100	107	104	102	103	149	147	148	159	158	158
16	105	95	100	103	102	103	152	149	150	159	158	159
17	103	84	90	105	102	103	153	151	152	160	159	159
18	91	78	84	103	101	102	155	152	154	160	159	159
19	88	82	84	104	102	103	155	153	154	160	159	160
20	91	85	88	104	103	104	154	153	154	160	159	160
21	92	87	90	104	103	104	154	153	154	161	160	160
22	92	85	88	105	103	104	154	154	154	161	160	161
23	90	86	88	107	105	105	155	154	154	161	160	161
24	91	81	86	109	105	107	155	154	155	161	160	161
25	88	79	84	112	108	110	155	154	155	161	160	161
26	88	79	84	114	112	113	155	154	155	163	161	161
27	91	85	88	114	113	114	156	153	155	166	162	164
28	94	89	91	116	114	115	155	154	155	169	165	166
29	94	85	89	119	115	117	156	155	155	172	169	171
30	92	82	87	121	119	119	156	155	155	182	171	177
31	---	---	---	122	120	121	156	155	156	---	---	---
MONTH	126	78	96	122	79	102	156	122	145	182	153	160

13013650 SNAKE RIVER AT MOOSE, WY--Continued

PH, WH, FIELD (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

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

WATER TEMPERATURE (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	8.8	5.6	6.9
2	---	---	---	---	---	---	---	---	---	9.0	5.1	6.9
3	---	---	---	---	---	---	---	---	---	9.4	6.2	7.5
4	---	---	---	---	---	---	---	---	---	9.7	5.0	7.2
5	---	---	---	---	---	---	---	---	---	7.4	5.3	6.3
6	---	---	---	---	---	---	9.3	4.3	6.7	7.0	4.2	5.3
7	---	---	---	---	---	---	8.4	4.3	6.5	6.5	4.0	5.3
8	---	---	---	---	---	---	9.4	4.4	6.8	6.9	2.2	4.4
9	---	---	---	---	---	---	6.8	4.2	5.8	8.0	3.3	5.6
10	---	---	---	---	---	---	8.6	4.4	6.4	9.2	5.0	6.9
11	---	---	---	---	---	---	8.4	4.1	6.1	10.3	5.7	7.7
12	---	---	---	---	---	---	7.3	4.7	6.1	11.3	5.7	8.4
13	---	---	---	---	---	---	9.5	4.2	6.6	11.4	7.1	9.1
14	---	---	---	---	---	---	8.0	6.3	7.1	10.0	7.3	8.8
15	---	---	---	---	---	---	6.3	2.8	4.5	9.0	6.1	7.8
16	---	---	---	---	---	---	6.0	1.8	3.5	9.5	5.6	7.6
17	---	---	---	---	---	---	5.4	3.2	4.2	9.8	5.8	8.0
18	---	---	---	---	---	---	8.2	2.3	4.9	10.5	6.7	8.8
19	---	---	---	---	---	---	6.6	3.2	4.8	11.1	6.6	9.2
20	---	---	---	---	---	---	5.0	2.7	3.9	10.4	7.1	8.9
21	---	---	---	---	---	---	6.5	2.3	4.6	9.6	5.0	6.4
22	---	---	---	---	---	---	9.5	3.7	6.2	5.0	3.1	4.0
23	---	---	---	---	---	---	9.1	4.9	6.6	7.8	4.0	5.7
24	---	---	---	---	---	---	9.1	3.4	6.1	8.3	5.6	6.9
25	---	---	---	---	---	---	10.2	4.0	6.9	10.5	5.8	8.3
26	---	---	---	---	---	---	9.1	5.4	7.0	10.6	8.1	9.3
27	---	---	---	---	---	---	8.4	5.9	6.9	11.5	7.6	9.7
28	---	---	---	---	---	---	9.5	4.9	6.8	11.9	8.3	10.1
29	---	---	---	---	---	---	10.3	4.6	7.4	12.0	8.2	10.3
30	---	---	---	---	---	---	9.3	6.8	8.0	12.5	8.8	10.8
31	---	---	---	---	---	---	---	---	---	12.1	8.5	10.6
MONTH	---	---	---	---	---	---	10.3	1.8	5.8	12.5	2.2	7.7

## SNAKE RIVER BASIN

13013650 SNAKE RIVER AT MOOSE, WY--Continued

WATER TEMPERATURE (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN									
1	11.8	8.5	9.8	15.4	13.6	14.5	19.6	15.7	17.4	16.6	14.0	15.3
2	9.5	7.7	8.4	15.7	13.0	14.2	17.2	15.8	16.3	17.5	13.8	15.5
3	10.9	6.7	8.6	14.3	12.9	13.5	17.8	15.2	16.4	17.2	14.1	15.6
4	10.1	7.4	8.9	16.7	12.4	14.3	18.8	15.3	16.9	17.4	14.0	15.6
5	11.3	7.5	9.6	17.5	13.6	15.4	18.2	15.7	17.1	17.0	14.2	15.6
6	12.2	9.2	10.5	17.7	13.7	15.5	17.5	15.5	16.6	15.5	14.6	14.9
7	11.1	8.9	10.1	18.1	14.0	15.8	17.1	15.2	16.3	15.7	14.1	14.7
8	10.4	8.2	9.5	18.1	14.4	16.0	17.3	15.0	16.0	15.4	13.7	14.4
9	8.2	5.6	6.7	17.8	15.2	16.4	17.8	13.7	15.6	16.5	13.5	14.7
10	8.1	4.6	6.2	19.1	13.9	16.5	18.4	13.8	16.0	16.4	12.8	14.5
11	9.3	6.4	7.5	19.8	15.0	17.3	17.8	14.4	16.1	16.3	13.1	14.7
12	11.1	6.9	9.1	20.3	15.5	17.7	17.7	14.8	16.1	16.4	13.9	14.9
13	13.6	8.6	11.0	20.1	15.6	17.7	18.2	13.7	15.9	16.9	13.1	14.8
14	14.4	9.6	11.9	20.0	15.4	17.6	18.5	14.6	16.4	16.9	13.2	14.9
15	13.9	10.7	12.0	21.0	15.6	18.0	18.6	14.9	16.7	16.7	13.4	14.9
16	13.6	9.8	11.7	20.3	15.7	17.9	18.0	15.1	16.5	16.6	13.5	15.0
17	13.0	10.9	11.9	20.1	16.0	17.6	17.6	14.5	16.1	14.9	13.5	14.1
18	11.5	9.6	10.8	20.0	15.8	17.9	18.4	14.5	16.3	14.8	12.4	13.7
19	12.8	8.6	10.5	20.7	16.4	18.2	17.8	14.2	16.0	15.5	11.9	13.3
20	11.4	9.5	10.6	19.1	16.7	17.8	17.8	14.8	16.3	15.3	12.2	13.5
21	13.2	9.6	11.2	19.2	15.8	17.6	17.0	14.7	15.8	14.7	11.2	13.1
22	11.9	10.6	11.3	19.9	16.7	18.2	17.3	14.0	15.6	14.5	10.4	12.1
23	13.6	9.7	11.7	19.0	16.4	17.9	17.2	14.1	15.5	14.6	11.1	12.7
24	13.9	10.9	12.4	19.9	15.7	17.7	17.6	14.1	15.6	14.3	11.2	12.7
25	14.9	11.6	13.2	19.8	16.8	17.9	17.7	13.7	15.6	14.6	11.4	12.8
26	15.0	12.4	13.5	17.8	16.4	17.1	17.2	14.1	15.6	13.7	10.9	12.1
27	14.2	11.4	12.7	18.6	15.0	16.7	16.8	14.3	15.2	12.9	10.8	11.7
28	15.0	11.4	13.2	19.2	15.3	16.9	16.5	13.3	14.9	13.2	10.1	11.6
29	15.4	12.6	13.8	19.5	15.6	17.6	16.2	13.5	14.8	11.7	10.2	10.9
30	15.8	13.7	14.6	19.4	15.9	17.7	17.0	13.3	15.0	11.2	8.8	10
31	---	---	---	19.5	16.6	17.8	17.5	14.1	15.6	---	---	---
MONTH	15.8	4.6	10.8	21.0	12.4	16.9	19.6	13.3	16.0	17.5	8.8	13.8

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	10.7	9.8	10.2
2	---	---	---	---	---	---	---	---	---	10.8	9.6	10.2
3	---	---	---	---	---	---	---	---	---	10.5	9.6	10
4	---	---	---	---	---	---	---	---	---	10.6	9.5	10.1
5	---	---	---	---	---	---	---	---	---	10.3	9.5	9.9
6	---	---	---	---	---	---	9.7	7.8	8.7	10.5	9.7	10.1
7	---	---	---	---	---	---	9.8	8.0	9.0	10.4	9.7	10
8	---	---	---	---	---	---	10.0	8.4	9.1	10.6	9.7	10.2
9	---	---	---	---	---	---	10.4	8.6	9.5	10.5	9.3	10
10	---	---	---	---	---	---	10.4	9.0	9.7	10.3	9.1	9.7
11	---	---	---	---	---	---	10.8	9.2	10	10.2	8.9	9.6
12	---	---	---	---	---	---	11.0	9.3	10.1	9.9	8.5	9.3
13	---	---	---	---	---	---	11.2	9.5	10.3	---	---	---
14	---	---	---	---	---	---	11.0	9.5	10.1	---	---	---
15	---	---	---	---	---	---	11.1	9.9	10.6	10.4	9.0	9.9
16	---	---	---	---	---	---	12.0	10.8	11.4	11.3	9.7	10.6
17	---	---	---	---	---	---	12.2	10.8	11.4	11.8	10.2	11.0
18	---	---	---	---	---	---	12.1	10.6	11.3	11.7	10.2	10.9
19	---	---	---	---	---	---	12.0	10.7	11.3	11.8	10.3	11.0
20	---	---	---	---	---	---	12.0	10.7	11.4	11.8	10.4	11.2
21	---	---	---	---	---	---	12.0	10.5	11.3	12.8	10.9	12.2
22	---	---	---	---	---	---	11.7	10.1	10.9	13.8	12.8	13.4
23	---	---	---	---	---	---	11.5	10.1	10.7	13.6	12.3	13.1
24	---	---	---	---	---	---	11.8	10.2	11.0	13.2	12.1	12.6
25	---	---	---	---	---	---	11.6	9.9	10.8	13.2	11.2	12.3
26	---	---	---	---	---	---	11.3	9.9	10.6	12.4	11.2	11.9
27	---	---	---	---	---	---	11.1	9.9	10.4	12.5	10.9	11.8
28	---	---	---	---	---	---	11.3	10.1	10.6	12.1	10.9	11.5
29	---	---	---	---	---	---	11.2	9.6	10.5	12.0	10.7	11.4
30	---	---	---	---	---	---	10.7	9.6	10.0	11.7	10.3	11.0
31	---	---	---	---	---	---	---	---	---	11.2	9.5	10.5
MONTH	---	---	---	---	---	---	12.2	7.8	10.4	13.8	8.5	10.5

13013650 SNAKE RIVER AT MOOSE, WY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	7.7	7.3	7.5	9.1	7.7	8.3	---	---	---
2	---	---	---	7.9	7.5	7.7	9.1	7.7	8.4	---	---	---
3	---	---	---	8.0	7.5	7.7	9.3	7.9	8.5	---	---	---
4	---	---	---	8.0	7.4	7.7	9.0	7.9	8.4	---	---	---
5	---	---	---	7.8	7.2	7.5	9.3	7.9	8.5	---	---	---
6	---	---	---	7.8	7.2	7.5	9.3	7.9	8.5	---	---	---
7	---	---	---	7.7	7.4	7.5	9.5	7.8	8.6	---	---	---
8	---	---	---	7.9	7.3	7.5	9.5	8.0	8.6	---	---	---
9	---	---	---	7.9	7.2	7.5	9.5	8.1	8.7	---	---	---
10	---	---	---	8.0	7.1	7.5	9.7	8.2	8.9	---	---	---
11	7.3	6.8	7.1	7.8	6.9	7.4	9.8	8.3	9.1	---	---	---
12	7.3	6.6	7.0	7.8	6.9	7.3	10.0	8.6	9.3	---	---	---
13	7.1	6.6	6.8	7.8	6.9	7.3	10.4	9.0	9.6	---	---	---
14	7.2	6.5	6.9	7.9	6.9	7.3	10.3	9.0	9.6	---	---	---
15	7.0	6.5	6.8	7.9	6.8	7.3	10.4	9.1	9.7	---	---	---
16	7.4	6.8	7.1	7.9	6.8	7.4	10.4	9.1	9.7	---	---	---
17	7.2	6.8	7.1	8.0	6.9	7.3	10.2	9.0	9.5	---	---	---
18	7.5	7.1	7.3	8.0	7.0	7.4	9.9	8.7	9.3	---	---	---
19	7.8	7.3	7.6	7.9	7.0	7.4	---	---	---	---	---	---
20	7.9	7.3	7.7	8.0	7.1	7.5	---	---	---	---	---	---
21	8.0	7.3	7.7	8.2	7.1	7.6	---	---	---	---	---	---
22	7.9	7.4	7.7	8.0	6.9	7.3	---	---	---	---	---	---
23	8.1	7.5	7.8	8.1	6.9	7.5	---	---	---	---	---	---
24	8.0	7.5	7.7	8.5	7.1	7.7	---	---	---	---	---	---
25	7.9	7.4	7.6	8.2	7.2	7.6	---	---	---	---	---	---
26	7.7	7.4	7.5	8.5	7.3	7.8	---	---	---	---	---	---
27	8.0	7.6	7.7	8.7	7.6	8.1	---	---	---	---	---	---
28	8.0	7.4	7.7	8.9	7.7	8.2	---	---	---	---	---	---
29	7.8	7.4	7.6	8.8	7.6	8.1	---	---	---	---	---	---
30	7.6	7.3	7.4	8.9	7.6	8.2	---	---	---	---	---	---
31	---	---	---	8.8	7.6	8.2	---	---	---	---	---	---
MONTH	8.1	6.5	7.4	8.9	6.8	7.6	10.4	7.7	9.0	---	---	---



13015000 GROS VENTRE RIVER AT ZENITH, WY--Continue

SUMMARY STATISTICS

FOR 2002 WATER YEAR\*

WATER YEARS 1917 - 2002\*

HIGHEST DAILY MEAN

1330 Jun 2

6710 Jun 6 1997

LOWEST DAILY MEAN

0.89 Sep 5

0.00 Many days,

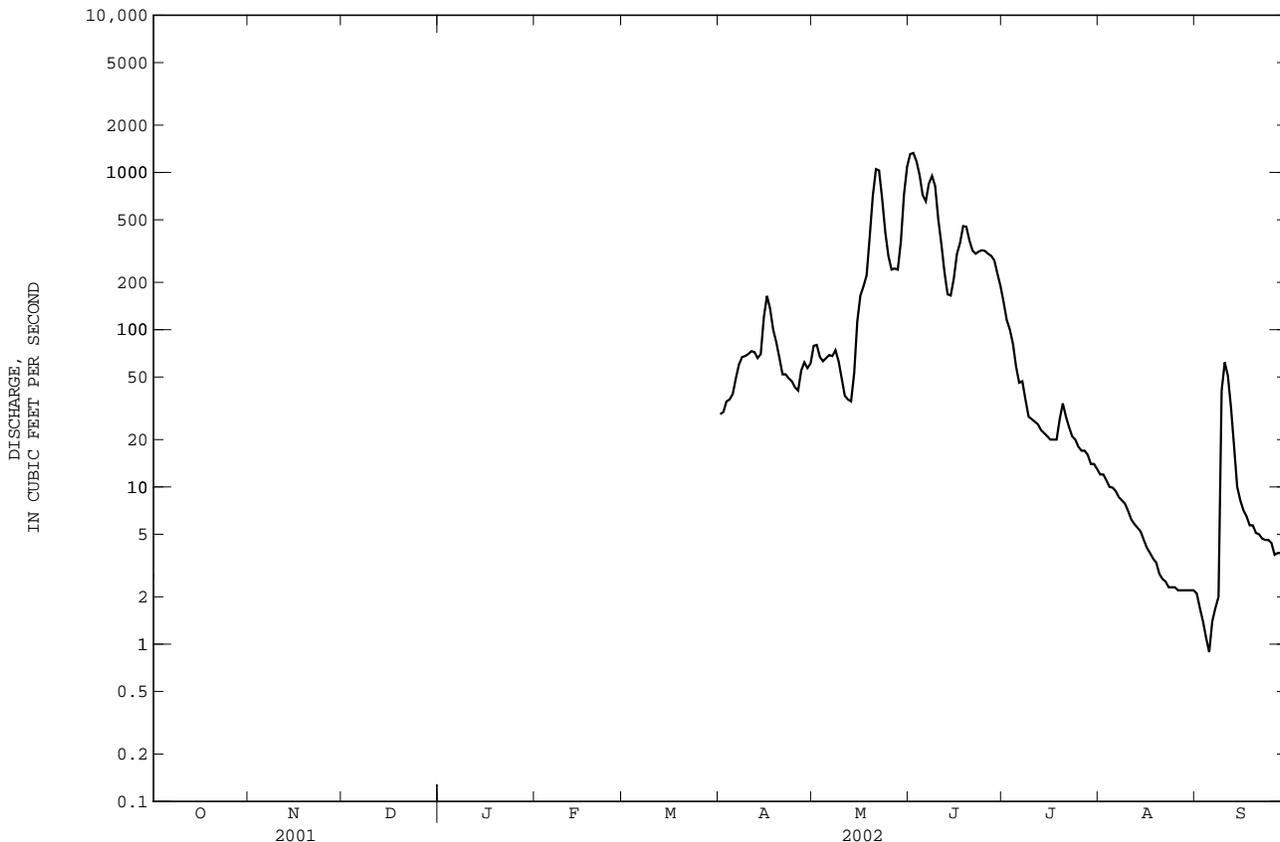
some years

MAXIMUM PEAK STAGE

--

2227 Jun 10 1991

e Estimated.



## SNAKE RIVER BASIN

13016305 GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY

LOCATION.--Lat 43°36'14", long 110°48'17", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

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.

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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	6.8	e6.0	e4.8	e4.4	e2.7	5.5	24	275	174	27	11
2	5.9	6.5	e5.2	e4.7	e4.6	e2.6	5.7	23	268	153	26	11
3	5.8	6.3	e5.6	e4.6	e4.8	e2.6	5.8	24	251	129	25	11
4	5.8	6.2	e4.8	e4.7	e4.6	e2.8	6.1	26	272	121	24	10
5	5.8	6.2	e5.6	4.8	e4.5	e3.0	6.9	31	256	114	23	10
6	5.8	7.4	e6.0	4.8	e4.5	e3.5	8.9	30	286	104	23	12
7	5.8	9.1	e6.2	4.9	e4.5	e3.8	11	29	292	97	21	18
8	5.8	7.7	e6.2	4.8	e4.8	e3.1	11	27	305	93	21	22
9	5.9	9.5	e6.0	4.8	4.9	e2.8	12	26	254	85	20	16
10	5.9	13	6.0	4.4	5.8	e3.2	13	24	183	77	20	14
11	6.2	6.6	e5.9	5.0	5.8	e3.5	12	24	145	72	20	13
12	6.1	6.4	e5.8	4.8	5.5	e3.7	11	24	97	67	19	13
13	6.4	6.4	e6.2	4.8	5.3	e3.6	12	28	94	61	19	12
14	6.7	6.4	e5.8	4.8	5.6	e3.5	17	39	118	57	18	12
15	6.3	6.3	e5.6	4.8	5.3	e3.4	25	47	165	55	17	11
16	6.1	6.1	e5.3	4.7	5.6	e3.2	22	50	206	57	16	11
17	6.3	6.1	e5.5	4.7	6.0	e3.1	20	59	242	52	16	11
18	6.5	6.1	5.5	4.7	5.4	e3.1	17	81	246	52	15	13
19	6.2	6.0	5.4	4.6	4.9	e3.0	16	105	229	46	15	12
20	6.2	10	5.3	4.7	4.9	e3.1	15	144	216	44	15	11
21	6.1	5.9	5.2	4.2	4.9	e3.1	14	147	204	41	14	11
22	6.1	6.3	5.2	4.8	5.1	e3.2	14	104	238	40	13	11
23	7.5	5.9	5.5	5.0	5.0	e3.4	14	92	213	38	13	10
24	6.5	11	3.6	5.0	5.0	e3.9	14	84	211	36	13	10
25	7.0	21	3.3	5.1	e4.5	e3.7	14	68	219	35	12	9.7
26	6.0	13	e3.2	5.0	e3.7	e4.0	16	58	216	34	12	9.7
27	6.1	10	e3.1	5.2	e2.8	e4.1	18	62	205	31	13	9.6
28	6.1	9.4	e3.8	5.0	e2.3	e4.3	18	82	188	30	12	9.4
29	6.1	e12	e3.6	4.5	---	e4.4	18	117	186	28	12	10
30	6.2	e8.0	e3.9	e4.1	---	e4.8	21	192	184	27	12	11
31	7.3	---	e4.2	e3.8	---	5.1	---	259	---	27	11	---
TOTAL	192.4	247.6	158.5	146.6	135.0	107.3	413.9	2130	6464	2077	537	355.4
MEAN	6.206	8.253	5.113	4.729	4.821	3.461	13.80	68.71	215.5	67.00	17.32	11.85
MAX	7.5	21	6.2	5.2	6.0	5.1	25	259	305	174	27	22
MIN	5.8	5.9	3.1	3.8	2.3	2.6	5.5	23	94	27	11	9.4
AC-FT	382	491	314	291	268	213	821	4220	12820	4120	1070	705

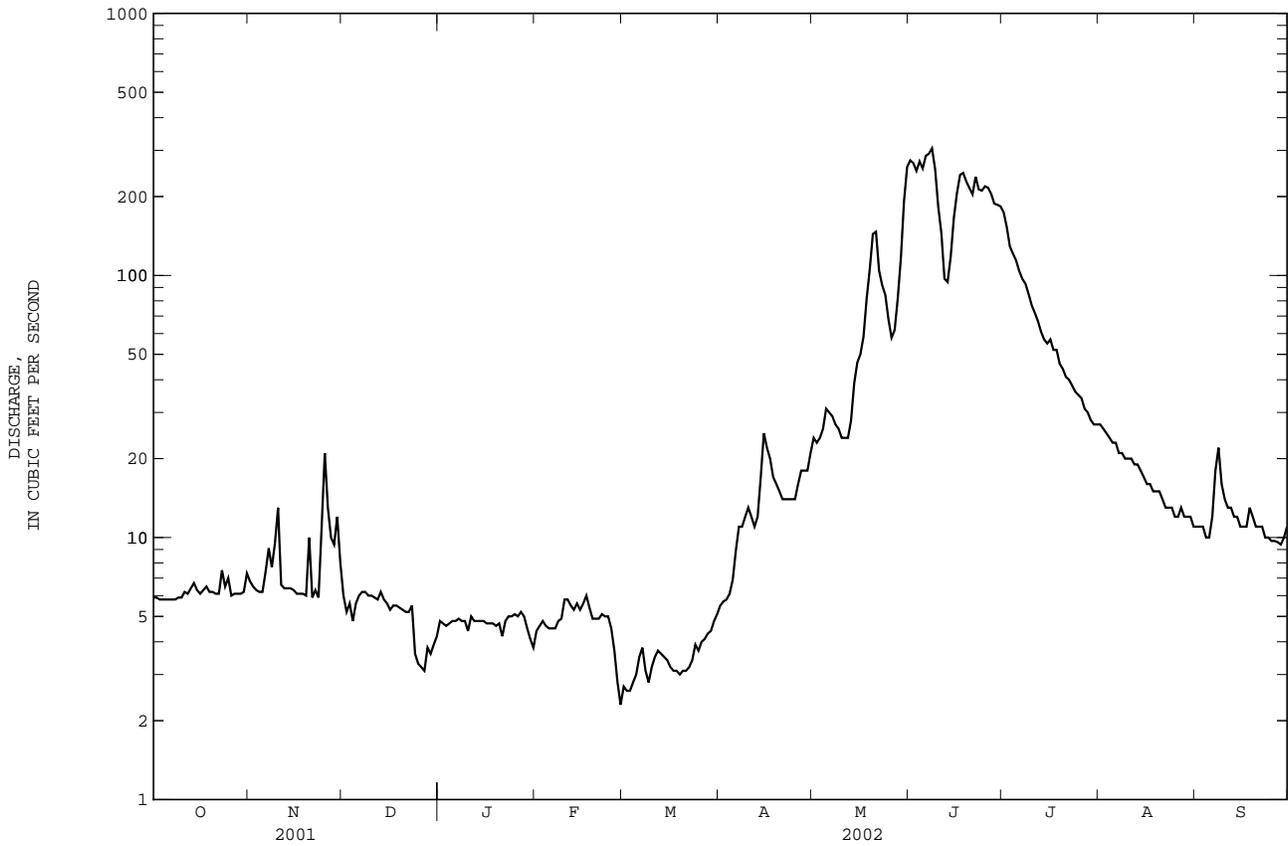
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	9.537	8.468	6.352	5.208	4.633	4.714	11.10	94.48
MAX	16.0	14.5	8.73	8.10	6.32	6.12	16.2	149
(WY)	1998	1998	1998	1998	1999	1999	2000	1997
MIN	6.21	5.48	3.77	1.65	1.77	3.46	8.54	52.2
(WY)	2002	2001	2001	2001	2001	1996	1999	2001

13016305 GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1995 - 2002
ANNUAL TOTAL	9839.0	12964.7	--
ANNUAL MEAN	26.96	35.52	40.66
HIGHEST ANNUAL MEAN	--	--	63.2
LOWEST ANNUAL MEAN	--	--	26.7
HIGHEST DAILY MEAN	446 May 16	305 Jun 8	490 Jun 9 1997
LOWEST DAILY MEAN	1.4 <sup>e</sup> Jan 29	2.3 <sup>e</sup> Feb 28	1.2 Jan 9 1996
ANNUAL SEVEN-DAY MINIMUM	1.5 Jan 24	2.7 Feb 27	1.3 Jan 5 1996
MAXIMUM PEAK FLOW	--	367 Jun 6	599 <sup>a,b</sup> May 16 2001
MAXIMUM PEAK STAGE	--	5.46 Jun 6	6.58 <sup>b</sup> Jun 9 1997
ANNUAL RUNOFF (AC-FT)	19520	25720	29450
10 PERCENT EXCEEDS	82	117	151
50 PERCENT EXCEEDS	6.4	9.6	9.8
90 PERCENT EXCEEDS	1.7	4.0	4.3

a Gage height, 5.02 ft.  
 b At datum then in use.  
 e Estimated.



## SNAKE RIVER BASIN

13016450 FISH CREEK AT WILSON, WY

LOCATION.--Lat 43°30'03", long 110°52'15", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--March 1994 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,150 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good. 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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	49	37	33	32	e34	62	61	717	625	308	262
2	130	48	37	33	32	e34	68	61	786	592	311	257
3	107	47	37	32	32	e34	67	60	798	577	313	259
4	93	46	36	32	32	35	68	60	705	530	317	277
5	89	45	36	31	e31	35	68	60	633	500	314	292
6	87	46	37	31	e31	34	68	61	637	487	310	318
7	85	46	35	32	e32	34	68	62	692	492	306	353
8	83	45	34	32	33	33	66	63	706	472	298	332
9	81	44	35	32	32	33	66	63	717	436	297	293
10	79	43	35	32	e31	33	66	65	611	392	293	259
11	80	43	34	32	32	33	65	65	510	375	291	244
12	79	42	35	32	32	34	63	64	423	353	285	228
13	76	42	34	32	e32	35	61	64	403	339	275	215
14	75	42	34	32	33	34	62	65	393	335	267	205
15	72	41	33	32	e33	34	67	68	435	326	265	200
16	68	41	33	32	e33	34	68	84	521	339	261	195
17	66	41	33	32	34	34	65	126	609	392	263	191
18	63	40	33	32	34	34	65	152	703	432	261	177
19	61	40	33	32	33	34	65	191	742	428	260	139
20	60	39	33	32	32	e34	65	241	694	419	260	128
21	59	40	33	e32	32	34	65	268	645	407	265	122
22	58	41	32	31	32	35	65	297	683	394	264	118
23	59	40	33	31	32	36	65	292	712	385	262	114
24	55	39	e32	31	33	38	64	260	693	375	266	112
25	55	39	e33	31	e31	39	61	241	690	365	263	111
26	54	38	e34	31	e32	39	61	227	699	370	260	109
27	53	37	e34	31	34	42	61	227	709	368	260	105
28	52	37	e34	31	35	44	60	244	686	357	271	102
29	52	37	34	31	---	45	60	285	655	350	270	95
30	51	36	34	e32	---	48	61	406	645	344	269	89
31	51	---	33	33	---	55	---	574	---	331	268	---
TOTAL	2285	1254	1060	985	907	1134	1936	5057	19252	12887	8673	5901
MEAN	73.71	41.80	34.19	31.77	32.39	36.58	64.53	163.1	641.7	415.7	279.8	196.7
MAX	152	49	37	33	35	55	68	574	798	625	317	353
MIN	51	36	32	31	31	33	60	60	393	326	260	89
AC-FT	4530	2490	2100	1950	1800	2250	3840	10030	38190	25560	17200	11700

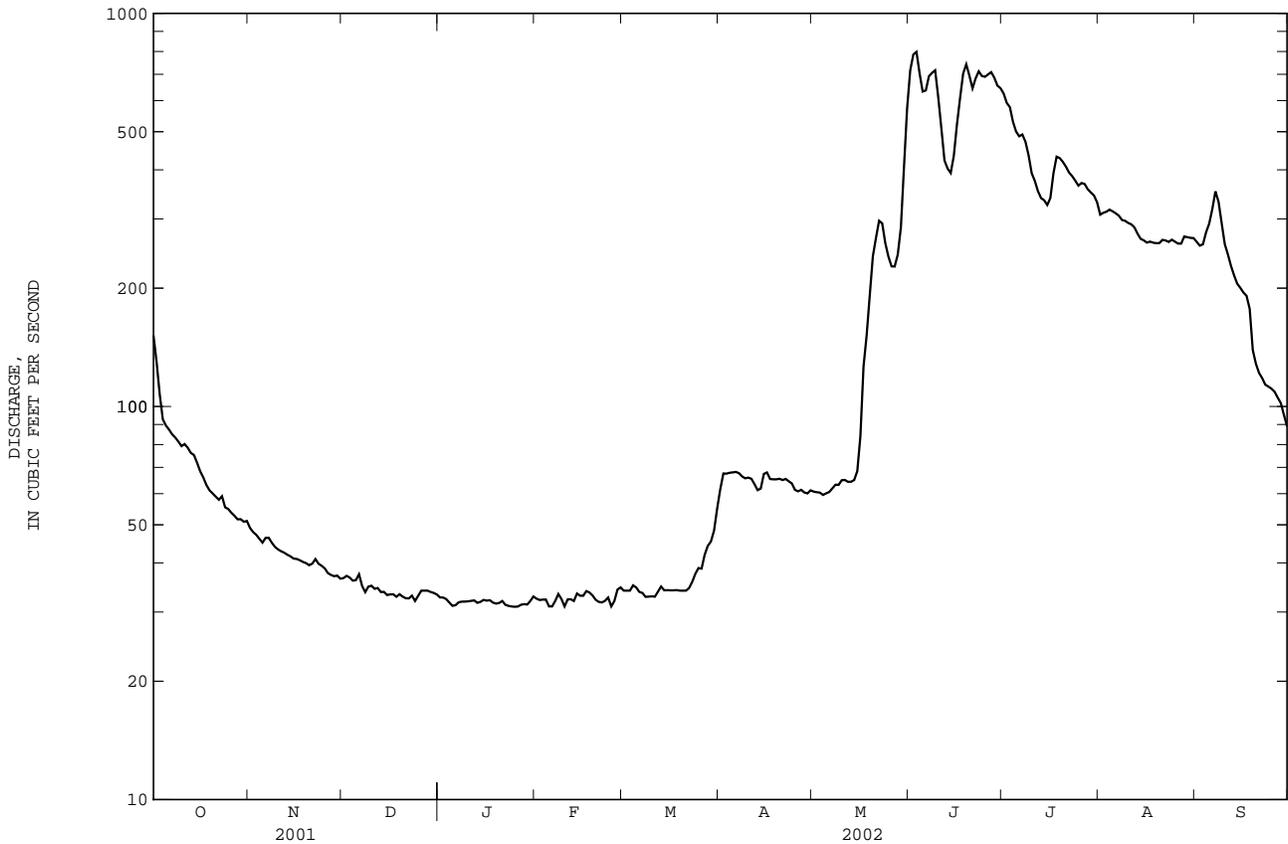
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	92.27	55.12	44.59	41.15	38.80	43.29	73.04	233.1	573.1
MAX	130	71.1	57.3	57.3	45.0	51.1	102	377	962
(WY)	2001	2001	1996	1997	1997	1997	1997	1997	1999
MIN	69.7	41.8	34.2	31.8	31.8	36.6	49.5	139	351
(WY)	1995	2002	2002	2002	2001	2002	2001	1995	1994

13016450 FISH CREEK AT WILSON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1994 - 2002	
ANNUAL TOTAL	58411		61331		--	
ANNUAL MEAN	160.0		168.0		180.1	
HIGHEST ANNUAL MEAN	--		--		222 1997	
LOWEST ANNUAL MEAN	--		--		161 1995	
HIGHEST DAILY MEAN	608	May 16	798	Jun 3	1350	Jun 9 1997
LOWEST DAILY MEAN	31	Many days	31	Many days	31	Many days, 2001, 2002
ANNUAL SEVEN-DAY MINIMUM	31	Mar 4	31	Jan 22	31	Mar 4 2001
MAXIMUM PEAK FLOW	--		838	Jun 3	1430	Jun 8 1997
MAXIMUM PEAK STAGE	--		4.10	Jun 3	5.41	Jun 8 1997
INSTANTANEOUS LOW FLOW	--		--		34	Jan 31 1998
ANNUAL RUNOFF (AC-FT)	115900		121700		130500	
10 PERCENT EXCEEDS	378		435		449	
50 PERCENT EXCEEDS	53		63		75	
90 PERCENT EXCEEDS	32		32		38	

e Estimated.

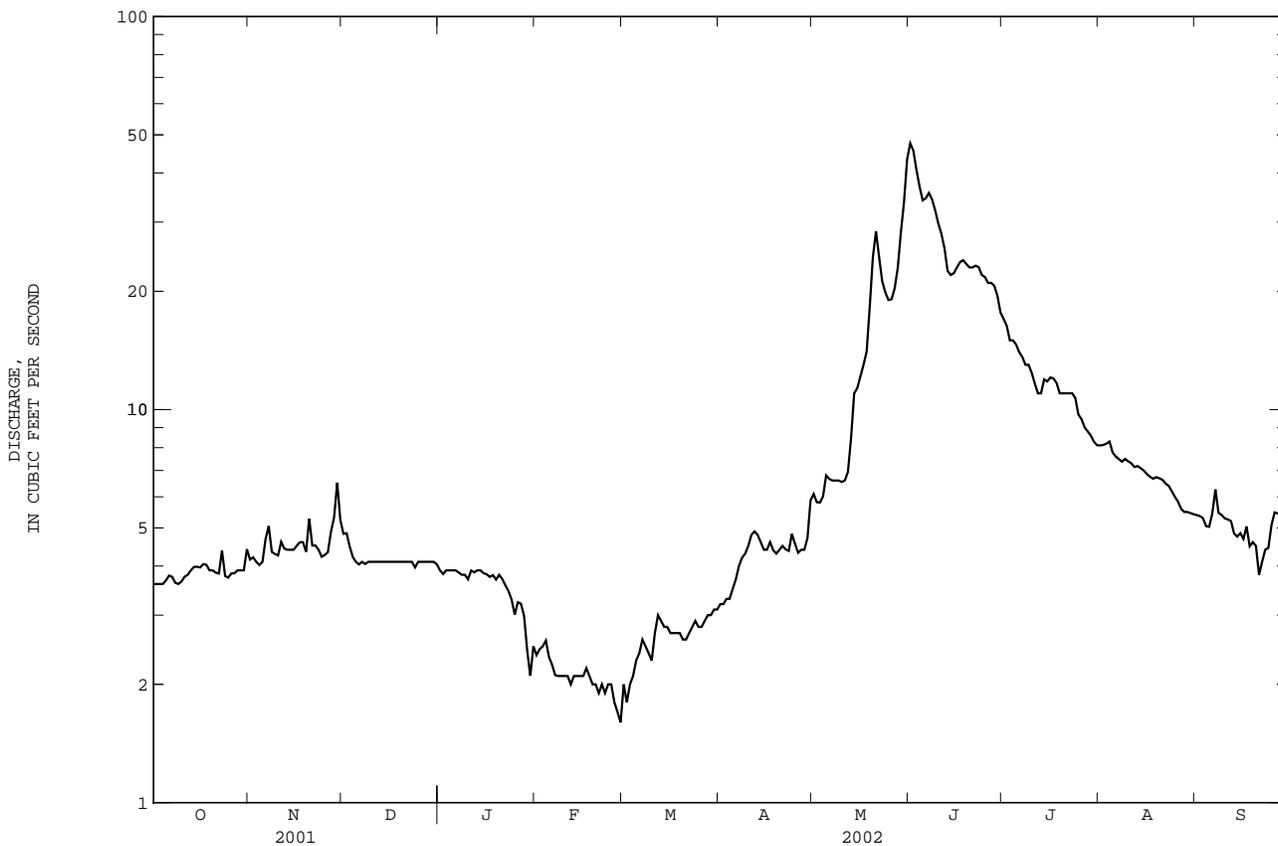




13018300 CACHE CREEK NEAR JACKSON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1962 - 2002	
ANNUAL TOTAL	2338.5	2784.9	--	
ANNUAL MEAN	6.407	7.630	12.91	
HIGHEST ANNUAL MEAN	--	--	20.5	1997
LOWEST ANNUAL MEAN	--	--	5.64	1992
HIGHEST DAILY MEAN	33 May 16	48 Jun 1	161	Jun 24 1971
LOWEST DAILY MEAN	2.9 Jan 16,17	1.6 <sup>e</sup> Feb 28	1.1	Dec 23 1990
ANNUAL SEVEN-DAY MINIMUM	3.1 Jan 16	1.8 Feb 24	1.3	Dec 20 1990
MAXIMUM PEAK FLOW	--	51 <sup>a</sup> Jun 1	225 <sup>b</sup>	Jun 24 1971
MAXIMUM PEAK STAGE	--	3.50 <sup>c</sup> Sep 7	4.30 <sup>d</sup>	Jun 10 1996
ANNUAL RUNOFF (AC-FT)	4640	5520	9350	
10 PERCENT EXCEEDS	13	20	32	
50 PERCENT EXCEEDS	4.3	4.4	6.5	
90 PERCENT EXCEEDS	3.5	2.5	3.6	

- a Gage height, 3.41 ft.
- b Gage height, 3.90 ft, site and datum then in use.
- c Present site and datum.
- d Datum then in use.
- e Estimated.



## SNAKE RIVER BASIN

13018350 FLAT CREEK BELOW CACHE CREEK, NEAR JACKSON, WY

LOCATION.--Lat 43°27'30", long 110°47'46", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> 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<sup>2</sup>.

PERIOD OF RECORD.--April 1989 to September 1996 (no winter records), October 1999 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,130 ft above NGVD of 1929, from topographic map.

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

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	62	59	e47	e37	e52	84	60	148	113	88	39
2	18	62	61	e42	e36	e45	69	58	154	116	89	39
3	18	62	65	e44	e36	e46	61	58	149	116	90	40
4	19	59	59	e47	e38	e47	60	86	140	109	90	40
5	26	57	59	e47	e35	e48	58	89	135	99	79	40
6	27	71	e62	e50	e38	49	57	93	135	93	61	50
7	25	72	e64	e46	e40	49	57	88	138	89	55	64
8	41	63	e58	e49	e48	49	55	86	142	83	52	60
9	62	60	e52	e47	e46	49	57	85	154	80	52	53
10	62	59	e50	e40	e43	53	61	83	148	77	52	48
11	65	60	e50	e42	e45	47	59	82	136	72	49	46
12	63	60	e54	e43	e44	51	58	81	112	68	48	46
13	61	59	e57	e46	e43	51	58	76	94	65	48	46
14	63	59	e60	e42	e44	48	60	74	79	64	50	46
15	62	59	e58	e42	e47	48	70	77	80	64	50	45
16	59	58	e52	e41	e46	49	66	74	91	68	49	45
17	59	58	e54	e44	e47	48	62	72	96	75	50	46
18	60	59	e56	e43	e49	50	60	79	102	81	50	49
19	60	57	e60	e42	e50	49	57	79	105	82	50	48
20	61	56	e58	e42	54	50	56	88	102	82	51	47
21	61	60	e54	e45	57	55	56	114	99	82	53	47
22	61	64	e50	e43	51	55	58	122	98	81	53	47
23	70	59	e48	e42	51	56	52	116	98	81	47	47
24	61	57	e46	e43	52	65	55	97	98	79	42	46
25	66	60	e44	e44	e51	73	54	82	96	89	42	45
26	61	60	e46	e44	e46	75	55	72	94	101	42	48
27	60	63	e44	e42	e50	74	61	70	92	100	41	49
28	60	e70	e47	e40	e54	66	58	75	93	98	40	48
29	60	e72	e50	e37	---	68	57	91	87	96	40	51
30	59	e68	e48	e35	---	81	61	107	103	92	40	60
31	65	---	e45	e36	---	88	---	133	---	88	40	---
TOTAL	1615	1845	1670	1337	1278	1734	1792	2647	3398	2683	1683	1425
MEAN	52.10	61.50	53.87	43.13	45.64	55.94	59.73	85.39	113.3	86.55	54.29	47.50
MAX	70	72	65	50	57	88	84	133	154	116	90	64
MIN	18	56	44	35	35	45	52	58	79	64	40	39
AC-FT	3200	3660	3310	2650	2530	3440	3550	5250	6740	5320	3340	2830

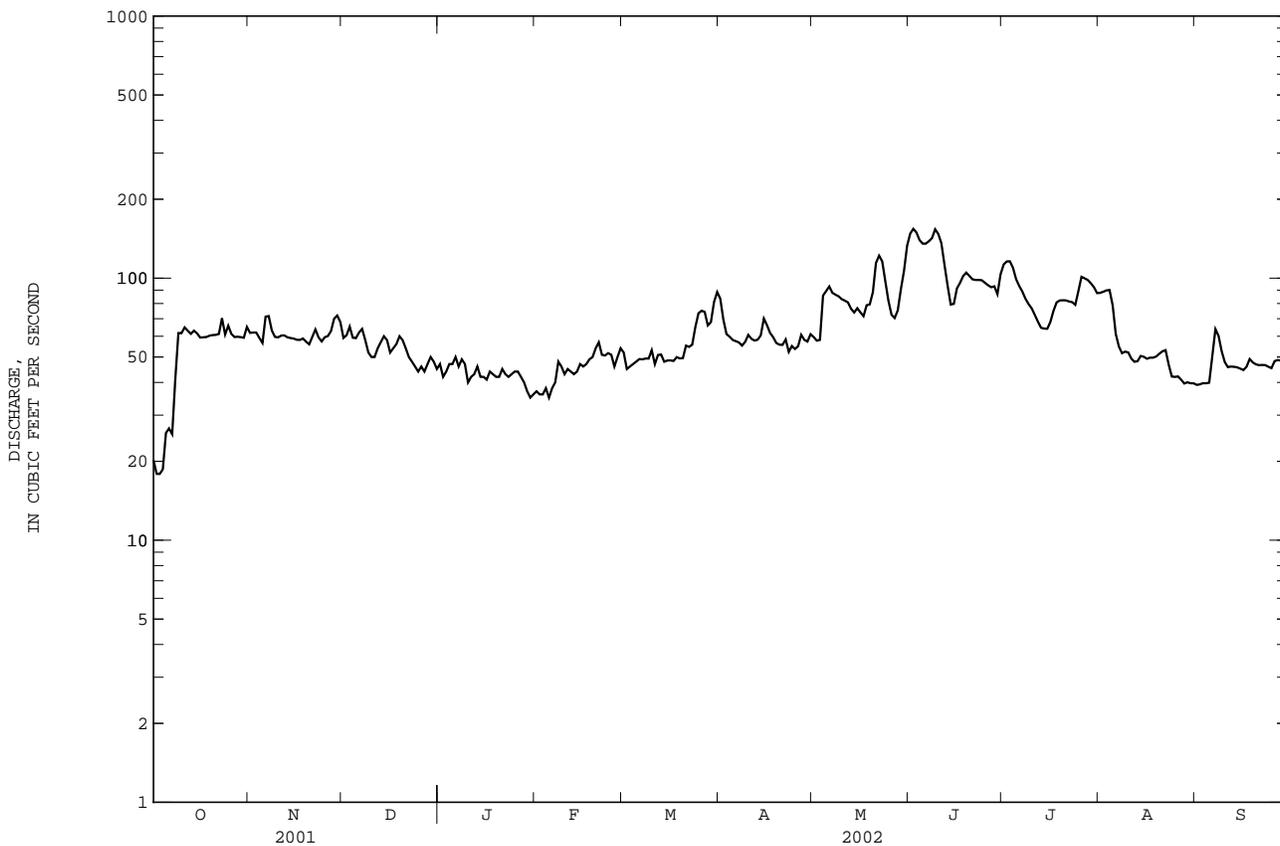
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2002, BY WATER YEAR (WY)\*

	80.32	75.84	71.00	60.08	62.49	68.19	62.40	97.88	129.8	113.5	80.94	55.87
MEAN	80.32	75.84	71.00	60.08	62.49	68.19	62.40	97.88	129.8	113.5	80.94	55.87
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	61.5	53.9	43.1	45.6	55.9	55.3	82.1	57.1	58.3	33.5	25.7
(WY)	2002	2002	2002	2002	2002	2002	1993	1989	1992	1992	2001	2001

13018350 FLAT CREEK BELOW CACHE CREEK, NEAR JACKSON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1989 - 2002*	
ANNUAL TOTAL	21673		23107		--	
ANNUAL MEAN	59.38		63.31		71.95	
HIGHEST ANNUAL MEAN	--		--		89.8 2000	
LOWEST ANNUAL MEAN	--		--		62.7 2001	
HIGHEST DAILY MEAN	137	Jun 4	154	Jun 2	256	Jul 13 1995
LOWEST DAILY MEAN	14	Sep 22	18	Oct 2,3	14	Sep 22 2001
ANNUAL SEVEN-DAY MINIMUM	15	Sep 19	22	Oct 1	15	Sep 19 2001
MAXIMUM PEAK FLOW	--		162 <sup>a</sup>	Jun 9	277 <sup>b</sup>	Jul 12 1995
MAXIMUM PEAK STAGE	--		4.18 <sup>c</sup>	Dec 8	4.18 <sup>c</sup>	Dec 8 2001
INSTANTANEOUS LOW FLOW	--		--		23	Aug 30 1990
ANNUAL RUNOFF (AC-FT)	42990		45830		52130	
10 PERCENT EXCEEDS	82		96		109	
50 PERCENT EXCEEDS	60		58		67	
90 PERCENT EXCEEDS	30		42		43	

\* For period of operation.  
 a Gage height, 2.32 ft.  
 b Gage height, 2.95 ft.  
 c Backwater from ice.  
 e Estimated.

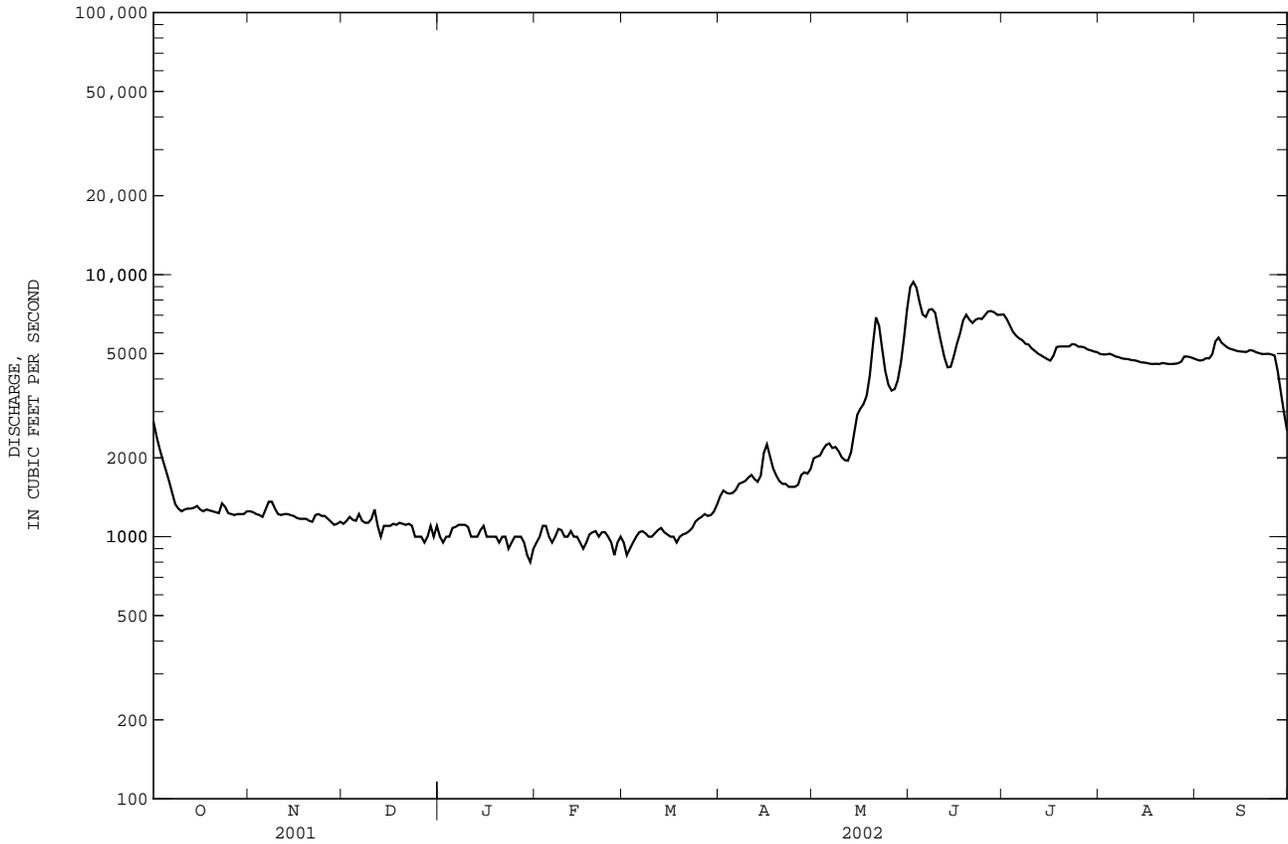




13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1976 - 2002	
ANNUAL TOTAL	1021040		1026200		--	
ANNUAL MEAN	2797		2812		3651	
HIGHEST ANNUAL MEAN	--		--		6110	
LOWEST ANNUAL MEAN	--		--		2469	
HIGHEST DAILY MEAN	9620	May 17	9380	Jun 2	30200	Jun 11 1997
LOWEST DAILY MEAN	950 <sup>e</sup>	Jan 17	800 <sup>e</sup>	Jan 30	690	Jan 19 1988
ANNUAL SEVEN-DAY MINIMUM	1010	Dec 24	921	Jan 26	785	Feb 4 1989
ANNUAL RUNOFF (AC-FT)	2025000		2035000		2645000	
10 PERCENT EXCEEDS	5140		5580		8220	
50 PERCENT EXCEEDS	1450		1550		2080	
90 PERCENT EXCEEDS	1100		1000		1120	

e Estimated.

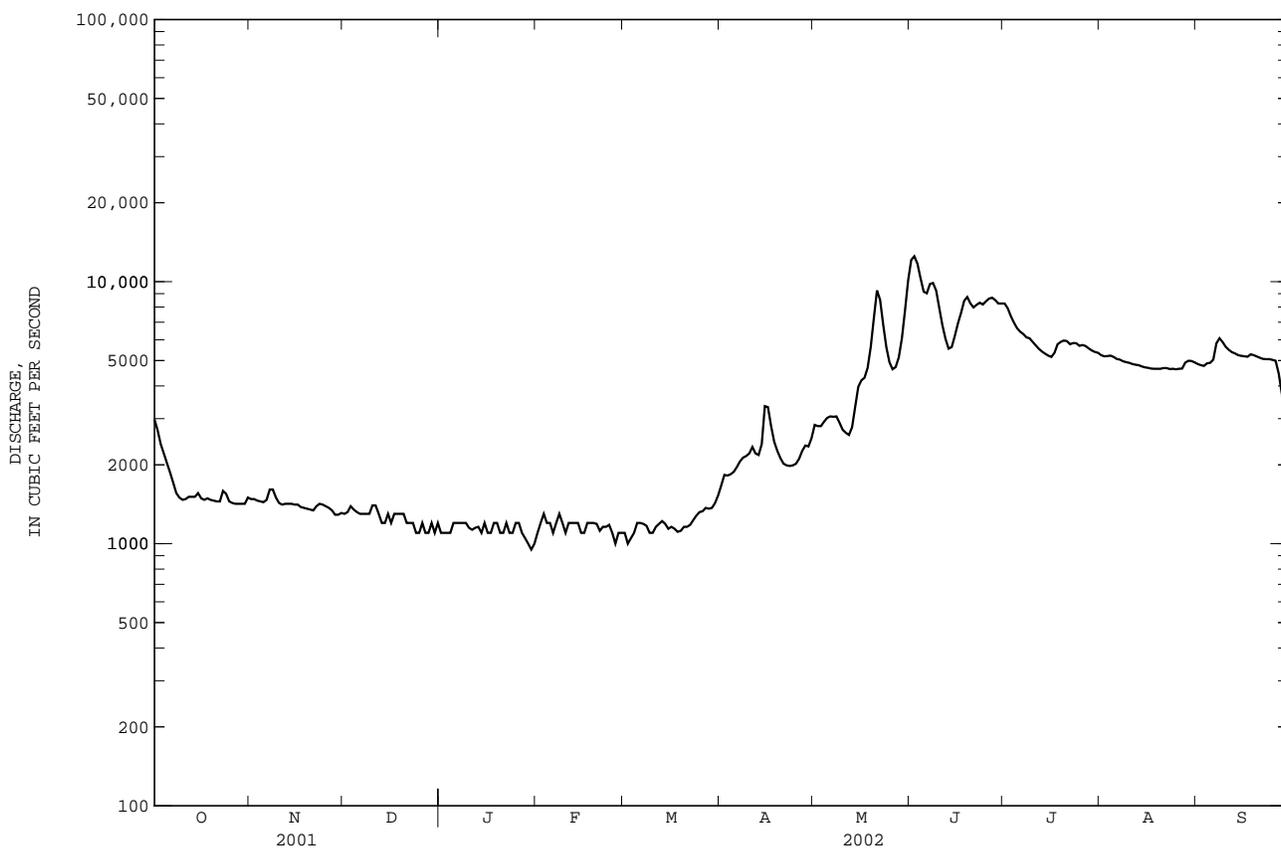




13022500 SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1937 - 2002	
ANNUAL TOTAL	1188680		1189790		--	
ANNUAL MEAN	3257		3260		4547	
HIGHEST ANNUAL MEAN	--		--		7525 1997	
LOWEST ANNUAL MEAN	--		--		2726 1977	
HIGHEST DAILY MEAN	13200	May 16	12500	Jun 2	38100	Jun 11 1997
LOWEST DAILY MEAN	1100 <sup>e</sup>	Jan 17	950 <sup>e</sup>	Jan 30	900	Dec 31 1978
ANNUAL SEVEN-DAY MINIMUM	1130	Dec 24	1060	Jan 26	957	Jan 9 1964
ANNUAL RUNOFF (AC-FT)	2358000		2360000		3294000	
10 PERCENT EXCEEDS	6060		6720		10800	
50 PERCENT EXCEEDS	1760		1960		2460	
90 PERCENT EXCEEDS	1300		1110		1320	

e Estimated.

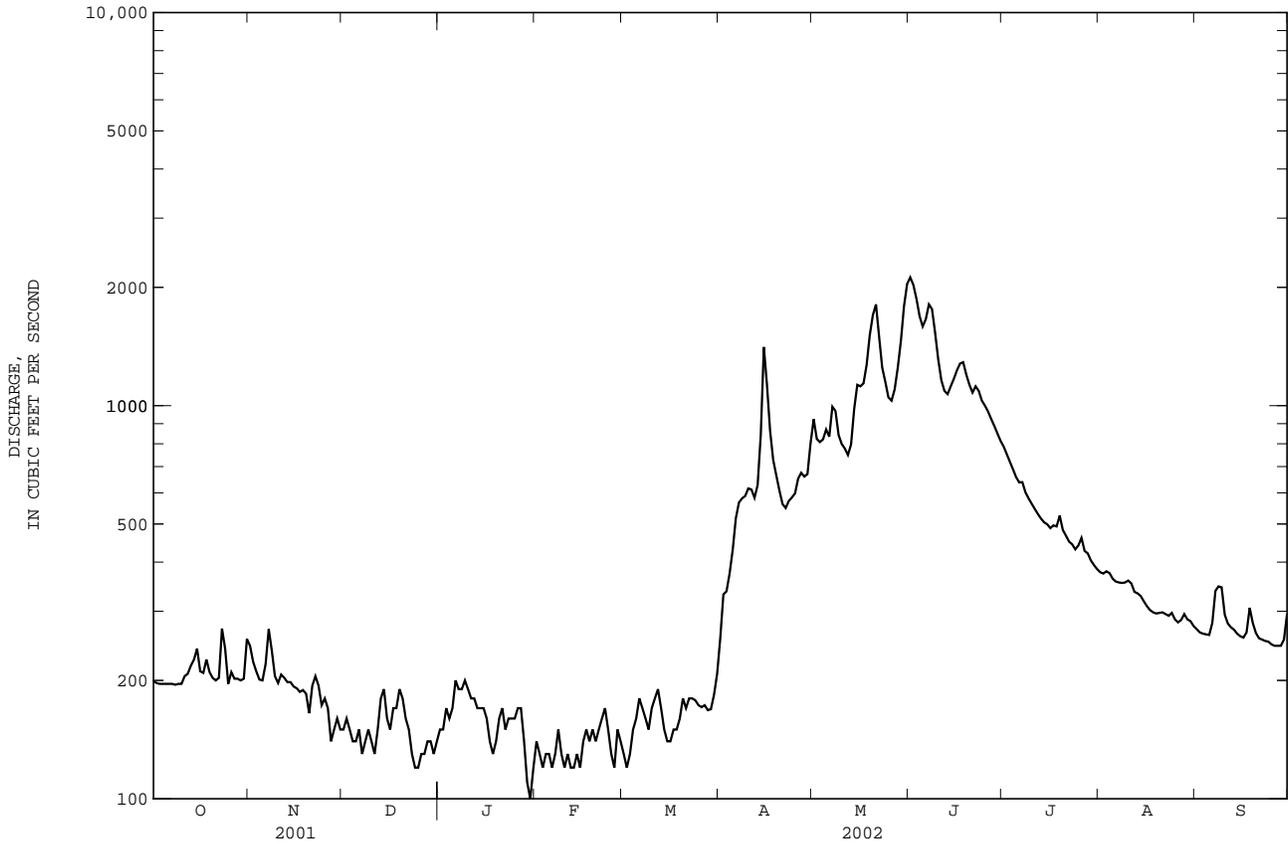




13023000 GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1937 - 2002
ANNUAL TOTAL	132701	158590	--
ANNUAL MEAN	363.6	434.5	642.8
HIGHEST ANNUAL MEAN	--	--	1022 1971
LOWEST ANNUAL MEAN	--	--	259 1977
HIGHEST DAILY MEAN	2620 May 16	2120 Jun 1	6170 Jun 19 1971
LOWEST DAILY MEAN	120 <sup>e</sup> Dec 24,25	100 <sup>e</sup> Jan 30	92 Jan 2 1978
ANNUAL SEVEN-DAY MINIMUM	130 Dec 23	121 Jan 29	121 Jan 29 2002
ANNUAL RUNOFF (AC-FT)	263200	314600	465700
10 PERCENT EXCEEDS	793	1090	1730
50 PERCENT EXCEEDS	220	247	320
90 PERCENT EXCEEDS	160	140	188

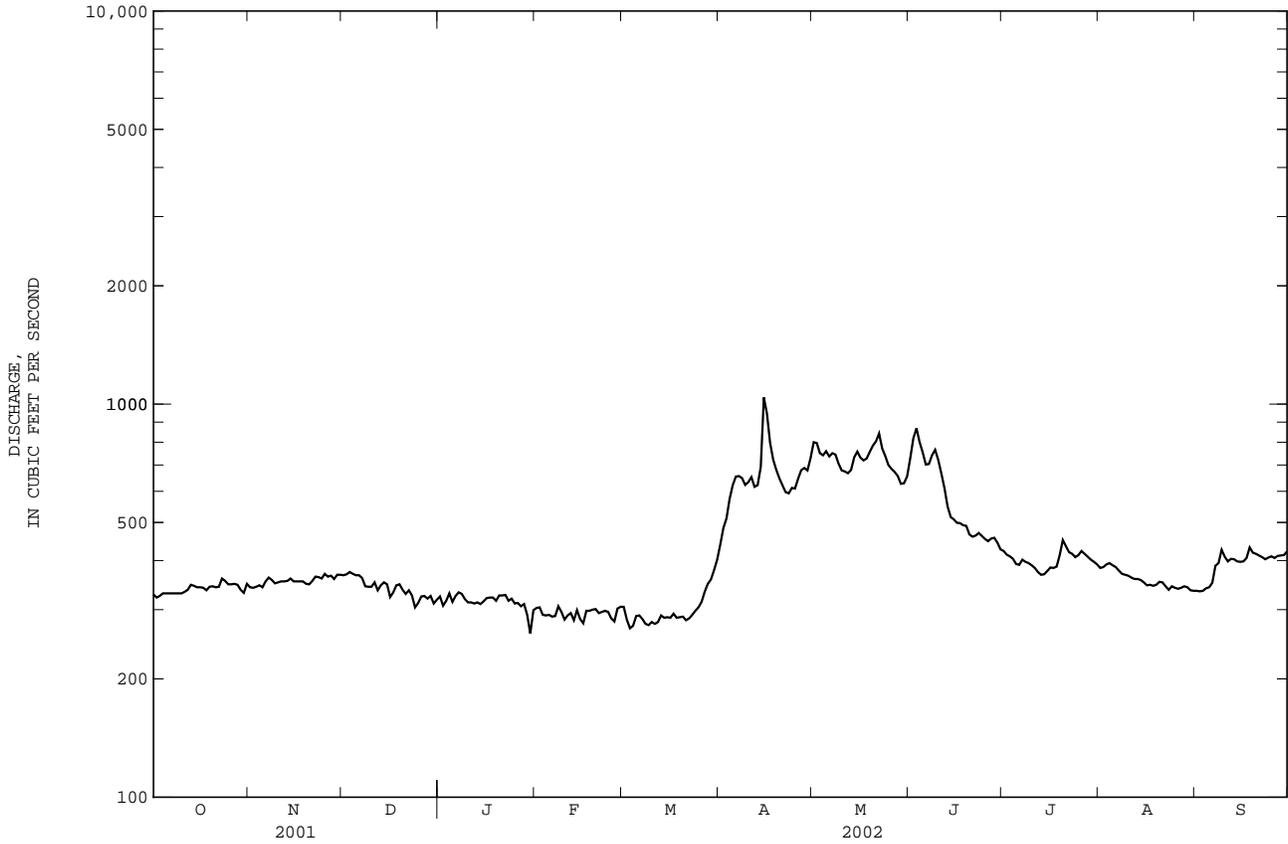
e Estimated.





13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1954 - 2002
ANNUAL TOTAL	135911	153935	--
ANNUAL MEAN	372.4	421.7	775.1
HIGHEST ANNUAL MEAN	--	--	1272
LOWEST ANNUAL MEAN	--	--	397
HIGHEST DAILY MEAN	651	1040	5030
LOWEST DAILY MEAN	275	261	180
ANNUAL SEVEN-DAY MINIMUM	281	279	226
ANNUAL RUNOFF (AC-FT)	269600	305300	561500
10 PERCENT EXCEEDS	524	695	1510
50 PERCENT EXCEEDS	347	357	574
90 PERCENT EXCEEDS	297	294	376



SALT RIVER BASIN

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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
------	------	---	--	-----------------------------------	--	--	---	---------------------------------	------------------------------------	---	---	---	--

NOV	20...	1645	400	625	11.5	110	8.2	487	5.5	5.0	--	--	--	--
MAR	18...	1515	283	622	11.0	107	7.7	472	2.5	5.5	--	--	--	--
JUN	26...	0930	420	620	8.3	97	7.8	476	21.0	13.0	--	--	--	--
AUG	28...	1125	324	618	9.0	100	7.8	471	19.0	10.5	240	64.1	19.2	1.09

Date	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
------	-----------------------------------	---	--	--	---	--	---	---	---	---	--	---	---

NOV	20...	--	--	--	--	--	--	--	--	<.04	--	1.07	E.003	
MAR	18...	--	--	--	--	--	--	--	--	<.04	--	1.08	<.008	
JUN	26...	--	--	--	--	--	--	--	--	<.04	--	.84	E.006	
AUG	28...	.3	10.0	200	12.5	6.94	36.2	.37	241	275	<.04	E.07	1.14	E.005

Date	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	SEDI-MENT, DIS-CHARGE, SUS-PENDEDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDEDED (T/DAY) (80155)
------	--	--	---------------------------------------	--	--	---------------------------------------	--	---

E -- Estimated value  
 k -- Counts outside acceptable range (Non-ideal colony count)

## HENRYS FORK BASIN

487

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, Yellowstone National Park, Hydrologic Unit 17040203, 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<sup>2</sup>.

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 good except for estimated daily discharges, which are fair. No diversion or regulation. Station operated and record provided by the Idaho District.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	70	63	59	e60	e55	61	267	275	96	73	67
2	60	65	64	59	e60	e55	62	292	296	92	73	67
3	60	63	65	60	e60	e55	60	302	319	91	74	66
4	60	62	63	60	e60	e60	62	293	295	90	76	66
5	60	62	64	60	e60	e60	66	278	267	88	73	66
6	60	69	64	59	e55	e65	72	213	260	88	72	76
7	60	74	63	61	e60	e65	78	199	276	86	72	85
8	60	65	62	60	e65	e60	76	162	279	84	72	72
9	61	63	62	60	e60	e60	77	147	264	83	72	69
10	60	62	61	59	e60	e60	93	151	227	82	70	68
11	64	62	62	59	e60	e55	95	188	188	81	70	68
12	62	62	61	59	e60	e60	94	222	170	80	70	67
13	64	62	63	59	e60	e60	99	223	158	79	69	67
14	64	62	65	59	e60	e60	124	226	163	79	69	67
15	63	62	63	59	e55	e60	138	219	172	78	69	67
16	62	62	61	58	e60	e55	120	203	186	78	68	67
17	62	62	62	59	e65	e60	107	193	193	77	68	69
18	61	62	62	59	e65	e60	101	192	210	77	68	72
19	61	62	62	59	e60	e60	99	202	232	81	68	68
20	62	61	61	59	e60	e65	96	230	182	77	68	67
21	61	64	60	61	e65	e65	93	251	149	76	68	67
22	61	67	60	60	e60	e60	97	260	144	75	68	67
23	64	64	60	59	e60	e60	113	253	143	76	68	67
24	61	64	59	59	e55	e60	125	234	137	75	68	67
25	60	64	60	59	e55	57	138	209	126	75	67	66
26	60	64	60	59	e50	56	165	191	118	77	67	66
27	60	62	59	59	e55	55	184	190	111	76	67	67
28	60	62	61	59	e60	54	175	195	106	74	68	67
29	60	64	60	e60	---	55	185	203	102	74	68	68
30	60	64	60	e60	---	56	236	220	99	73	68	69
31	92	---	60	e60	---	59	---	243	---	73	67	---
TOTAL	1925	1913	1912	1841	1665	1827	3291	6851	5847	2491	2158	2052
MEAN	62.10	63.77	61.68	59.39	59.46	58.94	109.7	221.0	194.9	80.35	69.61	68.40
MAX	92	74	65	61	65	65	236	302	319	96	76	85
MIN	60	61	59	58	50	54	60	147	99	73	67	66
AC-FT	3820	3790	3790	3650	3300	3620	6530	13590	11600	4940	4280	4070

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2002, BY WATER YEAR (WY)

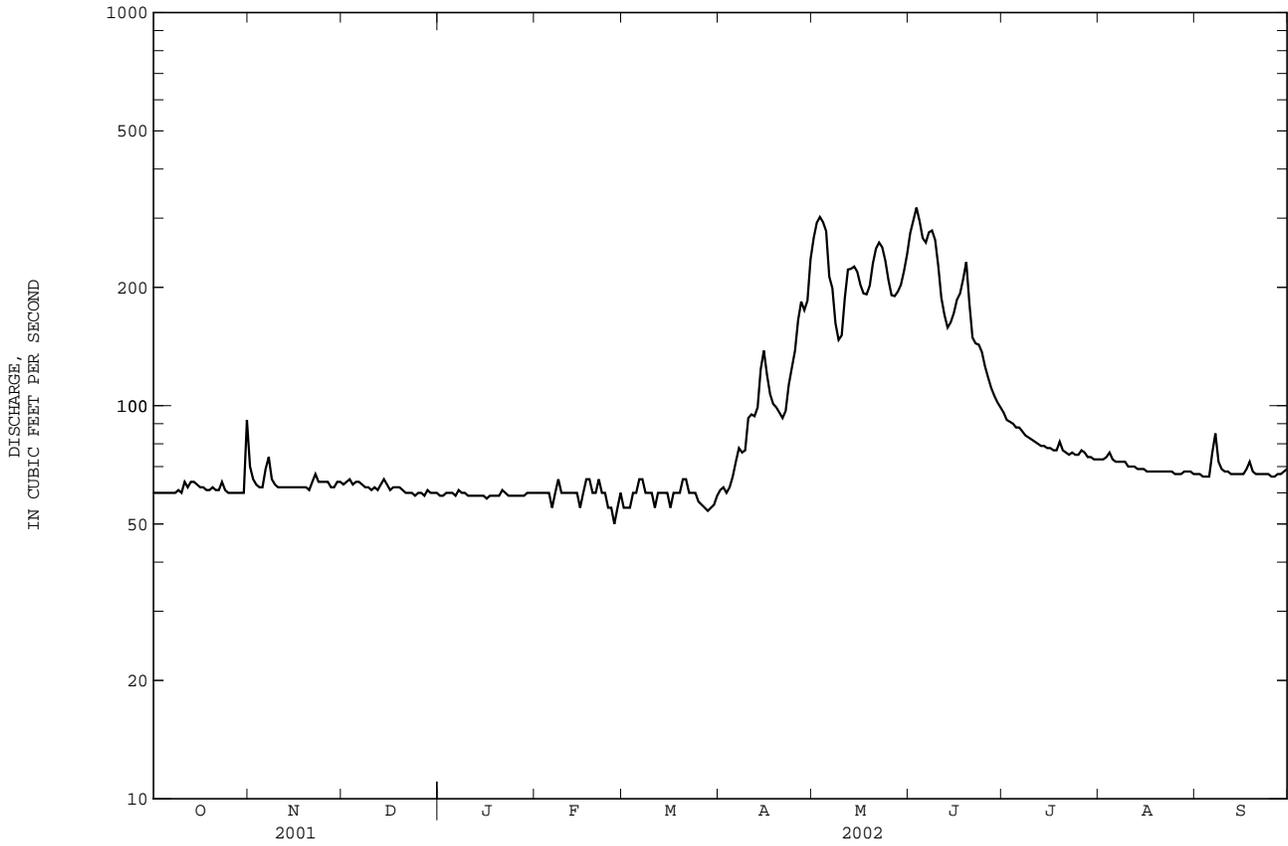
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	81.50	81.10	77.37	73.20	69.69	70.91	123.7	273.3	232.1	103.4	84.30	80.93
MAX	120	108	101	100	88.5	91.3	215	460	566	179	139	129
(WY)	1998	1998	1996	1997	1998	1997	1990	1997	1986	1997	1997	1997
MIN	61.6	61.9	58.8	58.1	53.8	58.0	68.8	150	83.3	68.1	62.2	59.4
(WY)	1993	1993	1993	1993	1989	1993	1991	1990	1987	1988	1988	1988

HENRYS FORK BASIN

13046680 BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1984 - 2002	
ANNUAL TOTAL	28860		33773		--	
ANNUAL MEAN	79.07		92.53		112.8	
HIGHEST ANNUAL MEAN	--		--		169 1997	
LOWEST ANNUAL MEAN	--		--		82.7 2001	
HIGHEST DAILY MEAN	293	Apr 29	319	Jun 3	810	Jun 2 1986
LOWEST DAILY MEAN	59	Dec 24,27	50 <sup>e</sup>	Feb 26	50	Feb 26 2002
ANNUAL SEVEN-DAY MINIMUM	60	Dec 21	55	Feb 24	53	Feb 12 1989
ANNUAL RUNOFF (AC-FT)	57240		66990		81700	
10 PERCENT EXCEEDS	122		194		222	
50 PERCENT EXCEEDS	66		66		82	
90 PERCENT EXCEEDS	61		59		61	

e Estimated.



## Annual maximum discharge at miscellaneous sites during water year 2002

Stream	Tributary to	Location	Period of Record	Measurements		
				Date	Gage height (feet)	Discharge (cfs)
Platte River Basin						
Crow Creek at 5th Street, in Cheyenne	South Platte River	Lat 41°07'20", long 104°48'38", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.6, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 15 ft upstream from bridge on 5th Street, in Cheyenne.	1995-02	8-27-02	7.04	335
Crow Creek on C.P. Orgon property, in Cheyenne	South Platte River	Lat 41°07'26", long 104°47'20", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.4, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 100ft downstream from bridge over Crow Creek on private land, and approximately 1,700 ft east of Morrie Avenue, in Cheyenne	1996-02	9-12-02	4.30	354
Clear Creek at Parsley Boulevard, in Cheyenne	Crow Creek	Lat 41°07'30", long 104°49'22", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.6, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 15 ft upstream from culvert under Parsley Boulevard, in Cheyenne.	1996-02	9-11-02	7.89	17
Henderson Drain at Nationway in Cheyenne	Crow Creek	Lat 41°08'08", long 104°46'19", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.33, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 40 ft upstream from culvert on Nationway, in Cheyenne.	1994, 1996-02	8-26-02	9.45	211
Dry Creek at Vista Lane, in Cheyenne 06756030	Crow Creek	Lat 41°10'27", long 104°50'31", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.24, T.14 N., R.67 W., Laramie County, Hydrologic Unit 10190009, 30 ft upstream from culvert on Vista Lane, in Cheyenne.	1987-02	8-5-02	3.08	4.9
Dry Creek at Smalley Park, in Cheyenne	Crow Creek	Lat 41°10'02", long 104°49'07", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec. 19, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 30 ft upstream from culvert on Seminole Road in Cheyenne.	1994-02	8-5-02	12.48	223
Dry Creek tributary at Briarwood Road, in Cheyenne	Dry Creek	Lat 41°09'53", long 104°47'15", in SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.21, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 15 ft upstream from culvert on Briarwood Road, in Cheyenne.	1994, 1996-02	8-26-02	13.30	21
Dry Creek at Windmill Road, in Cheyenne	Crow Creek	Lat 41°09'39", long 104°46'45", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.21, T.14 N., R.66 W., Laramie County, Hydrologic Unit 1019000, 50 ft upstream from culvert on Windmill Road in Cheyenne.	1994-02	9-11-02	9.66	222
Dry Creek at College Drive, in Cheyenne	Crow Creek	Lat 41°09'26", long 104°45'38", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.27, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 40 ft upstream from culvert on College Drive, in Cheyenne.	1994-02	8-27-02	12.48	273
Dry Creek at Rawlins Street, in Cheyenne	Crow Creek	Lat 41°09'11", long 104°45'03", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.26, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 30 ft upstream from culvert on Rawlins Street, in Cheyenne.	1994-02	9-11-02	15.32	149

## Discharge measurements made at miscellaneous sites during water year 2002

Stream	Tributary to	Location	Drainage area (sq mi)	Measured pre- viously (water years)	Measurements	
					Date	Discharge (cfs)
Yellowstone River Basin						
Dinwoody Canal 432302109215601	Wind River	Lat 41°23'02", long 109°21'56", in NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> 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	05-13-02	38.3
					06-26-02	223
					08-14-02	188
					09-12-02	185
					09-16-02	160
37-C Lateral 425716108520401	Little Wind River	Lat 42°57'16", long 108°52'04", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> 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	05-28-02	31.3
					06-28-02	75.8
					08-13-02	8.46
					09-17-02	7.65
65-C Lateral at Headworks 425515108485401	Little Wind River	Lat 42°55'15", long 108°48'54", in NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> 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	05-23-02	47.4
					06-28-02	88.8
					08-16-02	13.7
					09-13-02	17.1
Ray Canal Below 65 "C" Lateral 425513108485801	Little Wind River	Lat 42°55'13", long 108°48'58", in NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> 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	05-23-02	17.9
					06-28-02	14.9
					08-16-02	3.74
					09-13-02	2.83
Snake River Basin						
Fish Creek near Teton Village 433504110493901	Snake River	Lat 43°35'04", long 110°49'39", in NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.24, T.42 N., R.117 W., Teton County, Hydrologic Unit 17040103, on right bank 0.2 mi southwest of Teton Village entry from State Hwy 390.		2000-01	10-24-01	0.81
					05-15-02	2.57
					06-04-02	6.45
					06-26-02	4.42
					07-24-02	4.01
					08-21-02	3.19
Fish Creek at Resor Bridge, near Teton Village 433243110504501	Snake River	Lat 43°32'43", long 110°50'45", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> sec.2, T.41 N., R.117 W., Teton County, Hydrologic Unit 17040103, on right bank 1.2 mi west of miscellaneous site 433247110491701 Lake Creek at State Hwy 390, and 3.0 mi southwest of Teton Village.		2000-01	05-15-02	15.7
					06-25-02	148
					07-24-02	120
					08-21-02	98.9
Lake Creek at State Hwy 390, near Wilson 433247110491701	Fish Creek	Lat 43°32'47", long 110°49'17", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> 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.		1994-01	05-15-02	29.9
					06-25-02	437
					07-24-02	230
					08-20-02	127
Phillips Canyon at Fish Creek Road, near Wilson 433234110512601	Fish Creek	Lat 43°32'34", long 110°51'26", in SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.2, T.41 N., R.117 W., Teton County, Hydrologic Unit 17040103, on right bank 50 ft upstream from culvert on Fish Creek Road, 3.1 mi northeast of Wilson, and 3.4 mi southwest of Teton Village.		2000-01	05-15-02	4.64
					06-04-02	26.9
					06-26-02	17.1
					07-24-02	5.86
					08-21-02	3.23
Fish Creek at Harmon's, at Wilson 432958110521301	Snake River	Lat 43°29'58", long 110°52'13", in SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.22, T.41 N., R.117 W., Teton County, Hydrologic Unit 17040103, on left bank at Wilson and 600 ft downstream from station 13016450 Fish Creek at Wilson		2000-01	05-15-02	84.9
					06-26-02	711
					07-26-02	400
					08-20-02	299

## DISCHARGE AT MISCELLANEOUS SITES

491

Discharge measurements made at miscellaneous sites during water year 2002

Stream	Tributary to	Location	Drainage area (sq mi)	Measured pre- viously (water years)	Measurements	
					Date	Discharge (cfs)
Fish Creek above Mosquito Creek, near Wilson 432705110514501	Snake River	Lat 43°27'05", long 110°51'45", in SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.3, T.40 N., R.117 W., Teton County, Hydrologic Unit 17040103, at bridge on Fish Creek Meadow Road and 3.5 mi south of Wilson on Fall Creek Road.		2000-01	05-16-02	77.8
					06-05-02	625
					06-26-02	677
					07-24-02	393
					08-21-02	295

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## 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 2001 TO SEPTEMBER 2002

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	2,4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	2,4-D, TOTAL (UG/L) (39730)	DICAMBA TOTAL (UG/L) (82052)	PIC- LORAM UNFILT RECOVER (UG/L) (39720)	SILVEX, TOTAL (UG/L) (39760)
SEP 19...	0815	4.4	1180	3.0	8.8	<.03	<.03	.12	.04	.10	<.02



ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

GRAND TETON NATIONAL PARK, EASTERN TRIBUTARIES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

435529110335101 PILGRIM CREEK BELOW PARK BOUNDARY, NEAR MORAN, GRAND TETON NATIONAL PARK, WY (LAT 43 55 29 LONG 110 33 51)

Date	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
JUN 11...	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 16...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (T/DAY) (80155)
JUN 11...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	137	83.2
JUL 22...	--	--	--	--	--	--	--	--	--	--	5.0	.46
SEP 16...	--	--	--	--	--	--	--	--	--	--	1.0	.04

13010450 PILGRIM CREEK NEAR MORAN, WY (LAT 43 54 14 LONG 110 35 12)

Date	Time	DIS- CHARGE, INST- CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) ATION) (00300)	OXYGEN, (PER- CENT SOLVED (MG/L) ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL AS CACO3 (00900)	CALCIUM DIS- SOLVED (MG/L) AS CA (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L) AS MG (00925)	POTAS- SIUM, DIS- SOLVED (MG/L) AS K (00935)
JUN 11...	1200	198	596	10.2	105	8.1	126	12.0	6.0	57	17.6	3.23	.50
JUL 22...	1500	27	598	6.6	91	8.3	190	19.5	19.0	88	27.4	4.77	.63
SEP 16...	1615	10	591	7.6	100	8.6	200	17.0	16.0	94	29.2	5.06	.74

Date	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L) AS NA (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L) AS CL (00940)	FLUO- RIDE, DIS- SOLVED (MG/L) AS F (00950)	SILICA, DIS- SOLVED (MG/L) AS SIO2 (00955)	SULFATE DIS- SOLVED (MG/L) AS SO4 (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N (00623)
JUN 11...	.1	2.60	64	.82	E.1	6.51	2.7	.10	40.1	75	72	<.04	E.07
JUL 22...	.2	4.14	97	E.24	E.1	7.28	4.5	--	--	116	--	<.04	E.08
SEP 16...	.2	4.74	E102	.56	E.1	6.83	5.7	--	--	114	--	<.04	E.06

Date	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N (00613)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L) AS P (00671)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	CADMIUM DIS- SOLVED (UG/L) AS CD (01025)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR (01030)	COPPER, DIS- SOLVED (UG/L) AS CU (01040)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	NICKEL, DIS- SOLVED (UG/L) AS NI (01065)
JUN 11...	.17	<.05	<.008	.009	<.02	.097	.3	<.04	<.8	.5	E9	5.2	.49
JUL 22...	E.07	<.05	<.008	.006	<.02	.010	--	--	--	--	<10	E1.7	--
SEP 16...	E.09	<.05	<.008	E.003	<.02	E.002	--	--	--	--	<10	<2.0	--

## GRAND TETON NATIONAL PARK, EASTERN TRIBUTARIES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

13010450 PILGRIM CREEK NEAR MORAN, WY (LAT 43 54 14 LONG 110 35 12)

Date	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
JUN 11...	<.3	4	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 16...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
JUN 11...	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 16...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHYL METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENSOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
JUN 11...	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004
JUL 22...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 16...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80155)
JUN 11...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	105	56.1
JUL 22...	--	--	--	--	--	--	--	--	--	--	5.0	.36
SEP 16...	--	--	--	--	--	--	--	--	--	--	1.0	.03

435459110275401 PACIFIC CREEK ABOVE PARKK BOUNDARY, GRAND TETON NATIONAL PARK, NEARR MORAN, WY (LAT 43 54 59 LONG 110 27 45)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
JUN 11...	1500	716	595	10.0	106	7.8	130	9.5	7.0	58	17.5	3.60	.80
JUL 23...	0930	119	600	9.0	104	8.0	192	17.0	11.0	87	26.0	5.34	1.12
SEP 16...	1130	46	594	8.8	103	8.3	226	14.5	11.0	100	30.7	6.33	1.09





## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## GRAND TETON NATIONAL PARK, EASTERN TRIBUTARIES--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

## 13011500 PACIFIC CREEK AT MORAN, WY (LAT 43 51 04 LONG 110 30 59)

Date	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN, DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
JUN 12...	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
JUN 12...	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDE (MG/L) (80155)	
JUN 12...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	45	70.6	
JUL 23...	--	--	--	--	--	--	--	--	--	--	3.0	1.1	
SEP 17...	--	--	--	--	--	--	--	--	--	--	2.0	.30	

## 13011900 -- BUFFALO FORK ABOVE LAVA CREEK NEAR MORAN, WY (LAT 43 50 14 LONG 110 26 21)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
JUN 12...	0945	1080	597	11.0	113	7.7	127	10.0	6.0	58	16.5	4.20	1.29
JUL 23...	1615	548	600	8.2	101	7.4	111	19.0	14.0	47	12.9	3.53	1.62
SEP 17...	1130	199	592	8.6	98	7.8	180	10.0	10.0	76	21.5	5.47	2.00
Date	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
JUN 12...	.2	2.88	63	1.15	E.1	18.9	3.5	.12	260	89	86	<.04	E.09
JUL 23...	.2	2.75	53	1.29	<.1	20.4	2.8	.11	118	80	77	<.04	E.07
SEP 17...	.2	4.66	E84	2.89	E.1	21.9	5.2	--	--	120	--	<.04	<.10

## GRAND TETON NATIONAL PARK, EASTERN TRIBUTARIES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

13011900 -- BUFFALO FORK ABOVE LAVA CREEK NEAR MORAN, WY (LAT 43 50 14 LONG 110 26 21)

Date	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
JUN 12...	.20	<.05	<.008	.035	.03	.141	.6	.12	<.8	.5	E10	6.1	.38
JUL 23...	.47	<.05	<.008	.053	.05	.40	--	--	--	--	<10	4.9	--
SEP 17...	E.08	<.05	<.008	.042	.03	.045	--	--	--	--	<10	8.4	--
Date	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER, DIS- SOLVED (UG/L) (49260)	ALA- CHLOR, WATER, DIS- SOLVED (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DIS- SOLVED (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DIS- SOLVED (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DIS- SOLVED (UG/L) (04041)
JUN 12...	E.2	4	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	DCPA WATER FLTRD 0.7 U GF, REC (82682)	DEETHYL ATRA- ZINE, WATER, DISS- SOLVED (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (82677)	EPTC WATER FLTRD 0.7 U GF, REC (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (82672)	FONOFOS WATER DIS- SOLVED (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (82686)
JUN 12...	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	METHYL PARA- THION WAT FLT 0.7 U GF, REC (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (82676)
JUN 12...	<.006	E.008	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	PROPA- CHLOR, WATER, DISS, REC (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI- MENT, CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	
JUN 12...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	112	327	
JUL 23...	--	--	--	--	--	--	--	--	--	--	286	423	
SEP 17...	--	--	--	--	--	--	--	--	--	--	2.0	1.1	



GRAND TETON NATIONAL PARK, EASTERN TRIBUTARIES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

13012000 -- BUFFALO FORK NEAR MORAN, WY (LAT 43 50 10 LONG 110 30 30)

Date	METHYL-PARA-THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
JUN 12...	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004
JUL 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOF WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDED (T/DAY) (80155)
JUN 12...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	105	347
JUL 23...	--	--	--	--	--	--	--	--	--	--	43	86.3
SEP 17...	--	--	--	--	--	--	--	--	--	--	3.0	1.7

13012490 -- SPREAD CREEK AT DIVERSION DAM, NEAR MORAN, WY (LAT 43 46 22 LONG 110 28 59)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL AS (MG/L) (00900)	CALCIUM DIS- SOLVED AS CA (MG/L) (00915)	MAGNE- SIUM, DIS- SOLVED AS MG (MG/L) (00925)	POTAS- SIUM, DIS- SOLVED AS K (MG/L) (00935)
JUN 13...	0915	175	595	10.1	107	8.2	159	14.0	7.0	78	22.5	5.18	.70
JUL 24...	0930	67	595	8.3	101	8.3	211	20.0	13.0	100	29.6	6.53	.86
SEP 18...	1100	37	588	9.2	104	8.1	232	8.0	9.0	110	32.1	7.14	.98

Date	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED AS NA (MG/L) (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED AS CL (MG/L) (00940)	FLUO- RIDE, DIS- SOLVED AS F (MG/L) (00950)	SILICA, DIS- SOLVED AS SIO2 (MG/L) (00955)	SULFATE DIS- SOLVED AS SO4 (MG/L) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED AS N (MG/L) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED AS N (MG/L) (00623)
JUN 13...	.2	3.34	80	.77	E.1	7.25	5.9	.14	47.3	100	94	<.04	.12
JUL 24...	.2	4.21	106	.95	E.1	7.36	7.5	.17	22.4	124	121	<.04	E.07
SEP 18...	.2	4.71	E115	1.29	E.1	7.31	8.0	--	--	129	--	<.04	E.06

Date	NITRO- GEN,AM- MONIA + ORGANIC TOTAL AS N (MG/L) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED AS N (MG/L) (00631)	NITRO- GEN, NITRITE DIS- SOLVED AS N (MG/L) (00613)	PHOS- PHORUS DIS- SOLVED AS P (MG/L) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED AS P (MG/L) (00671)	PHOS- PHORUS TOTAL AS P (MG/L) (00665)	ARSENIC DIS- SOLVED AS AS (UG/L) (01000)	CADMIUM DIS- SOLVED AS CD (UG/L) (01025)	CHRO- MIUM, DIS- SOLVED AS CR (UG/L) (01030)	COPPER, DIS- SOLVED AS CU (UG/L) (01040)	IRON, DIS- SOLVED AS FE (UG/L) (01046)	MANGA- NESE, DIS- SOLVED AS MN (UG/L) (01056)	NICKEL, DIS- SOLVED AS NI (UG/L) (01065)
JUN 13...	.19	<.05	<.008	.007	<.02	.074	.4	.06	<.8	.7	27	5.2	.73
JUL 24...	.14	<.05	<.008	.005	<.02	.084	--	--	--	--	35	E2.6	--
SEP 18...	E.09	<.05	<.008	E.003	<.02	.026	--	--	--	--	45	E2.5	--

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## GRAND TETON NATIONAL PARK, EASTERN TRIBUTARIES--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

## 13012490 -- SPREAD CREEK AT DIVERSION DAM, NEAR MORAN, WY (LAT 43 46 22 LONG 110 28 59)

Date	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
JUN 13...	<.3	2	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
JUN 13...	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENSOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
JUN 13...	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, CHARGE, SUS- PENDE (MG/L) (80154)	POTAS- SIUM, DIS- SOLVED (MG/L) (80155)
JUN 13...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	65	30.7
JUL 24...	--	--	--	--	--	--	--	--	--	--	81	14.6
SEP 18...	--	--	--	--	--	--	--	--	--	--	22	2.2

## 13012500 -- SPREAD CREEK NEAR MORAN, WY (LAT 43 47 26 LONG 110 32 14)

Date	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	
JUN 13...	1115	124	596	8.8	107	8.1	162	16.0	13.0	74	21.6	4.97	.71
JUL 24...	1145	4.8	602	7.8	109	8.4	233	26.0	20.0	110	33.2	7.23	.91
SEP 17...	1600	1.5	590	8.6	104	8.3	266	9.0	12.0	130	38.7	8.45	1.07





## GRAND TETON NATIONAL PARK, EASTERN TRIBUTARIES--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

13013530 -- DITCH CREEK BELOW SOUTH FORK, NEAR KELLY WY (LAT 43 40 53 LONG 110 34 58)

Date	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN, DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)
JUN 13...	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)
JUN 13...	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--

Date	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDE (T/DAY) (80155)
JUN 13...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	27	3.5
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	6.0	.06

13013600 -- DITCH CREEK NEAR MOOSE, WY LAT 43 39 52 LONG 110 41 44)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
JUN 13...	1430	46	608	7.5	100	8.4	208	19.0	18.0	94	27.5	6.10	1.04
JUL 24...	1400	8.2	610	7.6	112	8.6	311	29.0	23.0	150	40.8	11.6	1.30
SEP 18...	0930	.17	601	9.3	104	8.4	384	8.5	9.5	180	49.3	14.5	1.43

Date	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
JUN 13...	.2	5.05	88	1.11	.2	9.44	21.4	.19	17.1	139	125	<.04	.19
JUL 24...	.2	5.71	114	1.51	.3	7.16	49.5	.27	4.42	199	186	<.04	E.06
SEP 18...	.2	6.25	E132	1.99	.4	9.40	64.8	--	--	235	--	<.04	E.08

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## GRAND TETON NATIONAL PARK, EASTERN TRIBUTARIES--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

13013600 -- DITCH CREEK NEAR MOOSE, WY LAT 43 39 52 LONG 110 41 44)

Date	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)
JUN 13...	.24	<.05	<.008	.017	E.01	.047	1.0	.17	<.8	.8	12	E2.3	.85
JUL 24...	.15	<.05	<.008	E.004	<.02	.010	--	--	--	--	<10	E.9	--
SEP 18...	.10	<.05	<.008	<.004	<.02	E.002	--	--	--	--	<10	<2.0	--
Date	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)
JUN 13...	E.3	3	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	DCPA WATER FLTRD 0.7 U GF, REC (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (82677)	EPTC WATER FLTRD 0.7 U GF, REC (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (82686)
JUN 13...	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	METHYL PARA- THION WAT FLT 0.7 U GF, REC (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (82676)
JUN 13...	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
Date	PROPA- CHLOR, WATER, DISS, REC (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (82661)	SEDI- MENT, CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	
JUN 13...	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	24	3.0	
JUL 24...	--	--	--	--	--	--	--	--	--	--	5.0	.11	
SEP 18...	--	--	--	--	--	--	--	--	--	--	1.0	.0	

E -- Estimated value

## KENDRICK IRRIGATION STUDY

## PLATTE RIVER BASIN

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

425841106304702 SOUTH FORK CASPER CREEK AT INLET TO THIRTY-THREE MILE RESERVOIR, NEAR ILLCO, WY  
(LAT 42 58 41 LONG 106 30 47)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MM OF SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
NOV 07...	0820	.67	633	10.2	102	8.0	7530	6.5	6.0	122
MAR 20...	0900	1.2	635	11.2	96	8.1	7560	-3.0	.5	148

425818106302701 THIRTY-THREE MILE RESERVOIR NEAR OUTLET, NEAR ILLCO, WY  
(LAT 42 58 18 LONG 106 30 27)

Date	Time	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MM OF SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
NOV 07...	0920	635	9.7	96	8.4	6010	5.0	6.0	60.1
MAR 20...	1000	635	11.9	105	8.1	1620	-3.0	2.5	16.1

425818106293401 SOUTH FORK CASPER CREEK BELOW THIRTY-THREE MILE RESERVOIR, NEAR CASPER, WY  
(LAT 42 58 18 LONG 106 29 34)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MM OF SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
NOV 07...	1010	1.1	635	10.2	96	8.0	5730	2.0	4.0	43.9
MAR 20...	1100	.66	635	10.7	99	8.2	5860	-3.0	3.5	72.8

430020106300801 -- SOUTHWEST INLET TRIBUTARY TO ILLCO SEEP, NEAR ILLCO, WY  
(LAT 43 00 20 LONG 106 30 08)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE AIR (DEG C) (00020)
NOV 07...	1305	.0	.0
MAR 20...	1135	.0	-5.0

430014106300301 MIDDLE TRIBUTARY ON SOUTH SIDE ILLCO SEEP AT ILLCO, WY  
(LAT 43 00 14 LONG 106 30 03)

Date	Time	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE AIR (DEG C) (00020)
NOV 07...	1310	.0	.0
MAR 20...	1130	.0	-5.0

ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

KENDRICK IRRIGATION STUDY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

430012106295901 IR-51 NEAR CASPER, WY  
(LAT 43 00 12 LONG 106 29 59)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
NOV 07...	1320	.20	635	8.5	81	8.2	2170	.0	5.0	8.5
MAR 20...	1220	.03	635	10.2	89	8.4	2460	-5.0	2.0	17.0

430018106300201 ILLCO SEEP NEAR OUTLET, NEAR ILLCO, WY  
(LAT 43 00 18 LONG 106 30 02)

Date	Time	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
NOV 07...	1300	635	9.6	91	8.5	1970	.0	5.0	4.2
MAR 20...	1240	635	10.4	87	8.4	2400	-5.0	.5	17.2

430016106295901 UNNAMED POND ON EAST SIDE OF ILLCO SEEP, NEAR ILLCO, WY  
(LAT 43 00 16 LONG 106 29 59)

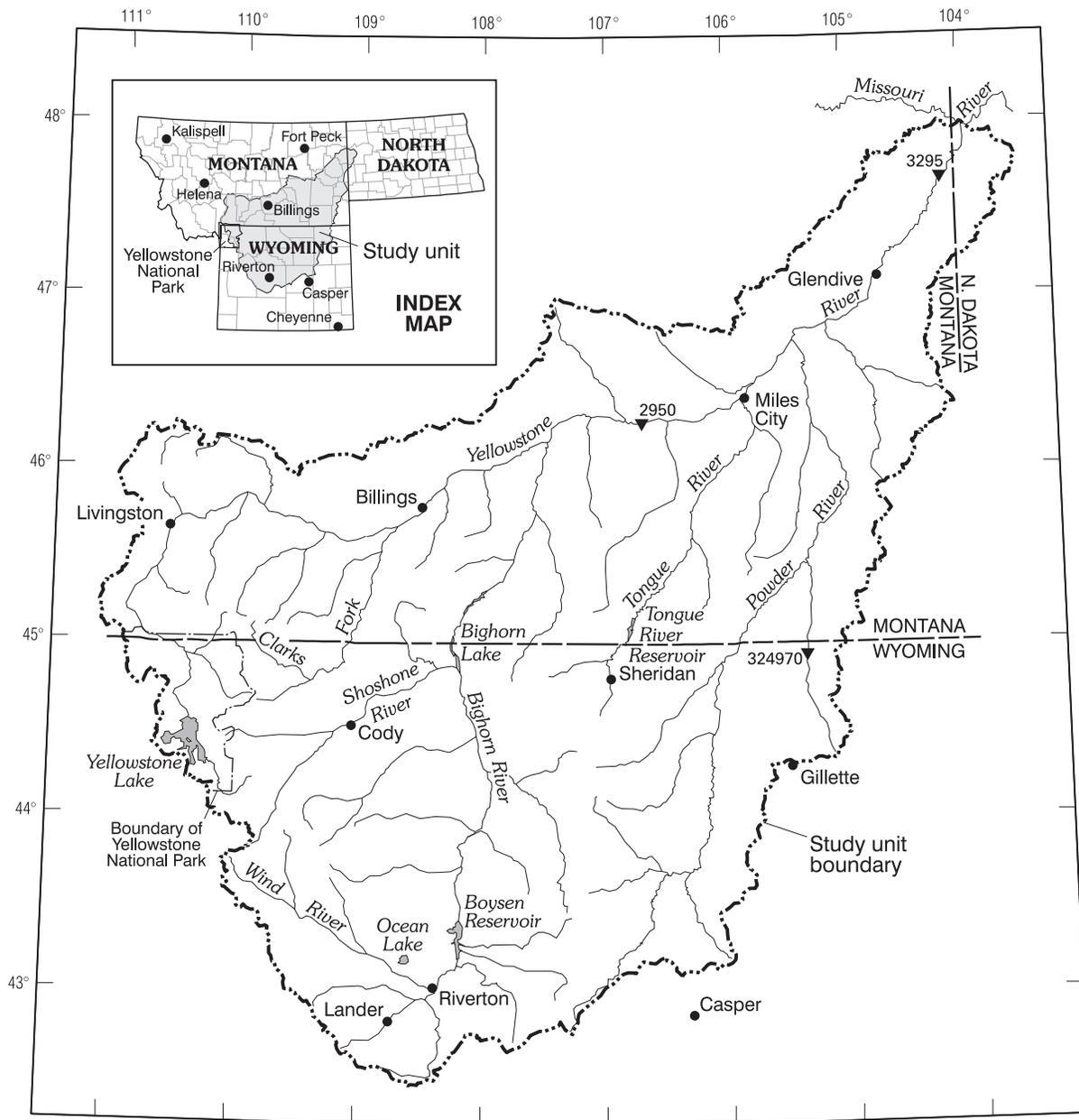
Date	Time	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
NOV 07...	1340	635	9.5	91	8.6	2220	.0	5.5	7.0
MAR 20...	1300	635	9.7	80	8.2	2490	-5.0	.0	10.1

430013106292001 OUTLET TRIBUTARY OF ILLCO SEEP AT CULVERT, AT ILLCO, WY  
(LAT 43 00 13 LONG 106 29 20)

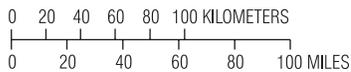
Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
NOV 07...	1100	.30	635	8.5	81	7.9	2520	1.0	5.0	1.5
MAR 20...	1400	.06	635	3.0	25	8.1	2590	-5.0	.0	3.5

NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN



Base modified from U.S. Geological Survey digital data, 1:2,000,000, 1972  
 Albers Equal-area Conic projection  
 Standard parallels 29°30' and 45°30'



**EXPLANATION**

- 324970  
 Fixed-station sampling site for water column chemistry and abbreviated number  
 Site numbers are abbreviated by not showing first two digits (06) and last two digits if zero.

**Figure 6.** Location of surface-water sampling sites in the Yellowstone River Basin NAWQA study unit, Montana, North Dakota, and Wyoming.

## 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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD ARD UNITS) (00400)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT. DIS FET LAB (MG/L CACO3) (29801)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3 (00452)	
OCT	24...	1000	3960	693	10.6	97	7.4	636	.0	7.5	160	156	190	--
NOV	29...	1030	E3400	686	14.9	115	7.7	701	-8.0	.5	170	154	188	--
DEC	13...	1300	E3500	689	12.5	96	8.2	726	2.0	.5	170	160	195	--
JAN	17...	1400	E3600	700	--	--	8.1	702	-1.0	.0	165	154	188	--
FEB	21...	1300	E4100	704	9.0	67	8.6	702	10.5	.5	162	144	176	--
MAR	25...	1400	E3500	696	14.4	108	8.3	786	2.0	.0	170	169	204	--
MAY	16...	1100	E10500	701	8.8	94	8.5	538	11.0	14.5	128	119	135	5
JUN	12...	1100	22700	--	--	--	8.1	254	19.5	13.0	68	63	77	--
JUL	02...	1000	19400	700	7.9	96	8.0	228	25.0	20.5	64	60	73	--
AUG	02...	0900	6080	694	8.2	99	8.3	540	20.0	20.0	132	128	142	7
SEP	19...	1000	4240	692	7.8	87	8.5	684	17.5	16.0	E161	142	168	2
Date		CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER, FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)
OCT	24...	8.79	160	<.04	.37	.20	.008	<.02	.033	--	--	--	--	--
NOV	29...	10.6	188	<.04	.24	.38	E.006	<.02	.051	<.002	<.004	<.002	<.005	E.005
DEC	13...	9.56	191	<.04	.28	.47	.010	<.02	.011	--	--	--	--	--
JAN	17...	9.83	193	E.02	.23	.53	E.005	E.01	.009	<.006	<.006	<.004	<.005	.008
FEB	21...	9.46	197	E.03	.33	.43	<.008	<.02	.049	--	--	--	--	--
MAR	25...	10.8	220	E.03	.36	.42	E.004	<.02	.040	<.006	<.006	<.004	<.005	.025
MAY	16...	7.15	137	<.04	.59	.06	<.008	<.02	.110	<.006	<.006	<.004	<.005	.008
JUN	12...	3.57	45.7	E.02	.40	.17	E.005	E.01	.17	<.006	<.006	<.004	<.005	<.007
JUL	02...	3.27	40.2	<.04	.22	.12	E.004	E.01	.104	<.006	<.006	<.004	<.005	E.007
AUG	02...	7.92	133	<.04	.38	.36	.010	.02	.107	<.006	<.006	<.004	<.005	.009
SEP	19...	9.63	184	<.04	.39	.21	E.004	<.02	.052	<.006	<.006	<.004	<.005	E.006

## 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 2001 TO SEPTEMBER 2002

Date	BEN- FLUR- ALIN WAT FLTD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLTD 0.7 U GF, REC (UG/L) (82663)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 29...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 25...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.004	<.005	<.005	<.02	<.002	<.009
MAY 16...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
JUN 12...	<.010	<.002	<.041	--	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
JUL 02...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
AUG 02...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.004	<.005	<.005	<.02	<.002	<.009
SEP 19...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.003	<.005	<.005	<.02	<.002	<.009
Date	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 29...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 25...	<.005	<.004	<.035	<.027	<.050	<.006	E.002n	<.006	<.002	<.007	<.003	<.010	<.004
MAY 16...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
JUN 12...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
JUL 02...	<.005	<.004	<.035	E.004	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
AUG 02...	<.005	<.004	<.035	<.027	<.050	<.006	E.005	<.006	<.002	<.007	<.003	<.010	<.004
SEP 19...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## 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 2001 TO SEPTEMBER 2002

Date	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)
OCT 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 29...	<.010	<.006	<.011	M	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 25...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U
MAY 16...	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--
JUN 12...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--
JUL 02...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--
AUG 02...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--
SEP 19...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--

Date	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 24...	--	--	--	28	299
NOV 29...	<.005	<.002	<.009	66	--
DEC 13...	--	--	--	21	--
JAN 17...	<.005	<.002	<.009	4.0	--
FEB 21...	--	--	--	36	--
MAR 25...	<.005	<.002	<.009	39	--
MAY 16...	<.005	<.002	<.009	102	--
JUN 12...	<.005	.007	<.009	176	10800
JUL 02...	<.005	.003	<.009	77	4030
AUG 02...	<.005	.012	<.009	62	1020
SEP 19...	--	--	--	--	--
SEP 19...	<.005	.008	<.009	34	389

E -- Estimated value  
M -- Presence verified, not quantified  
U -- Analyzed for, not detected

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
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 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT. DIS LAB (MG/L CACO3) (29801)	ALKA-LINITY WAT DIS FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT													
11...	0815	.05	--	--	--	8.0	3770	10.0	6.0	440	420	512	--
NOV													
14...	1400	.88	675	11.7	105	8.2	3470	15.0	5.0	376	324	395	--
DEC													
12...	1200	1.1	673	12.8	103	8.1	4340	1.0	.5	514	520	634	--
JAN													
16...	1400	1.0	673	12.3	97	7.9	4200	-2.0	.0	547	504	615	--
FEB													
20...	1500	1.0	672	10.4	84	8.0	2950	8.0	1.0	392	360	420	10
MAR													
19...	1100	2.3	674	13.1	104	8.1	2790	3.0	.5	351	356	434	--
MAY													
07...	1300	5.3	670	10.0	105	8.0	3460	11.0	11.0	388	379	456	--
JUL													
16...	1415	.16	676	10.4	158	7.9	3720	33.5	30.0	375	411	493	--
SEP													
10...	1650	.11	679	10.2	135	8.2	1840	25.5	23.0	229	222	264	--

Date	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT										
11...	118	1600	E.03	.65	E.03	<.008	<.02	.047	--	--
NOV										
14...	32.1	1580	<.04	.39	<.05	<.008	<.02	.021	60	.14
DEC										
12...	120	1860	E.02	.43	<.05	<.008	<.02	.014	112	.33
JAN										
16...	85.8	2010	E.03	.40	<.05	<.008	E.01	.020	68	.19
FEB										
20...	34.6	1290	E.03	.24	<.05	<.008	<.02	.013	22	.06
MAR										
19...	45.6	1130	<.04	.27	<.05	<.008	<.02	.013	73	.46
MAY										
07...	85.0	1480	<.04	.68	<.05	<.008	<.02	.059	189	2.7
JUL										
10...	--	--	--	--	--	--	--	--	--	--
16...	234	1480	<.04	.84	<.05	<.008	<.02	.054	61	.03
SEP										
10...	77.5	620	<.04	.73	<.05	<.008	<.02	.063	36	.01

E -- Estimated value

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	ALKA-LINITY WAT DIS FIELD CACO3 (MG/L AS) (39086)	BICAR-BONATE WATER DIS IT FIELD HCO3 (MG/L AS) (00453)	CAR-BONATE WATER DIS IT FIELD CO3 (MG/L AS) (00452)
OCT 23...	1500	4410	696	11.1	102	8.5	700	2.0	7.5	179	163	195	--
NOV 29...	1600	E3300	702	14.3	106	7.6	842	-3.0	.0	194	218	266	--
DEC 13...	0800	E4400	706	14.0	104	8.2	800	-12.0	.0	187	178	217	--
JAN 17...	0930	E4300	634	12.8	106	8.3	752	-10.0	.0	176	160	195	--
FEB 21...	0930	E4600	724	9.1	66	8.4	752	1.5	.0	168	154	188	--
MAR 12...	1200	E2800	702	13.3	99	8.2	917	9.0	.0	208	184	224	--
MAY 15...	1500	6050	708	10.0	110	8.7	631	16.5	16.0	137	127	145	5
JUN 11...	1430	32400	--	--	--	7.7	--	16.0	--	64	58	70	--
JUL 01...	1500	21400	700	8.4	109	8.2	235	26.5	24.0	66	59	72	0
AUG 01...	1300	5590	718	8.5	102	8.5	556	19.0	21.0	140	128	156	0
SEP 21...	1100	4160	705	8.2	84	8.3	771	10.5	13.0	E155	146	168	5

Date	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER, FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)
OCT 23...	9.77	181	<.04	.32	.24	E.007	<.02	.036	--	--	--	--	--
NOV 29...	14.8	233	E.02	.27	.40	E.005	<.02	.024	<.002	<.004	<.002	<.005	E.004
DEC 13...	12.7	220	E.03	.26	.52	.008	<.02	.020	--	--	--	--	--
JAN 17...	11.3	198	.09	.31	.61	E.007	E.01	.020	<.006	<.006	<.004	<.005	E.007
FEB 21...	11.4	211	E.03	.21	.48	<.008	<.02	.025	--	--	--	--	--
MAR 12...	18.4	262	.06	.34	.56	E.005	<.02	.023	<.006	.991	<.004	<.005	.394
MAY 15...	9.93	170	<.04	.66	.06	E.005	<.02	.105	<.006	<.006	<.004	<.005	.008
JUN 11...	2.93	36.7	<.04	.95	.20	E.005	E.01	.52	<.006	<.006	<.004	<.005	<.007
JUL 01...	3.37	41.0	<.04	.46	E.04	<.008	<.02	.193	<.006	<.006	<.004	<.005	.011
AUG 01...	8.18	133	<.04	.55	.44	.010	.02	.180	<.006	<.006	<.004	<.005	.010
SEP 21...	11.6	216	<.04	.57	<.05	<.008	<.02	.112	<.006	<.006	<.004	<.005	E.006

## 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 2001 TO SEPTEMBER 2002

Date	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 29...	<.010	<.002	<.041	<.025	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.003	<.005	<.005	<.02	<.002	<.009
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.004	<.005	<.005	<.02	<.002	<.009
MAY 15...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
JUN 11...	<.010	<.002	<.041	--	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
JUL 01...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
AUG 01...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
SEP 21...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.003	<.005	<.005	<.02	<.002	<.009
Date	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 29...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
MAY 15...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
JUN 11...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004
JUL 01...	<.005	<.004	<.035	<.027	<.050	<.006	E.007	<.006	<.002	<.007	<.003	<.010	<.004
AUG 01...	<.005	<.004	<.035	<.027	<.050	<.006	E.007	<.006	<.002	<.007	<.003	<.010	<.004
SEP 21...	<.005	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## 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 2001 TO SEPTEMBER 2002

Date	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (UG/L) (04022)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 29...	<.010	<.006	<.011	M	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	U
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 17...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U
FEB 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	U
MAY 15...	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--
JUN 11...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--
JUL 01...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--
AUG 01...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--
SEP 21...	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	--

Date	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, DIS- CHARGE, SUS- PENDE PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE PENDE (T/DAY) (80155)
OCT 23...	--	--	--	93	77	1080
NOV 29...	<.005	<.002	<.009	87	57	--
DEC 13...	--	--	--	84	33	--
JAN 17...	<.005	<.002	<.009	90	30	--
FEB 21...	--	--	--	89	33	--
MAR 12...	<.005	<.002	<.009	96	55	--
MAY 15...	<.005	<.002	<.009	93	115	1880
JUN 11...	<.005	.003	<.009	70	934	81800
JUL 01...	<.005	.004	<.009	49	260	15000
AUG 01...	<.005	<.002	<.009	98	139	2100
SEP 21...	<.005	.006	<.009	95	118	1330

E -- Estimated value  
M -- Presence verified, not quantified  
U -- Analyzed for, not detected

WYOMING DROUGHT SYNOPTIC

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

06298000 -- TONGUE RIVER NEAR DAYTON, WY  
(LAT 44 50 58 LONG 107 18 14)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
AUG 14...	1515	51	653	8.1	97	8.4	222	32.5	16.5	110	28.4	10.4	.71	
Date	Time	SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT. DIS-FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	
AUG 14...	.1	1.46	119	.98	.2	5.66	4.5	.17	17.3	126	124	<.04	E.07	
Date	Time	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)
AUG 14...	E.08	<.05	<.008	E.003	<.02	.008	<20	E.02	.6	<10	<.08	E1.2	<1	
Date	Time	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)												
AUG 14...		1												

06630000 -- NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY  
(LAT 41 52 20 LONG 107 03 25)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
AUG 08...	1230	82	612	7.6	106	8.1	464	25.0	20.5	150	33.2	15.4	2.96
Date	Time	SODIUM AD-SORP-TION RATIO (00931)	ALKA-LINITY WAT. DIS-FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
AUG 08...	1	35.7	124	12.0	3.63	89.5	.36	59.1	267	<.04	.50	<.05	E.004
Date	Time	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)											
AUG 08...		34											

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## WYOMING DROUGHT SYNOPTIC--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

06646000 -- DEER CREEK IN CANYON, NEAR GLENROCK, WY  
(LAT 42 42 42 LONG 106 01 43)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	
AUG 20...	0950	1.1	610	8.5	282	27.0	17.5	150	38.2	12.5	1.27	.2	4.30	
Date	Time	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)
AUG 20...	164	1.38	12.2	3.9	.23	.51	172	<.04	.15	<.05	<.008	<.06	<.02	
Date	Time	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS-SOLVED (UG/L AS FE) (01046)											
AUG 20...		<.06	16											

09216050 -- BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY  
(LAT 41 56 51 LONG 109 41 15)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
AUG 07...	1340	25	608	9.0	129	8.2	3010	28.0	21.0	760	141	99.5	3.33	
Date	Time	SODIUM AD-SORP-TION RATIO (MG/L AS NA) (00931)	SODIUM, DIS-SOLVED (MG/L AS CL) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS N) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS-SOLVED (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
AUG 07...	7	443	203	31.1	10.0	1430	3.09	154	2280	<.04	.28	<.05	<.008	
Date	Time	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS-SOLVED (UG/L AS FE) (01046)									
AUG 07...		<.06	<.02	<.06	<10									

13018300 -- CACHE CREEK NEAR JACKSON, WY  
(LAT 43 27 08 LONG 110 42 12)

Date	Time	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
AUG 19...	1400	6.4	593	9.0	100	7.6	287	24.0	9.0	160	41.6	13.4	.50

WYOMING DROUGHT SYNOPTIC--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

13018300 -- CACHE CREEK NEAR JACKSON, WY--Continued

Date	SODIUM AD- SORP- TION RATIO	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	SOLIDS, DIS- SOLVED (TONS AC-FT)	SOLIDS, DIS- SOLVED (TONS DAY)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
AUG 19...	.1	1.58	163	.41	4.30	3.4	.22	2.83	163	<.04	<.10	E.03	<.008

Date	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	ORTHO- PHOS- PHATE, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)
AUG 19...	<.06	<.02	<.06	<10

E -- Estimated value

- Access to water data .....21
- Accuracy of the records, surface water .....16
- Acid neutralizing capacity, definition of .....22
- Acme, Goose Creek near .....218
- Acre-foot (AC-FT, acre-ft), annual runoff, definition of .....16
- Acre-foot, definition of .....22
- Adenosine triphosphate, definition of .....22
- Alcova, Sweetwater River near .....341
- Algae,  
     Blue-green, definition of .....23  
     Fire, definition of .....27  
     Green, definition of .....27
- Algal growth potential, definition of .....22
- Alkalinity, definition of .....22
- Alpine  
     Greys River above reservoir near .....482  
     Snake River above reservoir near .....480
- Alva, Belle Fourche River near .....307
- Anchor Reservoir, South Fork Owl Creek below .....145
- Annual 7-day minimum, definition of .....16, 22
- Annual mean, explanation of .....15
- Annual runoff, definition of .....22
- Annual runoff, explanation of .....16
- Annual total, explanation of .....15
- Antelope Creek near Teckla .....278
- Aquifer, water table, definition of .....38
- Arapahoe, Popo Agie River, near .....124
- Archer, Crow Creek, near .....378
- Arlington, Rock Creek above King Canyon Canal,  
     near Arlington .....335
- Aroclor, definition of .....22
- Arrangement of records, water quality .....19
- Artificial substrate, definition of .....22
- Arvada  
     Clear Creek near .....265  
     Crazy Woman Creek at Upper Station near .....243  
     Powder River at .....249  
     Wild Horse Creek near .....254
- Ash mass, definition of .....22
- Aspect, definition of .....22
- Bacteria, definition of .....23  
     Enterococcus, definition of .....26  
     *Escherichia coli*, definition of .....26  
     Fecal coliform, definition of .....27  
     Fecal streptococcal, definition of .....27  
     Total coliform, definition of .....37
- Baggs, Little Snake River below .....427
- Bankfull stage, definition of .....23
- Barnum, Middle Fork Powder River near .....230
- Base discharge, definition of .....23
- Base flow, definition of .....23
- Basin, Bighorn River at .....150
- Battle Creek, West Fork, at Battle Creek Campground,  
     near Savery .....424
- Bear River  
     above reservoir, near Woodruff, UT .....432  
     at Border .....446  
     at Evanston .....430  
     below Pixley Dam, near Cokeville .....438  
     below reservoir, near Woodruff, UT .....435
- Bear River--continued  
     below Smiths Fork, near Cokeville .....443  
     near Utah-Wyoming State line .....428
- Beaver Creek at Mallo Camp, near Four Corners .....284
- Bechler Ranger Station, Boundary Creek near .....487
- Bed load, definition of .....23
- Bed material, definition of .....23
- Bed-load discharge, definition of .....23
- Belfry, MT, Clarks Fork Yellowstone River near .....64
- Belle Fourche River  
     at Wyoming-South Dakota State line .....309  
     below Hulett .....305  
     below Moorcroft .....301  
     below Rattlesnake Creek, near Piney .....290  
     near Alva .....307
- Benthic organisms, definition of .....23
- Beulah, Sand Creek near Ranch A, near .....313
- Big Goose Creek  
     above PK Ditch, in canyon, near Sheridan .....210  
     East Fork, near Big Horn .....202  
     West Fork, near Big Horn .....208
- Big Horn  
     Big Goose Creek, East Fork, near .....202  
     Big Goose Creek, West Fork, near .....208  
     Coney Creek above Twin Lakes, near .....204  
     Coney Creek below Twin Lakes, near .....206  
     Little Goose Creek, in canyon, near .....212
- Big Piney, New Fork River near .....386
- Big Sandy Reservoir near Farson .....398
- Big Sandy River  
     at Gasson Bridge, near Eden .....400  
     near Farson .....396
- Bighorn River  
     at Basin .....150  
     at Kane .....160  
     at Lucerne .....147  
     near St. Xavier, MT .....186
- Biochemical oxygen demand, definition of .....23
- Biomass pigment ratio, definition of .....23
- Biomass, definition of .....23
- Bitter Creek near Garland .....182
- Black Thunder Creek near Hampshire .....280
- Blacks Fork  
     near Little America .....414  
     near Lyman .....410  
     near Robertson .....406
- Blue-green algae, definition of .....23
- Border  
     Bear River at .....446  
     Smiths Fork .....440
- Bosler, Laramie River near .....362
- Bottom material, definition of .....23
- Boundary Creek near Bechler Ranger Station .....487
- Box Elder Creek at Boxelder .....348
- Boxelder, Box Elder Creek at .....348
- Boysen Reservoir, Wind River below .....139
- Buckhorn, Cold Springs Creek at .....311
- Buffalo  
     Clear Creek above Kumor Draw,  
         near .....259  
     Rock Creek, near .....257

- Buffalo--continued  
 Powder River below Burger Draw, near .....240
- Buffalo Bill Reservoir  
 Shoshone River below .....180  
 South Fork Shoshone River above .....177
- Buffalo Fork above Lava Creek near Moran .....457
- Bulk electrical conductivity, definition of .....23
- Bull Lake, Bull Lake Creek above .....84
- Bull Lake Creek  
 above Bull Lake .....84  
 near Lenore .....89
- Burris  
 Dinwoody Creek above Lakes, near .....72  
 Dry Creek Canal at headgate, near .....78  
 Dry Creek near .....76  
 Upper Wind River A Canal at Headworks, near .....74
- Caballo Creek, at mouth, near Piney .....293
- Cache Creek near Jackson .....474
- Casper, North Platte River below .....343
- Cells volume, definition of .....24
- Cells/volume, definition of .....23
- Cfs-day, definition of .....24
- Channel bars, definition of .....24
- Chemical oxygen demand, definition of .....24
- Cheyenne River  
 at Edgemont, SD .....288  
 at Riverview .....282
- Cheyenne, Crow Creek at 19th Street, at .....376
- Clarks Fork Yellowstone River  
 at Montana-Wyoming State line,  
 near Cooke City, MT .....62  
 near Belfry, MT .....64
- Classification of records, water-quality .....17
- Clear Creek near Arvada .....265
- Clear Creek (tributary to Powder River) above  
 Kumor Draw, near Buffalo .....259
- Clear Creek at Parsley Boulevard in Cheyenne .....490
- Clostridium perfringens*, definition of .....24
- Cody, Shoshone River above DeMaris Springs, near .....179
- Cokeville  
 Bear River below Pixley Dam, near .....438  
 Bear River below Smiths Fork, near .....443  
 Smiths Fork at .....442
- Cold Springs Creek at Buckhorn .....311
- Coliphages, definition of .....24
- Color unit, definition of .....24
- Coney Creek  
 above Twin Lakes, near Big Horn .....204  
 below Twin Lakes, near Big Horn .....206
- Confined aquifer, definition of .....24
- Contents, definition of .....24
- Continuous-record station, definition of .....24
- Control structure, definition of .....24
- Control, definition of .....24
- Cooke City, MT, Clarks Fork Yellowstone River  
 near Montana-Wyoming State line, at .....62
- Cooperation .....3  
 Surface-water records .....14  
 Water-quality records .....19
- Corwin Springs, MT, Yellowstone River at .....60
- Cottonwood Creek at High Island Ranch, near  
 Hamilton Dome .....148
- Crazy Woman Creek at Upper Station near Arvada, .....243
- Crow Creek  
 at 19th Street, at Cheyenne .....376  
 at 5th Street, in Cheyenne .....490  
 at mouth, at Pahaska .....164  
 near Archer .....378  
 on C.P. Orgon property, in Cheyenne .....490
- Crowheart  
 Willow Creek, near .....82  
 Wind River, near .....93
- Cubic feet per second per square mile (ft<sup>3</sup>/s/mi<sup>2</sup>), annual  
 runoff, definition of .....16
- Cubic foot per second per square mile, definition of .....25
- Cubic foot per second, definition of .....24
- Cubic foot per second-day, definition of .....25
- Daily mean suspended-sediment concentration, definition of 2 5
- Daily-record station, definition of .....25
- Daniel, Green River at Warren Bridge, near .....380
- Data collection and computation, surface water .....13
- Data collection platform, definition of .....25
- Data logger, definition of .....25
- Data presentation, surface water .....13
- Data table of daily mean values, explanation of .....15
- Datum, definition of .....25
- Dayton  
 East Pass Creek near .....192  
 Highline Ditch near .....196  
 Highline Ditch, diversion by, near .....198  
 Tongue River near .....198
- Dead Horse Creek near Buffalo .....242
- Decker, MT, Tongue River at State line, near .....224
- Deer Creek in canyon near Glenrock .....346
- Diamondville, Hams Fork near .....413
- Diatom, definition of .....25
- Diel, definition of .....25
- Dinwoody Creek above Lake, near Burris .....72
- Discharge, definition of .....25
- Dissolved oxygen, definition of .....25
- Dissolved, definition of .....25
- Dissolved-solids concentration, definition of .....25
- Diversity index, definition of .....26
- Donkey Creek  
 near Gillette .....295  
 near Moorcroft .....299
- Downstream-order system .....11
- Drainage area, definition of .....26  
 Surface water .....14  
 Water quality .....19
- Drainage basin, definition of .....26
- Dry Creek (tributary to Crow Creek),  
 at Vista Lane, in Cheyenne .....490
- Dry Creek (tributary to Wind River) near Burris .....76
- Dry Creek Canal at headgate near Burris .....78
- Dry Creek tributary at Briarwood Road in Cheyenne .....490
- Dry Creek  
 at College Drive, in Cheyenne .....490  
 at Rawlins Street, in Cheyenne .....490  
 at Smalley Park, in Cheyenne .....490

- Dry Creek--continued  
 at Windmill Road, in Cheyenne .....490
- Dry mass, definition of .....26
- Dry weight, definition of .....26
- Dubois  
 Wind River near .....66  
 Wind River above Red Creek, near .....68
- East Fork of Smiths Fork, near Robertson .....408
- East Pass Creek near Dayton .....192
- Eden, Big Sandy River at Gasson Bridge, near .....400
- Edgemont, SD, Cheyenne River at .....288
- Elk Mountain, Pass Creek near .....331
- Embeddedness, definition of .....26
- Encampment  
 Encampment River above Hog Park Creek, near .....325  
 Encampment River at mouth, near Encampment .....327  
 Haggarty Creek above Belvidere Ditch, near .....423
- Encampment River  
 above Hog Park Creek, near Encampment .....325  
 at mouth, near Encampment .....327
- Enterococcus bacteria, definition of .....26
- EPT Index, definition of .....26
- Escherichia coli* (*E. coli*), definition of .....26
- Estimated (E) concentration value, definition of .....26
- Etna, Salt River above reservoir, near .....484
- Euglenoids, definition of .....26
- Evanston, Bear River at .....430
- Explanation of the records .....11  
 Records of stage and water discharge .....12  
 Records of surface-water quality .....17
- Extractable organic halides, definition of .....27
- Extremes outside period of record, surface water,  
 explanation of .....14
- Extremes, water quality, explanation of .....19
- Farson  
 Big Sandy Reservoir near .....398  
 Big Sandy River near .....396
- Fecal coliform bacteria, definition of .....27
- Fecal streptococcal bacteria, definition of .....27
- Filmore, Little Laramie River near .....360
- Fire algae, definition of .....27
- Fish Creek,  
 above Mosquito Creek, near Wilson .....492  
 at Harmon's at Wilson .....491  
 at Resor Bridge, near Teton Village .....491  
 near Teton Village .....491  
 at Wilson .....472
- Fivemile Creek  
 above Wyoming Canal, near Pavillion .....135  
 near Shoshoni .....137
- Flag Ranch, Snake River above Jackson Lake, at .....448
- Flat Creek below Cache Creek near Jackson .....476
- Flow, definition of .....25
- Flow-duration percentiles, definition of .....27
- Fontenelle, Fontenelle Creek near Herschler  
 Ranch, near .....390
- Fontenelle Creek near Herschler Ranch, near Fontenelle .....390
- Fontenelle Reservoir  
 Green River below .....392
- Fort Laramie, Laramie River near .....370
- Fort Washakie  
 Ray Canal at Headworks, near .....115  
 South Fork Little Wind River above Washakie  
 Reservoir, near .....111  
 South Fork Little Wind River below Washakie  
 Reservoir, near .....113  
 Trout Creek, near .....119
- Fort Washakie, North Fork Little Wind River near .....117
- Four Corners, Beaver Creek at Mallo Camp, near .....284
- Fremont Lake  
 Pine Creek above .....382  
 Pine Creek below .....384
- Frontier, Hams Fork below Pole Creek, near .....411
- Gage datum, definition of .....27
- Gage height, definition of .....27
- Gage values, definition of .....27
- Gage, explanation of .....14
- Gaging station, definition of .....27
- Gallatin Gateway, MT, Gallatin River, near .....46
- Gallatin River near Gallatin Gateway, MT .....46
- Gardner River near Mammoth, Yellowstone National Park ...58
- Garland, Bitter Creek near .....182
- Gas chromatography/flame ionization detector, definition of 27
- Geomorphic channel units, definition of .....27
- Gillette  
 Donkey Creek near .....295  
 Stonepile Creek at mouth .....297
- Glendo Reservoir  
 North Platte River below .....352
- Glenrock, Deer Creek in canyon, near .....346
- Goose Creek  
 below Sheridan .....216  
 near Acme .....218
- Granite Creek above Granite Creek Supplemental,  
 near Moose .....470
- Granite Creek Supplemental, above Lake Creek,  
 near Moose .....491
- Green algae, definition of .....27
- Green River  
 at Warren Bridge, near Daniel .....380  
 below Fontenelle Reservoir .....392  
 below Green River .....405  
 Green River below .....405  
 Green River near .....402  
 near Green River .....402  
 near Greendale, UT .....419  
 near La Barge .....388
- Greendale, UT, Green River, near .....419
- Greybull River at Meeteetse .....153
- Greys River above reservoir near Alpine .....482
- Gros Ventre River at Zenith .....468
- Habitat quality index, definition of .....28
- Habitat, definition of .....27
- Haggarty Creek above Belvidere Ditch,  
 near Encampment .....423
- Hamilton Dome, Cottonwood Creek at High Island Ranch,  
 near .....148
- Hampshire, Black Thunder Creek near .....280

- Hams Fork  
  below Pole Creek, near Frontier .....411  
  near Diamondville .....413
- Hanna, Medicine Bow River above Seminoe Reservoir,  
  near .....339
- Hardness, definition of .....28
- Hazleton, North Fork Powder River near .....232
- Henderson Drain at Nationway in Cheyenne .....490
- Henrys Fork near Manila, UT .....417
- High tide, definition of .....28
- Highest annual mean, explanation of .....16
- Highest daily mean, explanation of .....16
- Highline Ditch near Dayton .....196
- Highline Ditch, diversion by, near Dayton .....198
- Hilsenhoff's Biotic Index, definition of .....28
- Horizontal datum, definition of .....28
- Hulett, Belle Fourche River below .....305
- Hydrologic index stations, definition of .....28
- Hydrologic unit, definition of .....28
- Identifying estimated daily discharge .....16
- Inch, definition of .....28
- Inches, annual runoff, explanation of .....16
- Instantaneous discharge, definition of .....28
- Instantaneous, discharge, definition of  
  Peak flow, explanation of .....16  
  Peak stage, explanation of .....16
- Instrumentation, water quality .....19
- Introduction .....1
- Island, definition of .....28
- Jack Creek above Coyote Draw, near Saratoga .....329
- Jackson  
  Cache Creek near .....474  
  Snake River below Flat Creek, near .....478  
  Flat Creek below Cache Creek, near Jackson .....476
- Johnstown Canal at Headworks near Kinnear .....491
- Johnstown Ditch at Headworks near Kinnear .....99
- Kane, Bighorn River at .....160
- Kearny, Piney Creek at .....263
- Kinnear  
  Johnstown Ditch at Headworks, near .....99  
  Wind River near .....101
- La Barge, Green River near .....388
- Laboratory measurements .....19
- Laboratory reporting level, definition of .....28
- Lake Creek,  
  below Granite Creek Supplemental, near Moose .....491
- Lakes and reservoirs  
  Big Sandy Reservoir near Farson .....398
- Lamar River near Tower Falls Ranger Station,  
  Yellowstone National Park .....56
- Lander  
  Little Popo Agie River near .....122  
  Popo Agie River at Hudson Siding, near .....121
- Land-surface datum, definition of .....28
- Laramie River  
  near Bosler .....362  
  near Fort Laramie .....370
- Laramie River and Pioneer Canal near Woods .....356
- Latent heat flux, definition of .....28
- Latitude-longitude system .....12
- Lefthand Ditch at Headworks, near Riverton .....105
- Lenore  
  Bull Lake Creek near .....89  
  Wind River below Wyoming Canal Diversion .....97  
  Wyoming Canal near .....95  
  Wind River above Crow Creek, near .....80
- Light-attenuation coefficient, definition of .....29
- Lipid, definition of .....29
- Little America, Blacks Fork near .....414
- Little Bighorn River at State line, near Wyola, MT .....188
- Little Goose Creek  
  in canyon, near Big Horn .....212  
  at Sheridan .....214
- Little Laramie River near Filmore .....360
- Little Medicine Bow River at Boles Spring, near  
  Medicine Bow .....337
- Little Popo Agie River near Lander .....122
- Little Powder River above Dry Creek, near Weston .....273
- Little Snake River  
  below Baggs .....427  
  near Slater, CO .....421
- Little Wind River  
  near Riverton .....126  
  North Fork, near Fort Washakie .....117  
  South Fork, above Washakie Reservoir, near  
  Fort Washakie .....111  
  South Fork, below Washakie Reservoir, near  
  Fort Washakie .....113
- Location, explanation of .....14
- Location, water quality .....19
- Long-term method detection level, definition of .....29
- Lovell, Shoshone River near .....183
- Low flow, 7-day 10-year, definition of .....34
- Low tide, definition of .....29
- Lowest annual mean, explanation of .....16
- Lowest daily mean, explanation of .....16
- Lucerne, Bighorn River at .....147
- Lyman, Blacks Fork near .....410
- Macrophytes, definition of .....29
- Madison River near West Yellowstone, MT .....44
- Manila, UT, Henrys Fork near .....417
- Mayoworth, North Fork Powder River below Pass Creek,  
  near .....234
- Mean concentration of suspended sediment, definition of .....29
- Mean discharge, definition of .....29
- Mean high tide, definition of .....29
- Mean low tide, definition of .....29
- Mean sea level, definition of .....29
- Measuring point, definition of .....29
- Medicine Bow River above Seminoe Reservoir, near Hanna 339
- Medicine Bow, Little Medicine Bow River at Boles  
  Spring, near .....337
- Meeteetse, Greybull River at .....153
- Membrane filter, definition of .....29
- Metamorphic stage, definition of .....29
- Method detection limit, definition of .....30
- Methylene blue active substances, definition of .....30

- Micrograms per gram, definition of .....30
- Micrograms per kilogram, definition of .....30
- Micrograms per liter, definition of .....30
- Microsiemens per centimeter, definition of .....30
- Milligrams per liter, definition of .....30
- Minimum reporting level, definition of .....30
- Miscellaneous site, definition of .....30
- Moorcroft
- Belle Fourche River below .....301
- Donkey Creek near .....299
- Moorhead, MT, Powder River at .....267
- Moose
- Granite Creek above Granite Creek
- Supplemental, near .....470
- Snake River at .....459
- Moran
- Buffalo Fork above Lava Creek, near .....457
- Pacific Creek at .....455
- Snake River near .....453
- Most probable number (MPN), definition of .....30
- Multiple-plate samplers, definition of .....30
- Murray Ditch above Headgate at
- Wyoming-South Dakota State line .....315
- Nanograms per liter, definition of .....30
- National Geodetic Vertical Datum of 1929, definition of .....30
- Natural substrate, definition of .....30
- Nekton, definition of .....30
- Nephelometric turbidity unit, definition of .....31
- New Fork River near Big Piney .....386
- Newcastle, Stockade Beaver Creek near .....286
- North American Vertical Datum of 1988, definition of .....31
- North Brush Creek near Saratoga .....321
- North Platte River
- above Seminoe Reservoir, near Sinclair .....333
- at Orin .....350
- at Wyoming-Nebraska State line .....372
- below Casper .....343
- below Glendo Reservoir .....352
- below Whalen Diversion Dam .....354
- near Northgate, CO .....319
- Northgate, CO, North Platte River near .....319
- Onsite measurements and sample collection .....17
- Open or screened interval, definition of .....31
- Organic carbon, definition of .....31
- Organic mass, definition of .....31
- Organism count,
- Area, definition of .....31
- Total, definition of .....37
- Volume, definition of .....31
- Organochlorine compounds, definition of .....31
- Orin, North Platte River at .....350
- Other records available, surface water .....17
- Owl Creek, South Fork, below Anchor Reservoir .....145
- Pacific Creek at Moran .....455
- Pahaska, Crow Creek at mouth .....164
- Parameter Code, definition of .....31
- Parkman, West Pass Creek near .....190
- Partial-record station, definition of .....31
- Particle size, definition of .....31
- Particle-size classification, definition of .....31
- Pass Creek
- near Elk Mountain .....331
- near Wyola, MT .....194
- Pavillion, Fivemile Creek above Wyoming Canal, near .....135
- Peak flow, definition of .....32
- Percent composition, definition of .....32
- Percent shading, definition of .....32
- Period of record, surface water, explanation of .....14
- Water quality, explanation of .....19
- Periodic station, definition of .....32
- Periphyton, definition of .....32
- Pesticides, definition of .....32
- pH, definition of .....32
- Phytoplankton, definition of .....32
- Picocurie, definition of .....32
- Pine Creek
- above Fremont Lake .....382
- below Fremont Lake .....384
- Piney
- Belle Fourche River below Rattlesnake Creek, near ....290
- Caballo Creek at mouth, near .....293
- Piney Creek at Kearny .....263
- Pioneer Canal. See Laramie River and Pioneer Canal .....356
- Plankton, definition of .....32
- Polychlorinated biphenyls (PCB s), definition of .....32
- Polychlorinated naphthalenes, definition of .....32
- Pool, definition of .....33
- Popo Agie River
- at Hudson Siding, near Lander .....121
- near Arapahoe .....124
- Powder River
- at Arvada .....249
- at Moorhead, MT .....267
- at Sussex .....238
- Middle Fork, near Barnum .....230
- North Fork, below Pass Creek, near Mayoworth .....234
- North Fork, near Hazelton .....232
- below Burger Draw, near Buffalo .....240
- Prairie Dog Creek near Acme .....220
- Precipitation .....4
- Primary productivity, definition of .....33
- Carbon method, definition of .....33
- Oxygen method, definition of .....33
- Quality-control samples, water quality .....20
- Radioisotopes, definition of .....33
- Ray Canal, at Headworks, near Fort Washakie .....115
- Reach, definition of .....33
- Records of surface-water quality .....17
- Records, explanation of .....11
- Stage and water discharge .....12
- Accuracy of the records .....16
- Data collection and computation .....13
- Data presentation .....13
- Identifying estimated daily discharge .....16
- Other records available .....17
- Surface-water quality .....17
- Classification of records .....17

- Records, explanation of--continued
- Surface-water quality--continued
    - Laboratory analyses .....19
    - Onsite measurements and sample collection .....17
    - Presentation of water-quality records .....19
    - Sediment .....18
    - Water temperature .....18
  - Recoverable, bottom material, definition of .....33
  - Recurrence interval, definition of .....33
  - Redwater Creek at Wyoming-South Dakota State line .....317
  - Remark codes, water quality .....20
  - Remarks, Surface water, explanation of .....14
    - Water quality, explanation of .....19
  - Replicate samples, definition of .....34
  - Return period, definition of .....34
  - Revised records, surface water, explanation of .....14
  - Revisions, surface water, explanation of .....14
    - water quality, explanation of .....19
  - Riffle, definition of .....34
  - River mileage, definition of .....34
  - Riverton
    - Lefthand Ditch at Headworks, near .....105
    - Little Wind River near .....126
    - Wind River at .....107
  - Riverview, Cheyenne River at .....282
  - Robertson
    - Blacks Fork near .....406
    - East Fork of Smiths Fork, near .....408
  - Rock Creek near Buffalo .....257
  - Rock Creek (tributary to Medicine Bow River) above
    - King Canyon Canal, near Arlington .....335
  - Run, definition of .....34
  - Runoff, definition of .....34
  
  - Sage, Twin Creek at .....437
  - Salt Creek near Sussex .....236
  - Salt River above reservoir near Etna .....484
  - Sand Creek (tributary to Belle Fourche River) near Ranch A, near Beulah .....313
  - Sand Creek (tributary to Laramie River) at
    - Colorado-Wyoming State line .....358
  - Saratoga
    - Jack Creek above Coyote Draw, near .....329
    - North Brush Creek near .....321
    - South Brush Creek near .....323
  - Savery, West Fork Battle Creek at Battle Creek
    - Campground, near .....424
  - Sea level, definition of .....34
  - Sediment .....18
  - Sediment, definition of .....34
    - Records of .....18
  - Sensible heat flux, definition of .....34
  - Shell Creek
    - above Shell Reservoir .....156
    - near Shell .....158
  - Shell Reservoir, Shell Creek above .....156
  - Shell, Shell Creek near .....158
  - Shelves, definition of .....34
  - Sheridan
    - Big Goose Creek above PK Ditch, in canyon .....210
    - Goose Creek below .....216
  - Sheridan--continued
    - Little Goose Creek at .....214
  - Shoshone River
    - above DeMaris Springs, near Cody .....179
    - below Buffalo Bill Reservoir .....180
    - near Lovell .....183
    - North Fork, at Wapiti .....173
    - South Fork, above Buffalo Bill Reservoir .....177
    - South Fork, near Valley .....175
  - Shoshoni
    - Fivemile Creek near .....137
    - Wind River above Boysen Reservoir, near .....130
  - Silver Gate, MT, Soda Butte Creek at Park Boundary, at .....52
  - Sinclair, North Platte River above Seminole Reservoir, near .....333
  - Slater Fork near Slater, CO .....425
  - Slater, CO
    - Little Snake River near .....421
    - Slater Fork near .....425
  - Smiths Fork
    - near Border .....440
  - Smiths Fork (tributary to Bear River)
    - at Cokeville .....442
  - Snake River
    - above Jackson Lake, at Flagg Ranch .....448
    - above reservoir, near Alpine .....480
    - at Moose .....459
    - below Flat Creek, near Jackson .....478
    - near Moran .....453
  - Soda Butte Creek
    - at Park Boundary, at Silver Gate, MT .....52
    - near Lamar Ranger Station, Yellowstone National Park .....54
  - Sodium adsorption ratio, definition of .....34
  - Soil heat flux, definition of .....34
  - Soil-water content, definition of .....34
  - South Brush Creek near Saratoga .....323
  - South Piney Creek at Willow Park .....261
  - Special networks and programs .....8
  - Specific conductance, definition of .....34
  - St. Xavier, Bighorn River near .....186
  - Stable isotope ratio, definition of .....35
  - Stage (see gage height) .....35
  - Stage and water-discharge records, explanation of .....12
  - Stage-discharge relation, definition of .....35
  - Station identification numbers .....11
  - Station manuscript, surface water, explanation of .....14
  - Statistics of monthly mean data, explanation of .....15
  - Stockade Beaver Creek near Newcastle .....286
  - Stonepile Creek at mouth, near Gillette .....297
  - Streamflow, definition of .....35
  - Substrate embeddedness class, definition of .....35
  - Substrate, definition of .....35
    - Artificial, definition of .....22
    - Natural, definition of .....30
  - Summary of hydrologic conditions .....4
  - Summary statistics, explanation of .....15
  - Surface area, definition of .....35
  - Surface-water-quality records, explanation of .....17
  - Surficial bed material, definition of .....35
  - Suspended sediment, definition of .....35

- Suspended solids, total residue at 105 °C concentration,  
 definition of .....36
- Suspended, definition of .....35
- Recoverable, definition of .....35
- Total, definition of .....36
- Suspended-sediment concentration, definition of .....35
- Suspended-sediment discharge, definition of .....36
- Suspended-sediment load, definition of .....36
- Sussex
- Powder River at .....238
- Salt Creek, near .....236
- Sweetwater River near Alcova .....341
- Sybillie Creek
- above Canal No. 3, near Wheatland .....366
- above Mule Creek, near Wheatland .....364
- Synoptic studies, definition of .....36
- Taxa (Species) richness, definition of .....36
- Taxonomy, definition of .....36
- Teckla, Antelope Creek near .....278
- Thalweg, definition of .....36
- Thermograph, definition of .....36
- Thermopolis, Wind River at Wedding of Waters, near .....143
- Time-weighted average, definition of .....36
- Tongue River
- at State line, near Decker, MT .....224
- near Dayton .....198
- Tons per acre-foot, definition of .....36
- Tons per day, definition of .....37
- Total coliform bacteria, definition of .....37
- Total discharge, definition of .....37
- Total length, definition of .....37
- Total load, definition of .....37
- Total organism count, definition of .....37
- Total recoverable, definition of .....37
- Total sediment discharge, definition of .....37
- Total sediment load, definition of .....37
- Total, bottom material, definition of .....37
- Total, definition of .....37
- Transect, definition of .....38
- Trout Creek near Fort Washakie .....119
- Turbidity, definition of .....38
- Twin Creek at Sage .....437
- Ultraviolet (UV) absorbance (absorption), definition of .....38
- Unconfined aquifer, definition of .....38
- Upper Wind River A Canal at Headworks near Burris ...74, 491
- Valley, South Fork Shoshone River, near .....175
- Vertical datum, definition of .....38
- Volatile organic compounds, definition of .....38
- Wapiti, North Fork Shoshone River at .....173
- Water data, access to .....21
- Water table, definition of .....38
- Water temperature, water-quality records .....18
- Water year, definition of .....38
- Water-discharge records, stage and explanation of .....12
- Water-quality records, explanation of .....17
- Classification of the records, explanation of .....17
- Water-table aquifer, definition of .....38
- WDR, definition of .....38
- Weighted average, definition of .....38
- West Pass Creek near Parkman .....190
- West Yellowstone, MT, Madison River near .....44
- Weston, Little Powder River above Dry Creek, near .....273
- Wet mass, definition of .....38
- Wet weight, definition of .....38
- Whalen Diversion Dam, North Platte River below .....354
- Wheatland
- Sybillie Creek above Canal No. 3, near .....366
- Sybillie Creek above Mule Creek, near .....364
- Wheatland Creek below .....368
- Wheatland Creek below Wheatland .....368
- Wild Horse Creek near Arvada .....254
- Willow Creek near Crowheart .....82
- Willow Park, South Piney Creek at .....261
- Wilson, Fish Creek at .....472
- Wind River
- above Boysen Reservoir, near Shoshoni .....130
- above Crow Creek, near Lenore .....80
- above Red Creek, near Dubois .....68
- at Riverton .....107
- at Sheridan Creek Bridge, near Tie Hack .....491
- at Wedding of Waters, near Thermopolis .....143
- below Boysen Reservoir .....139
- below Wyoming Canal Diversion, near Lenore .....97
- near Crowheart .....93
- near Dubois .....66
- near Kinneer .....101
- Wolf Creek at Wolf .....200
- Wolf, Wolf Creek at .....200
- Woodruff, UT
- Bear River above reservoir, near .....432
- Bear River below reservoir, near .....435
- Woods, Laramie River and Pioneer Canal, near .....356
- WSP, definition of .....38
- Wyola, MT, Pass Creek, near .....194
- Wyola, MT, Little Bighorn River at State line, near .....188
- Wyoming Canal near Lenore .....95
- Yellowstone National Park
- Gardner River near Mammoth .....58
- Lamar River near Tower Falls Ranger Station .....56
- Soda Butte Creek near Lamar Ranger Station .....54
- Yellowstone River at Yellowstone Lake Outlet .....50
- Yellowstone River
- at Corwin Springs, MT .....60
- at Yellowstone Lake Outlet,  
     Yellowstone National Park .....50
- Zenith, Gros Ventre River at .....468
- Zooplankton, definition of .....39

# CONVERSION FACTORS

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<b>Flow</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<b>Mass</b>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

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

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

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