

Figure 12. Schematic diagram showing gaging stations in the Snake River basin between King Hill and Murphy and in the Bruneau River basin.

CANYON CREEK BASIN

13159800 CANYON CREEK AT OREGON TRAIL CROSSING NEAR MOUNTAIN HOME, ID

LOCATION.--Lat 43°15'40", long 115°42'09"(revised), (NAD83), in SE¹/₄NW¹/₄SE¹/₄ sec.11, T.2 S., R.6 E., Elmore County, Syrup Creek quad., Hydrologic Unit 17050101, on right bank, 31 mi upstream from mouth, 3 mi downstream from confluence of Syrup Creek and Long Tom Creek, and 8.5 mi north of Mountain Home.

DRAINAGE AREA.--70.5 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 3,540 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow partly regulated by Long Tom Reservoir which receives water by inter-basin transfer from South Fork Boise River drainage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,420 ft³/s Feb. 23, 1986, gage height, 5.09 ft; no flow Sept. 29 to Oct. 28, 1991, July 21 to Nov. 9, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 144 ft³/s Mar. 18; minimum daily, 0.65 ft³/s Nov. 7.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.92	1.1	0.97	e1.5	e14	86	56	49	13	48	23	16
2	0.93	0.95	0.93	e1.5	e14	80	51	45	18	48	22	17
3	0.98	1.1	0.96	e1.5	e14	73	50	45	36	47	21	19
4	0.96	0.94	0.96	e1.5	13	57	50	52	39	33	20	19
5	0.98	0.67	0.98	e1.0	12	49	51	53	67	31	21	19
6	0.96	0.71	1.1	e1.0	11	48	50	46	80	31	26	18
7	1.00	0.65	1.6	e1.5	11	41	48	46	84	41	27	19
8	1.0	0.69	1.3	e1.5	11	44	44	39	72	42	45	22
9	1.0	0.66	1.2	e1.5	10	58	41	37	62	47	52	21
10	1.0	0.71	1.2	e1.5	9.5	74	39	37	62	47	67	20
11	1.1	0.80	1.2	e1.5	8.4	79	36	29	56	47	74	19
12	1.0	0.75	1.3	e1.5	8.0	83	34	23	52	53	79	18
13	1.0	0.75	1.7	e1.5	8.0	87	32	22	54	52	75	17
14	1.1	0.78	e1.5	e1.5	7.4	91	30	24	47	52	70	7.8
15	1.0	0.82	e1.5	e1.5	6.6	87	39	24	50	51	64	3.1
16	1.2	0.88	e1.5	e1.5	8.3	91	52	24	51	51	48	3.0
17	1.2	1.1	e1.5	e1.5	17	115	50	23	48	58	38	2.5
18	1.1	0.95	e1.5	e1.5	62	144	49	24	47	61	39	2.3
19	1.1	0.95	e1.5	e1.5	103	132	48	25	46	61	36	2.4
20	1.0	0.94	e1.5	e1.5	85	137	48	18	40	62	36	2.2
21	1.0	0.98	e1.5	e1.5	70	114	47	17	39	59	41	2.0
22	0.95	0.78	e1.5	e1.5	56	119	38	16	44	50	41	1.9
23	0.92	0.89	e1.5	e1.5	51	125	35	17	45	49	47	1.8
24	1.0	0.96	e1.5	e1.5	58	130	34	14	45	39	51	1.7
25	1.0	0.99	e1.5	e1.5	61	118	33	13	46	36	57	1.7
26	1.0	1.0	e1.5	e1.5	68	126	31	14	47	24	55	1.6
27	1.1	0.91	e1.5	e1.5	83	106	33	15	47	22	22	1.5
28	1.1	0.94	e1.5	e1.5	60	85	48	15	49	22	18	1.5
29	1.1	1.0	e1.5	e5.0	63	73	55	15	49	26	17	1.5
30	1.1	1.0	e1.5	e16	---	60	55	15	49	25	16	1.5
31	1.1	---	e1.5	e15	---	58	---	14	---	24	16	---
TOTAL	31.90	26.35	42.40	77.0	1003.2	2770	1307	850	1484	1339	1264	284.0
MEAN	1.03	0.88	1.37	2.48	34.6	89.4	43.6	27.4	49.5	43.2	40.8	9.47
MAX	1.2	1.1	1.7	16	103	144	56	53	84	62	79	22
MIN	0.92	0.65	0.93	1.0	6.6	41	30	13	13	22	16	1.5
AC-FT	63	52	84	153	1990	5490	2590	1690	2940	2660	2510	563

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

MEAN	3.35	2.65	5.48	14.5	36.1	65.3	60.0	53.9	55.9	49.7	37.7	21.9
MAX	9.21	8.06	32.3	114	261	196	170	105	79.4	88.9	70.5	52.8
(WY)	1996	1986	1997	1997	1986	1989	1984	1984	1989	1999	1999	1999
MIN	0.00	0.59	1.08	1.69	3.03	5.12	3.38	7.17	5.73	2.16	0.00	0.00
(WY)	1993	1995	1991	1992	2001	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1984 - 2004
ANNUAL TOTAL	7901.93	10478.85	
ANNUAL MEAN	21.6	28.6	32.6
HIGHEST ANNUAL MEAN			69.6
LOWEST ANNUAL MEAN			2.63
HIGHEST DAILY MEAN	69	144	997
LOWEST DAILY MEAN	0.65	0.65	0.00
ANNUAL SEVEN-DAY MINIMUM	0.70	0.70	0.00
ANNUAL RUNOFF (AC-FT)	15670	20780	23590
10 PERCENT EXCEEDS	48	67	74
50 PERCENT EXCEEDS	19	19	19
90 PERCENT EXCEEDS	0.97	0.99	1.2

e Estimated

CANYON CREEK BASIN

131610556 MCCALLEY DAM OUTFLOW AT MOUNTAIN HOME AIR FORCE BASE, ID

LOCATION.--Lat 43°03'01", long 115°53'40"(revised), (NAD83), in SW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.29, T.4 S., R.5 E., Elmore County, Crater Rings SW Quad., Hydrologic Unit 17050101, on right bank at McCalley Dam, 125 ft upstream from Liberator Street, on Mountain Home Air Force Base.

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

GAGE.--Water-stage recorder. Elevation of gage is 2,980 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15 ft³/s May 19, 20, 2004, gage height, 6.37 ft, from rating curve developed using computation of peak flow over weir; no flow for long periods each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15 ft³/s May 19, 20, gage height, 6.37 ft, from rating curve developed using computation of peak flow over weir; no flow for many days.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.3	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.90	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.6	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.7	0.00	0.00	0.00	0.00
CAL YR 2003	TOTAL 0.00	MEAN 0.00	MAX 0.00	MIN 0.00	AC-FT 0.00							
WTR YR 2004	TOTAL 3.90	MEAN 0.01	MAX 2.6	MIN 0.00	AC-FT 7.7							

BRUNEAU RIVER BASIN

13162225 JARBIDGE RIVER BELOW JARBIDGE, NV

LOCATION.--Lat 41°53'26", long 115°25'40", (NAD27), in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.9, T.46 N., R.58 E., Elko County, Nevada, Jarbidge North quad., Hydrologic Unit 17050102, Humboldt National Forest, on right bank, 1.0 mi north of Jarbidge.

DRAINAGE AREA.--30.6 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above NGVD of 1929, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 824 ft³/s May 24, 1999, gage height, 5.50 ft; minimum daily, 2.5 ft³/s Aug. 23, 26, 29, 30, Sept. 16, 2000, Sept. 11, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 320 ft³/s May 28, gage height, 4.88 ft; minimum daily, 2.7 ft³/s Nov. 1.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	2.7	5.2	4.7	e6.7	8.2	44	74	153	27	7.4	4.8
2	4.0	3.1	4.5	6.3	6.4	8.1	42	99	171	25	7.5	5.0
3	4.2	3.5	4.2	6.2	6.5	8.4	50	146	194	25	7.3	5.3
4	4.1	3.4	4.0	e5.8	6.2	8.2	66	199	215	22	6.9	5.6
5	4.1	3.3	4.4	e5.4	e6.0	8.3	78	244	240	20	6.6	5.3
6	4.1	3.2	4.7	e5.0	e6.0	8.2	92	226	226	19	6.7	5.1
7	4.0	3.5	6.3	4.6	5.9	8.5	110	212	218	16	6.6	4.8
8	3.8	3.6	4.7	4.6	5.8	12	103	197	186	16	6.4	4.5
9	3.8	3.9	5.4	4.6	5.9	17	89	181	149	16	6.1	4.3
10	3.7	3.7	5.1	4.6	e6.0	20	75	179	129	15	5.7	4.1
11	3.9	3.7	4.5	e4.6	e6.1	22	68	142	105	13	5.4	4.0
12	3.9	3.6	4.2	e4.6	e6.3	24	71	120	89	12	5.3	4.0
13	3.8	3.7	4.7	e4.6	e6.4	26	81	105	80	11	5.2	4.2
14	4.0	3.5	4.3	e4.6	6.7	28	79	90	84	10	5.2	4.4
15	4.0	3.7	4.5	e4.6	6.7	26	67	82	89	10	5.6	4.4
16	4.0	3.6	e4.4	e4.6	7.1	27	58	79	84	10	6.0	4.4
17	4.0	3.7	4.3	e4.6	8.7	31	53	85	76	10	8.9	4.1
18	3.9	3.9	4.2	e4.6	9.4	37	46	100	70	10	7.5	4.5
19	3.7	4.1	4.9	e4.6	8.6	47	41	106	66	11	6.1	9.5
20	3.6	4.0	4.9	e4.6	9.9	52	38	107	62	15	6.1	11
21	3.6	3.6	4.6	e4.6	e9.7	60	36	107	57	12	6.8	8.1
22	3.6	3.5	4.1	e4.6	9.4	69	34	108	52	12	5.9	7.6
23	3.5	5.7	4.6	e5.0	8.9	76	39	111	48	11	5.9	7.6
24	3.5	3.8	4.6	e5.5	9.2	77	46	98	43	10	5.9	7.4
25	3.4	3.4	4.6	e6.0	8.9	63	50	89	40	10	5.6	7.2
26	3.4	3.3	4.3	6.5	9.0	52	59	86	39	9.6	8.1	7.1
27	3.5	3.9	4.6	6.6	8.3	42	79	121	35	9.1	7.4	7.1
28	3.6	3.5	5.0	6.4	8.2	34	95	227	33	8.4	6.2	6.5
29	3.5	5.4	e4.8	6.5	7.8	31	84	223	31	8.3	5.6	6.6
30	3.5	8.8	4.6	6.5	---	36	72	174	29	8.1	5.4	6.7
31	3.0	---	4.4	6.9	---	44	---	152	---	7.8	5.2	---
TOTAL	116.4	116.3	143.6	162.9	216.7	1010.9	1945	4269	3093	419.3	196.5	175.2
MEAN	3.75	3.88	4.63	5.25	7.47	32.6	64.8	138	103	13.5	6.34	5.84
MAX	4.2	8.8	6.3	6.9	9.9	77	110	244	240	27	8.9	11
MIN	3.0	2.7	4.0	4.6	5.8	8.1	34	74	29	7.8	5.2	4.0
AC-FT	231	231	285	323	430	2010	3860	8470	6130	832	390	348

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2004, BY WATER YEAR (WY)

	1999	1999	1999	1999	2001	2004	2004	1999	1998	1998		
MEAN	5.05	5.80	5.53	6.02	7.09	16.1	46.8	134	108	17.6	5.67	4.70
MAX (WY)	8.33	9.66	7.52	6.64	8.47	32.6	64.8	170	189	55.4	9.15	6.86
MIN (WY)	3.66	3.88	4.63	5.22	5.42	9.46	27.5	105	28.5	6.96	3.02	3.06
(WY)	2002	2004	2004	2001	2002	2002	2001	2000	2001	2000	2000	2001

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1998 - 2004
ANNUAL TOTAL	10129.4	11864.8	
ANNUAL MEAN	27.8	32.4	28.6
HIGHEST ANNUAL MEAN			39.1
LOWEST ANNUAL MEAN			19.4
HIGHEST DAILY MEAN	428	244	541
LOWEST DAILY MEAN	2.7	2.7	2.5
ANNUAL SEVEN-DAY MINIMUM	3.2	3.2	2.6
ANNUAL RUNOFF (AC-FT)	20090	23530	20730
10 PERCENT EXCEEDS	60	98	78
50 PERCENT EXCEEDS	6.1	7.1	6.9
90 PERCENT EXCEEDS	3.7	3.8	4.0

e Estimated

BRUNEAU RIVER BASIN

13168500 BRUNEAU RIVER NEAR HOT SPRING, ID

LOCATION.--Lat 42°46'16", long 115°43'13"(revised), (NAD83), in NE¼NE¼SE¼ sec.34, T.7 S., R.6 E., Owyhee County, Hot Springs quad., Hydrologic Unit 17050102, on right bank, 1 mi downstream from Hot Creek, 1.5 mi south of Hot Spring, 9 mi southeast of Bruneau, 16 mi downstream from East Fork, and at mile 22.0.

DRAINAGE AREA.--2,630 mi², approximately. Mean elevation, 5,600 ft.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1909 to March 1915, October 1943 to current year.

REVISED RECORDS.--WSP 1063: 1913. WSP 1517: 1910(M). WSP 1567: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,598.5 ft above NGVD of 1929. Prior to Mar. 12, 1910, nonrecording gage at site 0.2 mi upstream at different datum. Mar. 12, 1910 to Mar. 15, 1915, nonrecording gage at present site and datum.

REMARKS.--Records good except for daily discharges, Apr. 24 to May 6, which are fair. Station equipment includes satellite telemetry. Several small reservoirs on tributaries above station. Diversions above station for irrigation of about 12,900 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,860 ft³/s May 15, 1984, gage height, 13.03 ft; minimum, 6.9 ft³/s Oct. 31, Nov. 2, 2002, Nov. 1, 2003, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 920 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 18	1030	*1,670	*7.04	May 6	1815	952	6.06
Mar. 25	0445	959	6.07	May 29	1900	999	6.13

Minimum, 6.9 ft³/s Nov. 1, gage height 3.01 ft, result of freezeup; minimum daily discharge, 35 ft³/s, Nov. 1, Jan. 5, 6.

DAY	DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	35	100	95	91	125	521	540	752	265	59	49
2	37	51	109	94	81	119	547	533	729	251	57	47
3	38	46	94	85	90	117	500	592	760	237	56	44
4	40	56	84	59	111	122	511	687	822	225	52	44
5	42	64	80	35	104	119	584	820	892	214	52	45
6	43	62	78	35	93	120	645	927	911	199	49	47
7	42	43	89	49	83	118	720	925	902	184	47	47
8	41	56	93	103	86	119	876	907	849	171	47	46
9	41	62	101	113	99	121	849	869	768	164	47	44
10	41	67	91	99	90	155	756	834	682	160	47	43
11	41	65	84	93	82	234	674	830	613	150	46	42
12	41	66	91	92	73	268	616	797	546	137	43	41
13	42	66	91	85	64	287	588	750	496	128	42	40
14	43	68	83	83	64	300	590	681	462	118	40	40
15	43	69	93	81	82	342	586	615	463	113	40	39
16	44	69	83	84	119	393	547	571	470	110	40	40
17	45	69	60	92	122	411	514	542	453	105	44	42
18	45	69	60	106	979	433	509	546	431	104	54	42
19	45	70	69	89	500	481	486	562	419	106	54	41
20	45	70	78	96	316	597	447	568	401	116	60	44
21	44	69	96	101	195	744	432	568	386	110	59	65
22	44	69	101	90	160	780	440	576	370	102	53	66
23	44	40	86	72	149	829	466	590	346	97	59	61
24	44	53	80	61	148	822	466	625	341	94	57	57
25	44	48	93	88	145	894	461	589	340	86	56	55
26	45	60	100	95	142	805	447	538	330	79	55	54
27	46	74	85	87	142	721	464	520	326	73	56	52
28	47	71	68	94	134	601	e500	616	299	70	58	51
29	48	65	62	101	129	507	e550	927	281	67	61	51
30	50	87	87	104	---	459	566	976	279	64	56	51
31	51	---	93	108	---	466	---	851	---	62	53	---
TOTAL	1343	1859	2662	2669	4673	12609	16858	21472	16119	4161	1599	1430
MEAN	43.3	62.0	85.9	86.1	161	407	562	693	537	134	51.6	47.7
MAX	51	87	109	113	979	894	876	976	911	265	61	66
MIN	37	35	60	35	64	117	432	520	279	62	40	39
AC-FT	2660	3690	5280	5290	9270	25010	33440	42590	31970	8250	3170	2840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2004, BY WATER YEAR (WY)												
	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
MEAN	97.1	119	125	160	210	395	775	1235	968	279	97.2	78.7
MAX	185	248	425	724	905	1901	1882	4102	3122	1044	334	170
(WY)	1985	1910	1965	1971	1986	1910	1952	1984	1984	1984	1984	1984
MIN	42.8	62.0	58.7	80.2	98.2	119	196	277	97.8	55.3	31.5	34.8
(WY)	2002	2004	1991	1991	1994	1955	1968	1992	1992	1992	2001	1981

SUMMARY STATISTICS	FOR 2003	CALENDAR YEAR	FOR 2004	WATER YEAR	WATER YEARS 1909 - 2004
ANNUAL TOTAL	73954		87454		
ANNUAL MEAN	203		239		378
HIGHEST ANNUAL MEAN					1012
LOWEST ANNUAL MEAN					113
HIGHEST DAILY MEAN	1530	May 30	979	Feb 18	6470
LOWEST DAILY MEAN	34	Aug 16	35	Nov 1	21
ANNUAL SEVEN-DAY MINIMUM	35	Aug 15	40	Oct 1	28
ANNUAL RUNOFF (AC-FT)	146700		173500		273900
10 PERCENT EXCEEDS	606		676		1100
50 PERCENT EXCEEDS	92		94		144
90 PERCENT EXCEEDS	39		44		65

e Estimated

BRUNEAU RIVER BASIN

13168500 BRUNEAU RIVER NEAR HOT SPRING, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1958 to October 1959, October 1965, December 1969 to June 1982, November 1990 to September 1991, November 1993 to September 1994, April to September 1997, April to September 2000, April to September 2004 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August to September 1997, July to September 2000, April to September 2004 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 31.6 °C July 28, 2000.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 31.0 °C Aug. 11-12.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbidity, lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC 0.7u MF 100 mL (31625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)
APR 22...	1015	427	105	7.9	11.0	10.1	5.5	10.5	102	S5	<.010	.25	.026
MAY 25...	1050	591	93	7.5	15.0	13.5	5.4	9.5	101	22	<.010	.20	.021
JUN 16...	1135	467	87	7.9	18.0	16.4	3.5	9.4	106	S55	<.010	.20	E.015
JUL 15...	1045	113	127	8.0	28.0	25.0	<2.0	8.7	116	25	E.006	.11	.059
AUG 17...	1115	48	203	7.8	22.0	24.0	<2.0	8.2	107	300	E.007	.20	.148
SEP 14...	1200	40	217	8.3	15.0	20.0	<2.0	9.8	119	57	<.010	.17	.165

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Hardness, water, CaCO3 mg/L as (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, fixed end pt, field, mg/L (00440)	Carbonate, fixed end pt, field, mg/L (00445)	ANC, fixed end pt, field, mg/L as CaCO3 (00410)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)
APR 22...	.007	.037	--	--	--	--	--	--	--	--	--	--	--
MAY 25...	E.005	.030	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	.006	.017	--	--	--	--	--	--	--	--	--	--	--
JUL 15...	<.006	.009	--	--	--	--	--	--	--	--	--	--	--
AUG 17...	<.006	.010	--	--	--	--	--	--	--	--	--	--	--
SEP 14...	<.006	.004	39	13.1	1.54	30.5	60	3.78	86	.0	72	14.0	6.25

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR 22...	--	--	15	17
MAY 25...	--	--	16	26
JUN 16...	--	--	9	11
JUL 15...	--	--	1	.31
AUG 17...	--	--	2	.26
SEP 14...	3.7	39.5	1	.11

< Less than
 E Estimated value
 S Most probable value

BRUNEAU RIVER BASIN
 13168500 BRUNEAU RIVER NEAR HOT SPRING, ID--Continued

Temperature, water, degrees Celsius
 WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	16.5	11.5	13.6
2	---	---	---	---	---	---	---	---	---	18.4	13.7	15.6
3	---	---	---	---	---	---	---	---	---	19.6	15.4	17.2
4	---	---	---	---	---	---	---	---	---	19.7	16.4	17.7
5	---	---	---	---	---	---	---	---	---	18.1	16.2	17.1
6	---	---	---	---	---	---	---	---	---	17.0	14.9	16.0
7	---	---	---	---	---	---	---	---	---	16.7	14.6	15.6
8	---	---	---	---	---	---	---	---	---	16.2	14.6	15.4
9	---	---	---	---	---	---	---	---	---	15.6	13.8	14.5
10	---	---	---	---	---	---	---	---	---	14.3	12.8	13.7
11	---	---	---	---	---	---	---	---	---	12.8	11.2	12.1
12	---	---	---	---	---	---	---	---	---	12.0	10.4	11.0
13	---	---	---	---	---	---	---	---	---	13.5	10.4	11.6
14	---	---	---	---	---	---	---	---	---	15.6	11.5	13.1
15	---	---	---	---	---	---	---	---	---	14.9	13.1	13.9
16	---	---	---	---	---	---	---	---	---	15.7	12.8	14.2
17	---	---	---	---	---	---	---	---	---	16.7	13.4	14.7
18	---	---	---	---	---	---	---	---	---	16.5	14.3	15.3
19	---	---	---	---	---	---	---	---	---	16.8	14.0	15.1
20	---	---	---	---	---	---	---	---	---	16.0	13.5	14.7
21	---	---	---	---	---	---	---	---	---	15.9	13.1	14.4
22	---	---	---	---	---	---	---	---	---	15.6	13.5	14.5
23	---	---	---	---	---	---	14.3	10.7	12.4	15.6	13.2	14.2
24	---	---	---	---	---	---	14.1	11.4	12.7	15.6	11.8	13.5
25	---	---	---	---	---	---	15.6	11.7	13.3	16.8	12.8	14.4
26	---	---	---	---	---	---	16.7	12.6	14.5	15.6	13.8	14.6
27	---	---	---	---	---	---	17.5	13.7	15.5	17.0	13.8	15.2
28	---	---	---	---	---	---	16.4	12.9	14.3	16.4	14.5	15.3
29	---	---	---	---	---	---	14.1	11.2	12.6	14.5	12.3	13.3
30	---	---	---	---	---	---	14.5	10.4	12.1	13.7	10.7	12.1
31	---	---	---	---	---	---	---	---	---	15.9	12.1	13.7
MONTH	---	---	---	---	---	---	---	---	---	19.7	10.4	14.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.9	14.3	15.7	24.2	19.2	21.2	29.7	23.4	26.4	27.3	21.2	23.9
2	19.2	15.7	17.1	24.7	20.4	22.2	28.4	24.2	25.9	24.6	20.2	22.3
3	19.7	16.8	18.0	23.7	20.5	21.9	29.5	22.7	25.6	24.4	17.8	20.5
4	20.0	17.1	18.4	24.6	20.4	22.2	29.9	22.2	25.9	25.2	18.3	21.1
5	19.2	17.1	18.2	24.7	20.0	22.0	30.1	22.8	26.3	25.4	19.1	21.7
6	18.4	16.4	17.3	25.2	19.9	22.4	28.4	22.3	25.2	26.1	18.4	21.7
7	17.5	14.9	16.2	25.8	20.8	23.0	28.2	21.3	24.4	26.3	18.4	22.0
8	16.7	14.0	15.3	24.6	19.2	21.6	29.0	20.8	24.4	26.8	19.1	22.5
9	16.4	14.0	15.1	23.7	19.1	21.2	29.3	20.5	24.8	26.8	19.7	22.8
10	15.1	14.1	14.6	25.8	19.7	22.2	30.1	21.8	25.7	27.7	21.0	23.7
11	17.0	13.1	14.7	25.8	20.7	22.9	31.0	22.5	26.4	27.3	20.4	23.6
12	17.9	14.3	15.8	26.8	20.2	23.1	31.0	22.8	26.8	23.9	21.8	22.8
13	20.4	16.0	17.7	27.9	21.8	24.5	30.4	23.5	26.8	26.1	20.7	22.9
14	19.9	16.7	18.1	28.4	22.7	25.2	27.9	25.1	26.5	23.9	19.2	21.3
15	19.2	16.8	17.8	30.6	23.9	26.5	29.0	23.9	26.0	24.0	18.3	20.8
16	19.2	15.4	17.1	30.6	23.9	26.8	27.9	24.4	26.0	26.1	19.2	22.1
17	19.7	15.4	17.5	29.0	24.4	26.5	27.7	24.7	26.0	25.6	19.1	21.9
18	19.2	16.0	17.9	26.4	24.7	25.5	30.3	23.4	26.4	21.7	19.4	20.0
19	20.7	16.7	18.4	28.2	23.4	25.3	29.5	23.4	26.2	21.7	18.3	19.6
20	20.5	17.6	18.9	28.8	23.4	25.7	28.6	23.0	25.7	21.5	16.5	18.6
21	21.7	17.5	19.3	29.3	23.9	26.1	28.4	22.5	25.2	19.7	14.5	17.0
22	22.0	17.9	19.9	28.4	23.9	25.9	25.5	22.5	24.1	20.7	14.5	16.9
23	23.0	18.7	20.8	29.5	23.2	25.8	25.8	20.7	22.7	22.2	15.9	18.5
24	23.7	20.2	21.6	29.0	23.0	25.6	24.7	19.4	21.9	23.4	16.8	19.6
25	23.9	20.2	21.8	28.4	24.4	25.8	25.6	20.8	22.8	23.9	17.1	20.1
26	23.4	19.7	21.4	28.2	23.7	25.4	25.8	20.7	22.6	24.4	17.5	20.5
27	23.7	19.7	21.4	28.4	22.8	25.3	26.8	19.4	22.5	22.7	18.1	20.3
28	23.5	20.4	21.6	28.6	22.7	25.2	26.1	19.4	22.6	23.7	17.8	20.5
29	23.4	20.4	21.7	28.4	22.3	25.1	26.8	19.7	22.9	21.7	18.6	20.3
30	22.8	19.4	20.8	29.3	22.5	25.6	28.1	20.0	23.7	24.2	18.3	20.7
31	---	---	---	30.6	23.2	26.4	27.2	20.7	23.6	---	---	---
MONTH	23.9	13.1	18.3	30.6	19.1	24.3	31.0	19.4	24.9	27.7	14.5	21.0

SNAKE RIVER MAIN STEM

13171500 C. J. STRIKE RESERVOIR NEAR GRAND VIEW, ID

LOCATION.--Lat 42°56'38", long 115°58'28", in SW¹/₄NW¹/₄SW¹/₄ sec.34, T.5 S., R.4 E., Owyhee County, C.J. Strike Dam quad., Hydrologic Unit 17050103, on left bank near the dam on Snake River, 7 mi southeast of Grand View, at mile 494.0.

DRAINAGE AREA.--40,800 mi², approximately.

PERIOD OF RECORD.--March 1952 to September 1967 (month-end contents only), July 1986 to current year.

REVISED RECORDS.--WDR ID-87-1: 1986 (M, m).

GAGE.--Water-stage recorder. Datum of gage is set to NGVD of 1929.

REMARKS.--Station includes satellite telemetry. Reservoir is formed by earthfill, rock-faced dam. Storage began in February 1952. Total capacity, 250,000 acre-ft at elevation 2,455 ft (top of spillway gates), of which about 50,000 acre-ft is controlled storage. Water is used for power generation by Idaho Power Co. Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 253,700 acre-ft Mar. 31, 1956, elevation, 2,455.49 ft; minimum since first filling, 215,600 acre-ft Mar. 3-10, 1991, elevation, 2,450.14 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 250,600 acre-ft Nov. 6, elevation, 2,455.08 ft; minimum, 245,800 acre-ft Apr. 28, elevation, 2,454.44 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,554.0	242,600
2,555.0	250,000
2,556.0	257,600

RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	249100	249200	248200	248400	248100	248400	248400	248400	248800	248800	249200	248400
2	249400	248800	248200	248700	248400	248900	248200	248400	248300	249500	249400	248800
3	248700	248500	249000	248100	248300	248700	247700	248200	248400	249100	249400	249100
4	248800	248800	248800	247600	248100	247700	248200	248600	248100	249400	249500	249400
5	248700	249300	247800	248200	248600	247900	248600	248400	247400	249300	249600	249600
6	248700	248300	248400	247700	248200	248800	248200	248000	247600	249500	249300	249300
7	248700	248500	248200	248000	247900	248200	248000	248200	247100	248900	249600	249400
8	248700	248100	249100	248400	248400	248200	247300	248100	248000	249300	249600	249400
9	248200	248200	247900	247900	248100	248200	247600	248000	248200	249400	249500	249100
10	248600	248700	248400	247900	248200	248300	247800	248400	248300	249200	249900	249000
11	248200	248700	249200	247600	247600	249000	248000	249000	248100	249300	249300	249800
12	247900	247900	248200	248200	248200	248200	249300	249700	248500	249400	249400	249800
13	248400	248500	248600	248200	248400	248800	248200	249200	248400	249400	249200	249400
14	249000	248400	248500	248800	248700	248400	248400	249200	247600	249000	249900	248600
15	248900	248700	248400	248600	247600	248400	247900	248100	246600	249500	249400	248900
16	249300	249000	249400	247700	248500	249200	248600	248500	247000	249100	249500	249400
17	249000	248700	248800	247700	247600	248600	247600	248200	248300	248700	249600	248800
18	248200	248600	248700	247900	249100	248700	248500	248600	248600	249500	249900	249500
19	248800	248000	247900	248300	249200	248400	248200	249000	249400	249600	249500	249100
20	248900	249300	248100	248700	247900	248700	248900	248700	249600	249800	249700	249400
21	248400	249300	248400	248700	249400	248200	247800	248400	249700	249800	248800	250000
22	248700	248800	248800	247300	248900	248200	248200	248400	249600	249900	249700	249500
23	248600	248900	247700	248400	249000	248600	248700	248400	248700	249400	249400	248700
24	247800	249400	247300	248400	248200	247300	248900	249600	249300	249100	249600	248700
25	247400	248700	248300	248700	247200	248100	248800	249100	248600	249500	249400	248500
26	248400	248500	248600	248400	248700	248400	248200	248700	248200	249600	249900	248700
27	248300	249200	248800	248100	248300	248300	248500	247800	248300	249700	249400	248800
28	248800	248700	248700	248500	248500	248300	248200	248000	248700	249600	249100	248800
29	249100	249400	248100	248700	249100	247900	248000	248400	249000	249300	249300	249200
30	249100	248400	248400	248000	---	246900	248500	249100	249300	249300	249300	248700
31	248700	---	248500	248200	---	248600	---	249200	---	249300	248900	---
MAX	249400	249400	249400	248800	249400	249200	249300	249700	249700	249900	249900	250000
MIN	247400	247900	247300	247300	247200	246900	247300	247800	246600	248700	248800	248400
†	2454.83	2454.78	2454.80	2454.76	2454.87	2454.81	2454.80	2454.89	2454.90	2454.90	2454.85	2454.83
‡	-300	-300	100	-300	900	-500	-100	700	100	0	-400	-200

CAL YR 2003 † 1200
WTR YR 2004 MAX 250000 MIN 246600 † -300

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

SNAKE RIVER MAIN STEM

13171620 SNAKE RIVER BELOW C.J. STRIKE DAM NEAR GRAND VIEW, ID

LOCATION.--Lat 42°56'50", long 115°58'49", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.5 S., R.4 E., Owyhee County, C.J. Strike Dam quad., Hydrologic Unit 17050103, on downstream left bank end of bridge about 0.25 mi below dam, 10 mi northwest of Bruneau, 6.5 mi southeast of Grand View, and at mile 493.8.

DRAINAGE AREA.--40,800 mi², approximately.

PERIOD OF RECORD.--April 1985 to current year.

REVISED RECORDS.--WDR ID-02-2: 2001 (M).

GAGE.--Water-stage recorder. Elevation of gage is 2,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Station equipment includes radio telemetry.

COOPERATION.--Discharge records furnished by Idaho Power and reviewed by U.S. Geological Survey beginning April 2001.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,000 ft³/s June 20, 21, 1997, gage height, 14.88 ft; minimum, 2,000 ft³/s Mar. 4, 1988, gage height, 3.28 ft; minimum daily, 3,880 ft³/s June 12, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 9,310 ft³/s Feb. 20; minimum daily, 4,160 ft³/s June 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5970	6230	7030	6850	7110	7480	6820	5980	6460	4460	4410	5020
2	6260	6910	6980	6900	6930	6710	7330	5880	6230	4230	4420	4760
3	6390	6360	6380	6860	6930	7190	7000	5950	5710	4510	4450	5050
4	6290	6670	7060	6940	6880	7190	6590	5930	5700	4360	4450	5140
5	6520	6720	7030	6860	6840	7100	6810	5920	5710	4600	4410	5220
6	6520	7040	7070	6920	6990	6660	6810	6210	5420	4450	4750	5460
7	6520	6350	7250	6610	6710	7060	6720	5920	5130	4390	4240	5180
8	6540	6740	7270	6850	6780	7150	6290	5840	5290	4370	4530	5250
9	6760	6800	7100	6880	7000	7210	6460	5900	5300	4350	4710	5230
10	6360	6810	6440	6850	6880	7430	6120	5780	5350	4360	4570	5160
11	6550	6830	6570	6730	6930	7550	6250	5960	5300	4380	4940	5130
12	6330	7310	7450	6700	6740	8220	6430	6230	5230	4350	4580	5640
13	6860	6960	7170	6730	6620	7640	6150	6840	5270	4390	4600	5710
14	6260	6720	6780	6760	6700	7880	6140	6630	5340	4560	4670	6360
15	6310	7070	7090	6980	6700	7890	6190	7010	5110	4510	4640	5650
16	6070	6880	6600	6910	6620	8050	5820	5890	4920	4300	4830	5170
17	6310	6970	7260	6690	6920	8020	6290	6100	4220	4200	4690	5880
18	6310	6980	6640	6700	6780	8050	5830	6060	4290	4200	4840	5900
19	5970	7120	7170	6610	9010	7800	6320	6140	4320	4280	5340	6120
20	6210	6670	6720	6680	9310	8400	6210	6390	4370	4570	4990	5880
21	6270	6890	6740	6940	7290	8340	6530	6360	4610	4510	5520	5870
22	5950	6760	7010	7230	7260	7760	6340	6130	4640	4490	4730	6360
23	6100	7050	6900	6550	7180	7710	6390	6160	4770	4880	5400	6470
24	6330	6550	7100	6640	7530	8380	6070	6170	4430	4630	5340	6150
25	6220	6990	6560	6810	7980	7800	6250	6450	4450	4330	5450	6210
26	5420	7050	6520	7070	6660	7690	6260	6300	4440	4460	5100	6150
27	5730	6690	6850	7000	7680	7260	5970	6370	4250	4370	5680	6330
28	5730	6780	7020	6590	7050	7510	5950	6080	4210	4480	5660	6370
29	5790	6670	6860	6980	7340	7450	5840	6280	4190	4450	5270	6400
30	5970	7460	6810	7080	---	6840	5800	6370	4160	4230	5350	6600
31	6460	---	6970	6750	---	6330	---	6600	---	4430	5520	---
TOTAL	193280	205030	214400	211650	207350	233750	189980	191830	148820	136740	152080	171820
MEAN	6235	6834	6916	6827	7150	7540	6333	6188	4961	4411	4906	5727
MAX	6860	7460	7450	7230	9310	8400	7330	7010	6460	4880	5680	6600
MIN	5420	6230	6380	6550	6620	6330	5800	5780	4160	4170	4240	4760
AC-FT	383400	406700	425300	419800	411300	463600	376800	380500	295200	271200	301700	340800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2004, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	9500	9667	9931	10400	10750	11770	11640	10820	10900	6614	6892	8238								
MAX	18320	16300	18090	18390	27560	29390	26950	25470	34180	10510	10450	14800								
(WY)	1987	1987	1987	1997	1997	1997	1986	1986	1997	1997	1997	1997								
MIN	6235	6834	4910	6734	6764	6555	6049	5090	4580	4411	4906	5637								
(WY)	2004	2004	1990	2002	2003	2003	1992	1992	1992	2004	2004	2002								

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1985 - 2004	
ANNUAL TOTAL	2228500		2256730			
ANNUAL MEAN	6105		6166		9700	
HIGHEST ANNUAL MEAN					18090 1997	
LOWEST ANNUAL MEAN					6166 2004	
HIGHEST DAILY MEAN	7550	May 11	9310	Feb 20	44000	Jun 16 1997
LOWEST DAILY MEAN	4150	Jun 10	4160	Jun 30	3880	Jun 12 1992
ANNUAL SEVEN-DAY MINIMUM	4350	Jul 8	4280	Jun 26	4040	Jul 4 2002
ANNUAL RUNOFF (AC-FT)	4420000		4476000		7027000	
10 PERCENT EXCEEDS	7030		7240		16700	
50 PERCENT EXCEEDS	6320		6360		7900	
90 PERCENT EXCEEDS	4600		4450		5730	

SNAKE RIVER MAIN STEM

13172500 SNAKE RIVER NEAR MURPHY, ID

LOCATION.--Lat 43°17'31", long 116°25'12", in NW¼NE¼SE¼ sec.35, T.1 S., R.1 W., Ada County, Initial Point quad., Hydrologic Unit 17050103, on right bank, 4.2 mi downstream from Swan Falls powerplant, 7.5 mi northeast of Murphy, and at mile 453.5.

DRAINAGE AREA.--41,900 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to October 1912, August 1913 to current year.

REVISED RECORDS.--WSP 1737: 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 2,271.17 ft above NGVD of 1929. Prior to Sept. 7, 1914, nonrecording gage, and Sept. 7, 1914 to Sept. 30, 1935, water-stage recorder at site 3.5 mi upstream at datum 9.79 ft higher.

REMARKS.--Station equipment includes satellite telemetry. Major regulation by American Falls Reservoir, 260.5 mi upstream. Diurnal fluctuation caused by hydroelectric plants upstream. Diversions above station for irrigation of about 2,590,000 acres, of which about 701,000 acres are irrigated by withdrawals from ground water (1966 determination).

COOPERATION.--Discharge records furnished by Idaho Power and reviewed by U.S. Geological Survey beginning July 2001.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,300 ft³/s June 22, 1918, gage height, 13.95 ft, site and datum then in use; minimum, 3,650 ft³/s July 7, 1981, gage height, 2.22 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 9,220 ft³/s Feb. 20; minimum, 4,030 ft³/s Aug. 1, gage height, 2.38 ft.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6140	6890	7510	6760	6840	7760	6380	5710	6880	4740	4750	5330
2	6360	7240	6880	6630	6720	7000	7410	5950	6850	4550	4860	4990
3	6550	6710	6800	6800	6930	6810	7230	5810	5740	4710	4740	5250
4	6770	6870	6420	6900	6770	7110	6630	5890	5890	4800	4800	5270
5	6550	7130	7290	6920	6380	7220	6700	5960	5990	4660	4670	5470
6	6740	7150	6830	6750	6750	6990	6800	6070	5610	5010	4890	5740
7	6570	7130	7420	6780	6900	6760	6700	6060	5590	4690	4680	5680
8	6650	6430	7130	6370	6350	7390	6490	5940	5330	4790	4750	5750
9	6910	6940	7430	7010	6610	7300	6170	5760	5490	4740	4900	5680
10	6950	6920	6710	6620	6810	7080	6210	5940	5590	4740	4780	5630
11	6890	6650	6040	6800	6480	8030	5970	5930	5650	4700	5080	5430
12	6930	6840	7060	6390	6990	7800	6230	6190	5630	4760	4870	6240
13	7010	7640	7580	6680	6370	8160	6480	7330	5660	4760	4890	5940
14	7800	6210	6960	6430	6250	7990	5860	6580	5540	4780	4880	6350
15	6710	6970	6510	6650	6630	7820	5910	6920	5480	4760	4910	6080
16	7150	6780	7100	6860	6570	8340	5980	6900	5150	4560	4910	5770
17	6850	6780	7220	6730	6660	8090	5840	5840	4520	4530	5100	5790
18	6970	7000	6430	6240	6800	8170	5670	6540	4520	4480	5210	6320
19	6970	7280	6560	6410	8300	7930	5910	6500	4690	4460	5180	6130
20	6880	6350	7080	6490	9220	8370	6290	6080	4510	4850	5170	6330
21	7080	6950	6630	6660	8490	8510	6160	6650	4910	4640	5420	6410
22	6580	6600	6830	6700	6690	8260	6360	6290	4970	4660	5120	6760
23	6720	7000	6930	6710	7090	7580	6180	6360	4670	5020	5010	6400
24	6860	6700	6610	6150	7050	8250	6010	6390	4810	4820	5550	6940
25	6970	6640	7070	6510	7690	8900	5830	6780	4810	4720	5370	6460
26	6580	7150	6340	6880	7520	7080	6190	6710	4590	4630	5290	6310
27	5920	6820	6550	6790	6830	7720	5860	6430	4580	4690	5540	6630
28	6490	6830	6790	6690	7130	7150	5810	6600	4490	4690	5660	6600
29	6460	6780	6930	6430	7220	7880	5710	6290	4550	4620	5700	6420
30	6370	6950	6620	6970	---	7410	5660	6900	4530	4690	5430	6770
31	6780	---	7130	6630	---	6250	---	6900	---	4570	5510	---
TOTAL	209160	206330	213390	206340	203040	237110	186630	196200	157220	145820	157620	180870
MEAN	6747	6878	6884	6656	7001	7649	6221	6329	5241	4704	5085	6029
MAX	7800	7640	7580	7010	9220	8900	7410	7330	6880	5020	5700	6940
MIN	5920	6210	6040	6150	6250	6250	5660	5710	4490	4460	4670	4990
AC-FT	414900	409300	423300	409300	402700	470300	370200	389200	311800	289200	312600	358800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2004, BY WATER YEAR (WY)

MEAN	10440	11220	11350	11540	11780	12170	13300	12820	12800	7923	7375	8446
MAX	18500	21370	21020	23250	26540	28350	28950	31250	31980	21230	10480	14870
(WY)	1972	1985	1984	1984	1997	1997	1971	1984	1997	1917	1997	1997
MIN	6747	6878	6884	6656	6801	6701	5987	5285	4971	4447	5085	6029
(WY)	2004	2004	2004	2004	2003	2003	2003	1992	1992	2003	2004	2004

SUMMARY STATISTICS	FOR 2003	CALENDAR YEAR	FOR 2004	WATER YEAR	WATER YEARS 1914 - 2004
ANNUAL TOTAL	2254230		2299730		
ANNUAL MEAN	6176		6283		10920
HIGHEST ANNUAL MEAN					19180
LOWEST ANNUAL MEAN					6220
HIGHEST DAILY MEAN	7930	Feb 20	9220	Feb 20	46100 Jun 22 1918
LOWEST DAILY MEAN	4160	Jul 12	4460	Jul 19	4160 Jul 12 2003
ANNUAL SEVEN-DAY MINIMUM	4240	Jul 9	4580	Jun 26	4240 Jul 9 2003
ANNUAL RUNOFF (AC-FT)	4471000		4562000		7910000
10 PERCENT EXCEEDS	7070		7250		17400
50 PERCENT EXCEEDS	6460		6490		9200
90 PERCENT EXCEEDS	4710		4760		6760

SNAKE RIVER MAIN STEM

13172500 SNAKE RIVER NEAR MURPHY, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1975 to October 1976, April 1978 to January 1982, November 1990 to September 1991, November 1993 to September 1994, April to September 1997, June to September 1998, April to August 2000, April to August 2004 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August to September 1997, June to September 1998, April to August 2000, April to August 2004 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27.5 °C Aug. 1, 2004.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 27.5 °C Aug. 1.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC col/100 mL (31625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)
APR 19...	1400	5670	407	9.0	18.0	14.0	19	14.1	149	S4	E.009	1.1	.185
MAY 24...	1600	6070	439	8.8	20.5	17.7	7.7	13.2	151	S3	<.010	.66	.470
JUN 18...	1110	4440	419	8.6	19.0	19.6	8.0	11.6	138	S3	<.010	.70	.274
JUL 16...	1000	4550	444	8.2	27.0	24.3	6.5	8.6	112	S5	<.010	.66	.380
AUG 24...	1130	6000	475	8.2	19.0	20.6	4.6	7.6	92	25	E.008	.43	.779
SEP 15...	1330	6130	498	8.2	23.5	17.8	4.4	10.3	118	30	<.010	.73	.941

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, wat unfltrd fixed end pt, field, mg/L (00440)	Carbonate, wat unfltrd fixed end pt, field, mg/L (00445)	ANC, wat unfltrd fixed end pt, field, mg/L as CaCO3 (00410)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)
APR 19...	<.006	.083	--	--	--	--	--	--	--	--	--	--	--
MAY 24...	<.006	.077	--	--	--	--	--	--	--	--	--	--	--
JUN 18...	<.006	.066	--	--	--	--	--	--	--	--	--	--	--
JUL 16...	<.006	.065	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	.013	.059	--	--	--	--	--	--	--	--	--	--	--
SEP 15...	.018	.062	190	43.2	20.2	29.9	25	4.57	193	.0	158	48.2	27.4

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR 19...	--	--	21	321
MAY 24...	--	--	14	229
JUN 18...	--	--	16	192
JUL 16...	--	--	16	197
AUG 24...	--	--	10	162
SEP 15...	.7	21.0	7	116

< Less than
E Estimated value
S Most probable value

SNAKE RIVER MAIN STEM

13172500 SNAKE RIVER NEAR MURPHY, ID--Continued

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

Date	Time	Aluminum, biota, tissue, rec, dry wgt ug/g (49237)	Antimony, biota, tissue, rec, dry wgt ug/g (49246)	Arsenic, biota, tissue, rec, dry wgt ug/g (49247)	Barium, biota, tissue, rec, dry wgt ug/g (49238)	Beryllium, biota, tissue, rec, dry wgt ug/g (49248)	Boron, biota, tissue, rec, dry wgt ug/g (49239)	Cadmium, biota, tissue, rec, dry wgt ug/g (49249)	Chromium, biota, tissue, rec, dry wgt ug/g (49240)	Cobalt, biota, tissue, rec, dry wgt ug/g (49250)	Copper, biota, tissue, rec, dry wgt ug/g (49241)	Iron, biota, tissue, rec, dry wgt ug/g (49242)	Lead, biota, tissue, rec, dry wgt ug/g (49251)
AUG 24...	1500	<1	<.1	.5	<.1	<.1	.6	<.1	1.5	<.1	1.1	18	<.1

Date	Manganese, biota, tissue, rec, dry wgt ug/g (49243)	Mercury, biota, tissue, rec, dry wgt ug/g (49258)	Molybdenum, biota, tissue, rec, dry wgt ug/g (49252)	Nickel, biota, tissue, rec, dry wgt ug/g (49253)	Selenium, biota, tissue, rec, dry wgt ug/g (49254)	Silver, biota, tissue, rec, dry wgt ug/g (49255)	Strontium, biota, tissue, rec, dry wgt ug/g (49244)	Vanadium, biota, tissue, rec, dry wgt ug/g (49465)	Zinc, biota, tissue, rec, dry wgt ug/g (49245)	Uranium, biota, tissue, rec, dry wgt ug/g (49257)
AUG 24...	1.0	.582	<.1	.2	1.3	<.1	.9	.3	36	<.1

< Less than

Temperature, water, degrees Celsius
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	17.3	13.8	15.2
2	---	---	---	---	---	---	---	---	---	18.1	14.9	16.3
3	---	---	---	---	---	---	---	---	---	18.7	15.5	17.0
4	---	---	---	---	---	---	---	---	---	18.2	16.2	17.4
5	---	---	---	---	---	---	---	---	---	18.9	16.6	17.7
6	---	---	---	---	---	---	---	---	---	18.2	16.2	17.3
7	---	---	---	---	---	---	---	---	---	18.7	16.6	17.7
8	---	---	---	---	---	---	---	---	---	19.0	17.4	18.2
9	---	---	---	---	---	---	---	---	---	19.0	16.6	17.6
10	---	---	---	---	---	---	---	---	---	17.4	16.0	16.4
11	---	---	---	---	---	---	---	---	---	16.2	14.7	15.5
12	---	---	---	---	---	---	---	---	---	16.3	14.4	15.1
13	---	---	---	---	---	---	---	---	---	16.5	14.6	15.5
14	---	---	---	---	---	---	---	---	---	18.2	15.2	16.6
15	---	---	---	---	---	---	---	---	---	17.4	16.0	16.8
16	---	---	---	---	---	---	---	---	---	17.3	15.4	16.3
17	---	---	---	---	---	---	---	---	---	18.1	15.2	16.5
18	---	---	---	---	---	---	---	---	---	17.6	16.0	16.6
19	---	---	---	---	---	---	---	---	---	17.0	15.0	16.1
20	---	---	---	---	---	---	14.6	13.5	14.0	18.9	15.8	17.2
21	---	---	---	---	---	---	13.8	12.9	13.5	18.1	16.5	17.2
22	---	---	---	---	---	---	15.2	12.1	13.2	17.8	16.0	16.8
23	---	---	---	---	---	---	15.8	11.9	13.5	18.1	16.0	16.9
24	---	---	---	---	---	---	15.4	12.1	13.9	18.4	15.8	16.9
25	---	---	---	---	---	---	15.7	13.0	14.2	19.0	16.0	17.3
26	---	---	---	---	---	---	17.0	13.3	14.8	18.4	16.5	17.5
27	---	---	---	---	---	---	17.3	14.1	15.4	17.9	16.6	17.4
28	---	---	---	---	---	---	15.8	13.3	14.3	18.2	16.8	17.3
29	---	---	---	---	---	---	14.7	11.8	12.9	17.8	16.0	16.8
30	---	---	---	---	---	---	16.2	11.8	13.7	18.4	15.8	16.9
31	---	---	---	---	---	---	---	---	---	19.2	16.5	17.7
MONTH	---	---	---	---	---	---	---	---	---	19.2	13.8	16.8

SNAKE RIVER MAIN STEM
13172500 SNAKE RIVER NEAR MURPHY, ID--Continued

Temperature, water, degrees Celsius
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	19.7	17.1	18.3	24.5	21.6	22.4	27.5	22.8	24.2	23.5	20.7	21.5
2	20.3	17.8	18.9	24.9	21.6	22.7	26.1	23.1	24.1	21.0	18.4	19.9
3	21.5	18.1	19.6	24.5	21.8	22.6	26.8	23.3	24.5	18.6	16.7	17.8
4	21.3	18.7	19.9	24.5	21.6	22.7	26.6	22.6	24.2	18.7	15.8	17.0
5	21.8	19.4	20.6	24.2	21.1	22.3	26.8	23.1	24.3	19.7	17.0	17.9
6	21.3	19.4	20.2	24.4	21.3	22.4	26.3	23.3	24.3	19.8	17.6	18.5
7	19.9	18.3	19.1	24.4	21.5	22.8	25.0	22.0	23.2	20.8	18.1	19.1
8	20.5	17.4	18.5	24.0	21.1	22.1	24.9	21.0	22.5	20.8	18.7	19.4
9	18.6	17.0	17.7	22.6	20.5	21.5	25.7	20.7	22.6	20.7	18.6	19.3
10	18.2	16.8	17.4	23.7	21.0	22.1	25.9	22.0	23.4	21.0	18.7	19.4
11	18.7	16.6	17.6	23.7	20.7	21.9	25.7	22.3	23.6	20.3	18.6	19.3
12	19.5	17.0	18.2	24.7	21.1	22.5	27.0	22.5	24.0	19.4	18.7	19.1
13	20.8	18.4	19.4	25.4	21.8	23.1	27.1	23.1	24.3	19.5	17.9	18.6
14	20.8	18.7	19.7	25.7	22.8	23.9	25.7	23.5	24.3	18.7	17.4	18.0
15	20.3	17.9	19.0	26.1	23.1	24.2	26.4	23.3	24.1	17.9	16.6	17.5
16	20.3	16.8	18.3	26.8	23.1	24.4	25.7	23.0	23.8	19.4	17.1	18.0
17	21.0	16.6	18.7	27.0	23.5	24.8	24.9	22.8	23.4	19.7	17.6	18.4
18	20.7	18.7	19.4	25.4	24.0	24.8	26.1	22.3	23.5	18.6	17.1	17.8
19	22.5	18.7	20.1	27.1	23.4	24.8	26.1	22.5	23.6	17.3	16.2	16.7
20	21.3	18.7	19.6	27.0	23.0	24.3	26.1	23.1	24.2	16.5	15.4	15.8
21	21.8	19.2	20.2	26.8	23.0	24.6	24.9	22.8	23.6	15.8	14.6	15.2
22	22.6	19.2	20.6	25.9	22.8	24.1	23.3	21.1	22.5	16.5	14.7	15.6
23	23.8	20.3	21.5	25.7	23.0	24.0	23.1	20.5	21.7	17.3	15.5	16.5
24	24.4	21.1	22.2	26.4	23.3	24.4	21.8	19.8	20.7	17.8	16.2	17.0
25	24.4	21.8	22.6	26.8	23.8	24.7	21.8	20.5	21.0	17.8	16.2	17.0
26	25.0	21.5	22.5	27.1	23.8	24.9	21.6	20.0	20.6	17.8	16.2	17.0
27	24.7	21.6	22.5	25.7	23.0	24.0	21.8	19.7	20.4	17.8	16.3	17.0
28	25.4	22.0	23.0	25.0	22.1	23.4	22.3	19.7	20.7	17.9	16.3	17.0
29	25.4	22.1	22.9	25.2	22.5	23.4	22.6	20.3	21.3	17.4	16.2	16.9
30	24.9	21.6	22.4	25.6	22.6	23.7	23.3	20.5	21.5	17.6	16.3	16.9
31	---	---	---	25.7	22.6	23.7	22.8	20.2	21.3	---	---	---
MONTH	25.4	16.6	20.0	27.1	20.5	23.5	27.5	19.7	22.9	23.5	14.6	17.8

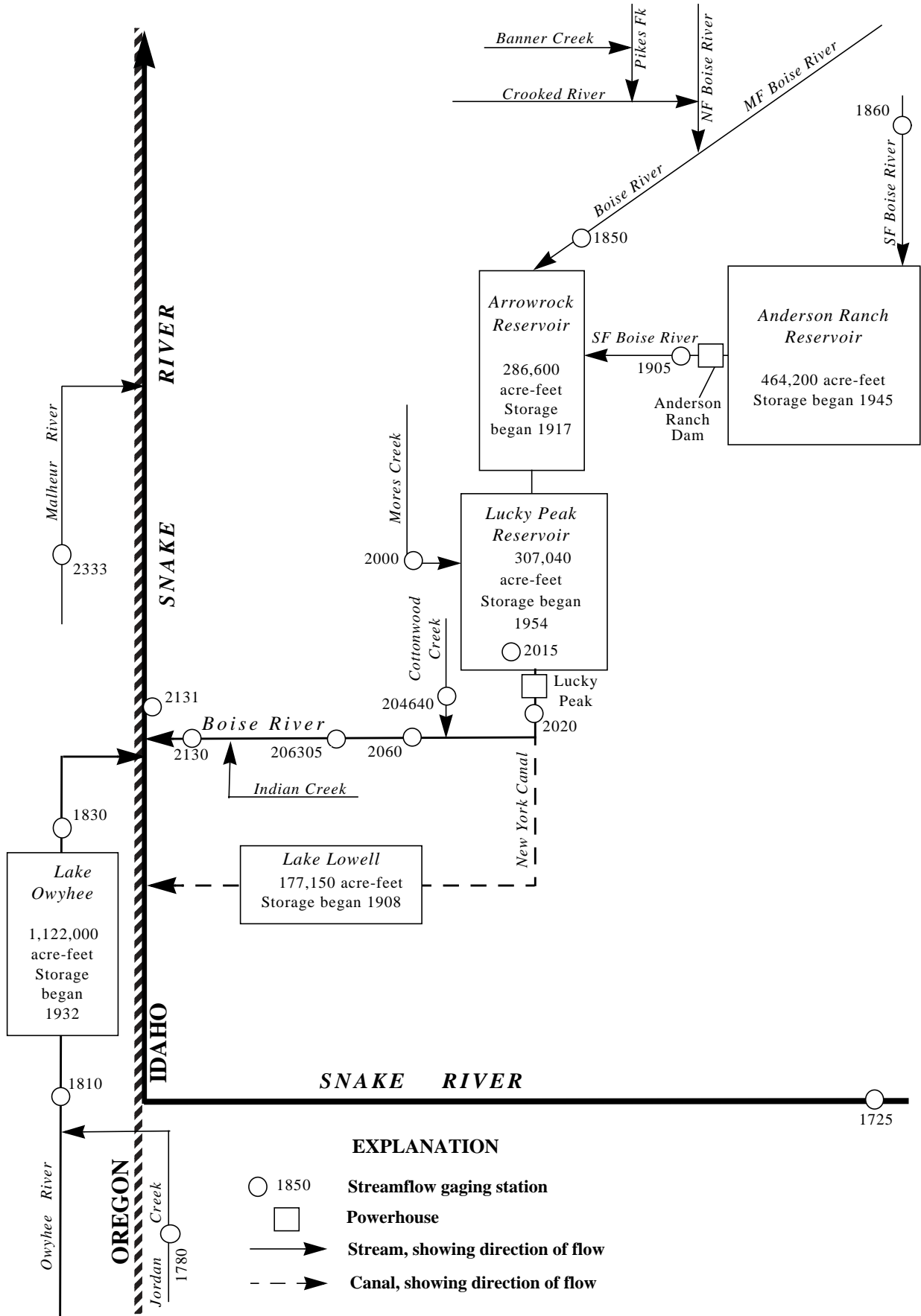


Figure 13. Schematic diagram showing gaging stations in Boise, Owyhee, Malheur and middle Snake River basins.

OWYHEE RIVER BASIN

13178000 JORDAN CREEK ABOVE LONE TREE CREEK NEAR JORDAN VALLEY, OR

LOCATION.--Lat 42°54'45", long 116°59'40", (NAD83), in SW¹/₄NW¹/₄SE¹/₄ sec.12, T.6 S., R.6 W., Owyhee County, Williams Creek quad., Hydrologic Unit 17050108, on left bank, 0.1 mi upstream from Lone Tree Creek, 1.6 mi east of the Idaho/Oregon State line, 4.8 mi southeast of Jordan Valley, Oregon, and at mile 52.6.

PERIOD OF RECORD.--November 2002 to June 2004 (discontinued). October 1945 to January 1953 at site 1.9 mi upstream, April 1955 to October 1971, at site 3.5 mi upstream; records equivalent except during late summer months when considerable difference may result from irrigation and return flow between sites.

GAGE.--Water-stage recorder. Elevation of gage is 4,450 ft above NGVD of 1929, from topographic map. Sept. 1, 1965 to Oct. 1971, at datum 4,499.73, unadjusted, at site 3.5 mi upstream. Apr. 23, 1955 to Jan. 31, 1965, at site 3.9 mi upstream at datum 5.73 ft higher. Prior to June 14, 1952, water-stage recorder, and June 14, 1952 to Jan. 31, 1953, nonrecording gage, at site 1.9 mi upstream at different datum. Nonrecording gage at site 0.1 mi downstream at datum 4,404.78 ft above NGVD of 1929, used as supplementary gage Feb. 3 to Aug. 31, 1965.

REMARKS.--Records fair. Station equipment includes satellite telemetry. Diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,530 ft³/s Dec. 24, 1964, gage height, 11.05 ft, site and datum then in use, from rating curve extended above 4,210 ft³/s; no flow part of each day Oct. 4, 5, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge during period October to June, 1,720 ft³/s Mar. 24; minimum daily, 3.4 ft³/s Oct. 1.

DAY	DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004											
	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	16	23	29	45	117	850	411	418	---	---	---
2	4.1	14	21	25	52	110	762	417	377	---	---	---
3	7.6	15	20	e24	49	98	784	450	358	---	---	---
4	5.8	17	19	24	47	110	899	497	330	---	---	---
5	5.9	24	18	e20	43	96	986	525	303	---	---	---
6	6.1	21	20	e22	31	113	1130	515	286	---	---	---
7	5.5	19	33	e28	49	131	1070	476	268	---	---	---
8	6.0	19	33	33	44	208	1070	435	236	---	---	---
9	6.2	20	23	34	e32	418	998	395	218	---	---	---
10	7.5	26	25	35	e30	607	882	365	212	---	---	---
11	8.4	22	26	33	e30	607	793	404	211	---	---	---
12	9.0	21	20	e30	e30	640	749	360	175	---	---	---
13	9.5	20	27	e30	e28	723	742	335	157	---	---	---
14	10	19	34	e28	e36	797	701	299	143	---	---	---
15	12	19	27	e28	46	899	632	274	133	---	---	---
16	12	20	21	e32	46	885	545	269	126	---	---	---
17	11	22	30	e32	131	952	489	248	116	---	---	---
18	14	22	24	32	378	1060	459	251	109	---	---	---
19	15	29	23	44	381	1350	434	277	107	---	---	---
20	17	27	28	e34	244	1410	407	274	102	---	---	---
21	19	25	28	e30	194	1430	419	268	96	---	---	---
22	20	20	25	e26	163	1590	414	282	92	---	---	---
23	20	17	20	37	167	1630	414	286	83	---	---	---
24	21	18	30	42	192	1720	383	311	79	---	---	---
25	22	14	32	36	163	1460	372	274	76	---	---	---
26	22	15	26	38	175	1260	398	281	74	---	---	---
27	21	11	21	37	157	1040	439	328	64	---	---	---
28	21	16	28	38	134	850	501	511	68	---	---	---
29	20	18	32	47	122	789	467	640	90	---	---	---
30	20	22	25	65	---	835	427	534	106	---	---	---
31	18	---	27	49	---	893	---	468	---	---	---	---
TOTAL	400.0	588	789	1042	3239	24828	19616	11660	5213	---	---	---
MEAN	12.9	19.6	25.5	33.6	112	801	654	376	174	---	---	---
MAX	22	29	34	65	381	1720	1130	640	418	---	---	---
MIN	3.4	11	18	20	28	96	372	248	64	---	---	---
AC-FT	793	1170	1560	2070	6420	49250	38910	23130	10340	---	---	---

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

MEAN	11.3	26.5	77.0	135	183	307	736	585	185	25.7	5.14	4.67
MAX	32.9	114	733	844	638	801	2098	1534	626	74.5	17.3	19.4
(WY)	1960	1971	1965	1971	1951	2004	1952	1952	1967	1952	1965	1965
MIN	2.60	13.8	13.9	18.0	24.8	93.6	131	103	32.9	5.49	1.16	1.19
(WY)	1967	1949	1950	1949	1949	1948	1968	1968	1966	1968	1961	1962

e Estimated

OWYHEE RIVER BASIN

13183000 OWYHEE RIVER BELOW OWYHEE DAM, OR

LOCATION.--Lat 43°39'16", long 117°15'21"(revised), (NAD83), in SE¹/₄ sec.18, T.22 S., R.45 E., Malheur County, Oregon, Grassy Mountain quad., Hydrologic Unit 17050110, on left bank 0.8 mi downstream from Owyhee Dam, 20 mi southwest of Nyssa, and at mile 27.3.

DRAINAGE AREA.--11,160 mi², approximately.

PERIOD OF RECORD.--February 1929 to current year.

REVISED RECORDS.--WSP 983: 1941-42. WSP 1397: 1930, 1933, 1946.

GAGE.--Water-stage recorder. Datum of gage is 2,343.67 ft above NGVD of 1929 (levels by Bureau of Reclamation).

REMARKS.--No estimated daily discharges. Records fair. Station equipment includes satellite telemetry. Flow regulated since October 1932 by Lake Owyhee (sta 13182500), and by many smaller reservoirs. Diversion of up to 457,000 acre-ft from Lake Owyhee during the year for irrigation of lands downstream from station and outside the basin. Many smaller diversions upstream from Lake Owyhee for irrigation upstream from station. Computation of monthly and annual adjusted flows discontinued in 1991.

AVERAGE DISCHARGE.--72 years (water years 1933-2004), 403 ft³/s, 292,300 acre-ft/yr, not adjusted for storage or diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,900 ft³/s Apr. 15, 1952, gage height, 15.70 ft; no flow for part of Aug. 8, 9, 1932, when temporary diversion tunnel at Owyhee Dam was closed.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 223 ft³/s Aug. 24, 26; minimum daily, 7.9 ft³/s Oct. 11-22.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	8.1	9.4	9.7	10	11	11	201	204	211	211	209
2	160	8.1	9.5	9.7	10	11	11	201	204	211	211	200
3	159	8.1	9.7	9.7	10	11	11	202	204	211	210	200
4	158	8.1	9.7	9.7	10	11	11	203	204	211	210	200
5	157	8.1	9.7	10	11	11	100	203	204	211	210	200
6	151	8.1	9.7	10	10	11	171	204	204	211	210	200
7	155	8.1	9.7	10	10	11	168	206	204	211	209	199
8	155	8.1	9.7	10	10	11	168	206	205	211	209	200
9	154	8.4	9.7	10	10	11	167	205	206	211	209	201
10	80	8.4	9.7	10	10	11	166	206	206	212	209	192
11	7.9	8.4	9.7	10	10	11	177	206	206	212	209	184
12	7.9	8.4	9.7	10	10	11	186	206	206	211	208	186
13	7.9	8.4	9.7	10	10	11	185	206	206	211	208	184
14	7.9	8.4	9.7	10	10	11	184	206	207	211	208	183
15	7.9	8.4	9.7	10	10	11	183	206	206	205	208	183
16	7.9	8.4	9.7	10	10	11	182	205	206	211	208	184
17	7.9	8.4	9.7	10	10	11	193	204	207	211	208	185
18	7.9	8.4	9.7	10	10	11	202	204	207	211	206	185
19	7.9	8.5	9.7	10	10	11	201	204	207	211	206	185
20	7.9	8.7	9.7	10	10	11	201	204	208	212	206	185
21	7.9	8.7	9.7	10	10	11	202	204	208	212	206	184
22	7.9	8.7	9.7	10	10	11	200	204	208	211	214	185
23	8.1	8.8	9.7	10	11	11	199	203	208	211	221	185
24	8.1	9.0	9.7	10	11	11	201	201	209	211	223	186
25	8.1	9.0	9.7	10	11	11	200	202	210	211	222	186
26	8.1	9.0	9.7	10	11	11	198	203	211	211	223	187
27	8.1	9.0	9.7	10	11	11	200	203	211	211	222	187
28	8.1	9.3	9.7	10	11	11	200	204	211	211	221	186
29	8.1	9.4	9.7	10	11	11	199	204	199	211	221	184
30	8.1	9.4	9.7	10	---	11	200	204	210	211	221	185
31	8.1	---	9.7	10	---	11	---	204	---	211	221	---
TOTAL	1657.7	256.3	300.2	308.8	298	341	4877	6324	6196	6539	6588	5700
MEAN	53.5	8.54	9.68	9.96	10.3	11.0	163	204	207	211	213	190
MAX	161	9.4	9.7	10	11	11	202	206	211	212	223	209
MIN	7.9	8.1	9.4	9.7	10	11	11	201	199	205	206	183
AC-FT	3290	508	595	613	591	676	9670	12540	12290	12970	13070	11310
CAL YR 2003	TOTAL	28904.2	MEAN	79.2	MAX	173	MIN	7.9	AC-FT	57330		
WTR YR 2004	TOTAL	39386.0	MEAN	108	MAX	223	MIN	7.9	AC-FT	78120		

BOISE RIVER BASIN
13185000 BOISE RIVER NEAR TWIN SPRINGS, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1958 to September 1959, November 1974 to November 1980, November 1990 to September 1991, November 1993 to September 1994, May to June 1995, May to June 1996, April to September 1997, June to August 1998, April to September 2000, April to September 2004 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: August to September 1997, June to August 1998, August to September 2000, April to September 2004 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 24.1 °C Aug. 1-2, 2000, July 16, 2004.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 24.1 °C July 16.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Turbidity, wat unfltrd, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Ammonia, water, mg/L as N (00608)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)
APR 21...	1345	1400	56	7.4	11.0	7.0	7.0	11.8	111	<1	E.005	.11	.065
MAY 19...	1210	2060	50	7.1	14.0	8.6	5.3	11.0	106	S2	<.010	.24	.076
JUN 17...	1215	1860	52	7.1	25.5	11.5	<2.0	10.6	109	3	<.010	E.07	E.015
JUL 13...	1045	662	65	7.3	26.0	17.6	<2.0	9.4	112	S10	<.010	E.07	<.016
AUG 27...	1128	489	81	7.7	20.5	13.3	18	10.8	115	24	<.010	.18	.020
SEP 16...	1230	484	88	7.8	16.0	13.2	2.7	9.9	107	27	<.010	E.08	<.016

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Hardness, water, mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Potassium, water, fltrd, mg/L (00935)	Bicarbonate, wat unfltrd, fixed end pt, mg/L (00440)	Carbonate, wat unfltrd, fixed end pt, mg/L (00445)	ANC, wat unfltrd, fixed end pt, mg/L as CaCO3 (00410)	Sulfate, water, fltrd, mg/L (00945)	Chloride, water, fltrd, mg/L (00940)
APR 21...	E.004	.019	--	--	--	--	--	--	--	--	--	--	--
MAY 19...	<.006	.018	--	--	--	--	--	--	--	--	--	--	--
JUN 17...	<.006	.016	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	<.006	.016	--	--	--	--	--	--	--	--	--	--	--
AUG 27...	.007	.070	--	--	--	--	--	--	--	--	--	--	--
SEP 16...	E.003	.018	31	11.0	.828	4.82	25	.39	49	.0	40	2.8	.59

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
APR 21...	--	--	254	960
MAY 19...	--	--	65	362
JUN 17...	--	--	21	105
JUL 13...	--	--	9	16
AUG 27...	--	--	39	51
SEP 16...	.6	13.8	11	14

< Less than
E Estimated value
S Most probable value

BOISE RIVER BASIN

13185000 BOISE RIVER NEAR TWIN SPRINGS, ID--Continued

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

Date	Time	Aluminum, biota, tissue, rec, dry wgt ug/g (49237)	Antimony, biota, tissue, rec, dry wgt ug/g (49246)	Arsenic, biota, tissue, rec, dry wgt ug/g (49247)	Barium, biota, tissue, rec, dry wgt ug/g (49238)	Beryllium, biota, tissue, rec, dry wgt ug/g (49248)	Boron, biota, tissue, rec, dry wgt ug/g (49239)	Cadmium, biota, tissue, rec, dry wgt ug/g (49249)	Chromium, biota, tissue, rec, dry wgt ug/g (49240)	Cobalt, biota, tissue, rec, dry wgt ug/g (49250)	Copper, biota, tissue, rec, dry wgt ug/g (49241)	Iron, biota, tissue, rec, dry wgt ug/g (49242)	Lead, biota, tissue, rec, dry wgt ug/g (49251)
SEP 09...	1300	<1	<.1	.6	<.1	<.1	<.2	<.1	.5	<.1	1.0	13	<.1
Date		Manganese, biota, tissue, rec, dry wgt ug/g (49243)	Mercury, biota, tissue, rec, dry wgt ug/g (49258)	Molybdenum, biota, tissue, rec, dry wgt ug/g (49252)	Nickel, biota, tissue, rec, dry wgt ug/g (49253)	Selenium, biota, tissue, rec, dry wgt ug/g (49254)	Silver, biota, tissue, rec, dry wgt ug/g (49255)	Strontium, biota, tissue, rec, dry wgt ug/g (49244)	Vanadium, biota, tissue, rec, dry wgt ug/g (49465)	Zinc, biota, tissue, rec, dry wgt ug/g (49245)	Uranium, biota, tissue, rec, dry wgt ug/g (49257)		
SEP 09...		.5	.289	<.1	<.1	.7	<.1	1.5	.2	17	<.1		

< Less than

Temperature, water, degrees Celsius
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	11.6	8.5	10.0
2	---	---	---	---	---	---	---	---	---	11.9	9.2	10.6
3	---	---	---	---	---	---	---	---	---	12.2	9.2	10.9
4	---	---	---	---	---	---	---	---	---	12.3	8.9	10.9
5	---	---	---	---	---	---	---	---	---	12.3	8.5	10.5
6	---	---	---	---	---	---	---	---	---	11.6	7.9	9.8
7	---	---	---	---	---	---	---	---	---	11.1	8.2	9.9
8	---	---	---	---	---	---	---	---	---	11.1	8.3	9.9
9	---	---	---	---	---	---	---	---	---	10.7	7.9	9.2
10	---	---	---	---	---	---	---	---	---	9.9	8.2	8.8
11	---	---	---	---	---	---	---	---	---	8.2	6.5	7.4
12	---	---	---	---	---	---	---	---	---	8.5	6.3	7.3
13	---	---	---	---	---	---	---	---	---	10.5	6.3	8.2
14	---	---	---	---	---	---	---	---	---	11.1	8.2	9.5
15	---	---	---	---	---	---	---	---	---	10.5	8.2	9.1
16	---	---	---	---	---	---	---	---	---	10.8	8.9	9.7
17	---	---	---	---	---	---	---	---	---	10.8	8.3	9.7
18	---	---	---	---	---	---	---	---	---	10.9	9.6	10.4
19	---	---	---	---	---	---	---	---	---	11.7	8.3	9.7
20	---	---	---	---	---	---	---	---	---	12.3	9.2	10.8
21	---	---	---	---	---	---	---	---	---	11.7	9.6	10.5
22	---	---	---	---	---	---	---	---	---	10.8	8.6	9.5
23	---	---	---	---	---	---	---	---	---	10.1	8.2	9.2
24	---	---	---	---	---	---	---	---	---	9.6	7.1	8.5
25	---	---	---	---	---	---	---	---	---	11.4	8.0	9.4
26	---	---	---	---	---	---	---	---	---	10.8	8.8	9.4
27	---	---	---	---	---	---	11.7	9.4	10.7	10.9	8.5	9.7
28	---	---	---	---	---	---	11.2	7.1	9.0	10.8	8.8	9.6
29	---	---	---	---	---	---	8.8	5.1	6.9	9.1	6.8	7.7
30	---	---	---	---	---	---	10.6	7.2	8.8	9.7	6.3	7.9
31	---	---	---	---	---	---	---	---	---	11.6	7.7	9.4
MONTH	---	---	---	---	---	---	---	---	---	12.3	6.3	9.5

BOISE RIVER BASIN
13185000 BOISE RIVER NEAR TWIN SPRINGS, ID--Continued

Temperature, water, degrees Celsius
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.6	9.6	11.1	18.3	15.0	16.6	23.6	18.6	21.3	20.4	16.4	18.6
2	13.4	10.3	11.9	19.0	15.4	17.1	23.6	19.8	21.6	19.4	16.2	18.0
3	14.2	11.1	12.7	18.1	15.3	16.8	23.1	18.8	21.1	17.4	13.0	15.5
4	14.2	11.4	13.0	19.1	15.3	17.2	22.4	17.5	20.3	17.4	12.6	15.1
5	13.9	10.2	12.1	19.3	14.7	17.0	22.4	18.0	20.5	17.7	13.1	15.5
6	13.1	10.2	11.5	19.4	15.3	17.4	21.1	17.5	19.3	17.4	12.6	15.2
7	11.2	8.2	9.7	19.9	15.8	17.8	20.6	16.1	18.6	17.2	12.2	14.9
8	13.3	9.6	11.2	18.8	14.5	16.8	21.2	15.9	18.8	18.1	13.1	15.7
9	13.0	10.9	11.8	17.3	13.9	15.6	21.9	16.6	19.4	18.1	13.4	16.0
10	11.4	10.0	10.5	19.1	14.2	16.6	22.2	17.0	19.9	18.5	14.2	16.4
11	12.0	8.5	10.1	20.4	15.4	17.8	22.6	17.7	20.3	18.0	13.7	16.2
12	12.6	9.6	11.1	20.7	15.3	18.1	22.9	17.5	20.4	17.1	13.6	15.1
13	13.9	10.9	12.3	21.9	16.7	19.3	22.4	18.0	20.5	13.6	12.0	12.9
14	14.2	11.2	12.7	22.7	17.4	20.0	22.6	18.5	20.8	14.0	10.9	12.3
15	13.9	10.9	12.5	23.4	18.5	21.0	23.2	18.6	21.0	12.8	10.6	11.8
16	14.0	10.8	12.4	24.1	19.6	21.8	21.8	19.4	20.7	15.4	11.4	13.3
17	14.8	11.2	13.0	23.6	19.3	21.5	20.9	18.8	19.6	15.8	11.9	13.9
18	14.1	11.6	12.6	22.2	19.6	20.5	21.7	17.4	19.3	15.0	12.1	13.4
19	15.8	11.4	13.3	22.4	17.2	19.6	21.9	18.3	20.2	12.1	10.6	11.2
20	15.0	12.0	13.5	23.6	19.3	21.2	22.2	18.0	20.2	11.2	9.1	10.3
21	15.6	11.7	13.6	23.1	18.5	20.8	21.6	17.7	19.8	11.9	8.3	10.1
22	16.9	13.3	15.0	23.2	18.3	20.8	20.5	17.3	18.8	12.8	8.8	10.9
23	17.0	13.9	15.5	23.1	18.3	20.9	17.4	15.4	16.5	14.5	10.8	12.6
24	18.0	14.2	15.8	23.6	18.3	21.0	16.6	13.4	15.1	15.3	11.6	13.5
25	18.6	15.3	17.0	22.6	19.3	21.0	17.2	14.5	15.6	15.3	11.6	13.6
26	18.6	15.3	16.9	21.8	18.5	20.0	16.3	13.6	14.7	15.8	11.7	13.8
27	18.6	15.0	16.8	22.6	17.5	20.1	17.2	12.3	14.7	15.9	12.5	14.3
28	18.6	15.8	17.2	22.4	17.8	20.3	18.3	13.3	15.8	16.1	12.3	14.3
29	18.3	15.1	16.9	22.2	17.4	20.1	19.4	14.3	17.0	15.2	12.5	13.9
30	17.7	14.7	16.3	22.6	17.4	20.2	20.2	15.3	17.9	14.8	11.6	13.3
31	---	---	---	23.1	17.7	20.6	20.4	15.6	18.2	---	---	---
MONTH	18.6	8.2	13.3	24.1	13.9	19.2	23.6	12.3	19.0	20.4	8.3	14.1

BOISE RIVER BASIN

13190500 SOUTH FORK BOISE RIVER AT ANDERSON RANCH DAM, ID

LOCATION.--Lat 43°20'30", long 115°28'40", in NW $\frac{1}{4}$ sec.14, T.1 S., R.8 E., Elmore County, Anderson Ranch Dam quad., Hydrologic Unit 17050113, Boise National Forest, on right bank 600 ft upstream from Dixie Creek, 1.8 mi downstream from Anderson Ranch, 2.2 mi northwest of Bennett, and at mile 41.5.

DRAINAGE AREA.--982 mi².

PERIOD OF RECORD.--April 1943 to current year (includes flow of Dixie Creek prior to October 1946).

GAGE.--Water-stage recorder. Datum of gage is 3,830.0 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good. Station equipment includes satellite telemetry. Flow regulated by Anderson Ranch Reservoir, 1.8 mi upstream (see sta 13190000) beginning Dec. 15, 1945. Flow of Little Camas Creek is stored in Little Camas Reservoir, capacity, 22,300 acre-ft, no spill most years, and diverted out of basin through Little Camas Canal for irrigation of about 5,000 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,850 ft³/s May 25, 1956, gage height, 10.56 ft; minimum, 0.10 ft³/s Nov. 13, 1959; minimum gage height, 0.99 ft, Feb. 16, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,610 ft³/s Aug. 8; minimum daily, 290 ft³/s Mar. 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	596	297	297	303	308	297	592	599	1550	1590	1590	654
2	602	298	295	303	309	296	598	594	1550	1590	1590	659
3	603	300	296	309	311	296	598	590	1530	1590	1600	662
4	602	298	294	308	311	299	603	590	1530	1590	1590	659
5	599	298	293	310	313	297	600	590	1530	1590	1590	665
6	600	296	293	310	315	298	602	588	1520	1590	1600	666
7	452	296	294	308	318	298	602	584	1520	1590	1590	667
8	300	295	302	308	317	298	600	582	1520	1590	1610	652
9	296	294	299	308	310	298	599	583	1530	1580	1600	667
10	296	295	294	307	305	297	600	582	1520	1580	1600	666
11	297	295	297	305	306	298	599	580	1510	1580	1600	662
12	297	295	299	306	299	300	600	579	1510	1590	1600	664
13	299	295	300	307	300	300	600	581	1520	1590	1600	679
14	298	294	299	307	300	300	603	575	1510	1590	1600	676
15	298	293	301	307	300	300	603	573	1510	1580	1600	669
16	297	294	301	308	299	299	602	573	1510	1580	1420	568
17	297	296	301	311	294	297	603	759	1500	1580	1240	369
18	297	300	301	311	295	290	602	958	1500	1580	1020	356
19	297	299	300	312	300	293	599	1160	1510	1580	850	359
20	297	299	300	313	304	300	601	1350	1510	1580	632	351
21	298	297	301	313	302	300	603	1540	1510	1580	621	352
22	297	300	304	313	303	300	601	1560	1510	1580	627	360
23	299	302	304	311	300	300	599	1550	1500	1580	628	360
24	299	301	305	311	299	300	599	1550	1510	1570	625	360
25	298	301	304	311	300	300	598	1540	1510	1570	636	358
26	297	299	306	309	300	300	602	1540	1510	1580	643	357
27	296	300	307	309	300	302	598	1550	1510	1580	644	358
28	296	298	307	308	300	300	599	1550	1550	1580	648	356
29	296	300	306	310	300	300	600	1540	1580	1580	654	356
30	297	297	305	308	---	300	596	1550	1590	1580	646	326
31	298	---	306	308	---	300	---	1550	---	1580	650	---
TOTAL	11191	8922	9311	9572	8818	9253	18001	30590	45670	49070	36144	15513
MEAN	361	297	300	309	304	298	600	987	1522	1583	1166	517
MAX	603	302	307	313	318	302	603	1560	1590	1590	1610	679
MIN	296	293	293	303	294	290	592	573	1500	1570	621	326
AC-FT	22200	17700	18470	18990	17490	18350	35700	60680	90590	97330	71690	30770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2004, BY WATER YEAR (WY)

MEAN	386	400	507	537	589	672	1092	2051	2285	1503	1052	612
MAX	1183	1504	1556	1531	3002	2996	3795	4820	5171	2546	1862	1741
(WY)	1953	1984	1984	1984	1997	1997	1946	1943	1983	1950	1948	1952
MIN	1.46	1.32	1.26	1.30	1.57	3.19	5.84	3.37	572	628	62.6	41.7
(WY)	1949	1949	1950	1949	1950	1950	1962	1962	1955	1944	1950	1949

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1943 - 2004
ANNUAL TOTAL	204150	252055	
ANNUAL MEAN	559	689	969
HIGHEST ANNUAL MEAN			1735
LOWEST ANNUAL MEAN			411
HIGHEST DAILY MEAN	1240	Jul 6	1610
LOWEST DAILY MEAN	293	Nov 15	290
ANNUAL SEVEN-DAY MINIMUM	294	Nov 9	294
ANNUAL RUNOFF (AC-FT)	404900	500000	702300
10 PERCENT EXCEEDS	1200	1580	2120
50 PERCENT EXCEEDS	596	358	601
90 PERCENT EXCEEDS	297	297	192



South Fork Boise River at Anderson Ranch Dam, Idaho

BOISE RIVER BASIN

13201500 LUCKY PEAK LAKE NEAR BOISE, ID

LOCATION.--Lat 43°31'32", long 116°03'19"(revised), (NAD83), in SW¼NW¼ sec.12, T.2 N., R.3 E., Ada County, Lucky Peak quad., Hydrologic Unit 17050112, at outlet control tower at Lucky Peak Dam on Boise River, 2 mi upstream from diversion dam for New York Canal, 7 mi downstream from Mores Creek, 9 mi southeast of Boise, and at mile 63.8.

DRAINAGE AREA.--2,680 mi², approximately.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level, (levels by U.S. Corps of Engineers). Prior to May 13, 1955, nonrecording gage at same site and datum.

REMARKS.--Station equipment includes satellite telemetry. Reservoir is formed by earthfill dam. Storage began Oct. 16, 1954. Dam completed in February 1955. Capacity, 307,040 acre-ft between elevations 2,827.0 ft, sill of outlet gates, and 3,060.0 ft, spillway crest. Minimum proposed operating level, 2,905.0 ft, 28,770 acre-ft, but all storage can be released. Water is stored for flood control, irrigation of lands in Boise Valley, and hydro-electric power.

COOPERATION.--Gage-height record and capacity table provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 305,130 acre-ft June 25, 1955, elevation, 3,059.32 ft; minimum since near-full capacity was attained on June 25, 1955, 28,630 acre-ft Dec. 21, 1961, elevation, 2,904.83 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 294,700 acre-ft July 22, elevation, 3,055.56 ft; minimum contents, 51,200 acre-ft Sept. 30, elevation, 2,928.64 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

2,920.0	42,200	3,000.0	162,800
2,940.0	64,600	3,020.0	205,600
2,960.0	92,400	3,040.0	253,600
2,980.0	125,100	3,060.0	307,000

RESERVOIR STORAGE, in (ACRE-FEET), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97200	89400	120100	158100	169700	183600	210400	223900	291600	292500	288800	200600
2	93400	90200	121300	159300	170000	183800	211300	224600	291300	292400	289100	195900
3	89600	91100	122500	160400	170300	183900	212700	225200	291100	292200	289600	191100
4	85800	92100	123500	161600	170600	184000	214400	225700	291500	291900	290100	186500
5	82000	93000	124600	161700	171000	184000	214700	227100	292200	291800	290600	181800
6	78700	93900	125900	161800	171100	184000	213900	228900	293000	291900	291400	177100
7	75800	94700	127900	162000	171600	184000	214000	230600	293100	292000	292200	172500
8	74800	95600	129600	162600	172000	184000	214600	232200	292800	292200	292800	167900
9	74600	96600	130800	163000	172100	184100	215100	233700	292400	292400	293700	162100
10	74400	97900	132000	163400	171800	184500	215600	236400	292100	292700	293700	156000
11	74300	99300	133200	163700	171500	185000	216000	239600	291800	292800	292800	149700
12	74100	100500	134400	163800	171300	185500	216100	242800	291400	293000	292800	143500
13	74100	101500	135800	163900	171000	186200	216700	245700	291500	293100	292900	137600
14	74000	102400	137100	164000	170700	186900	217400	248400	291800	293000	289400	131600
15	74500	103300	138500	164000	170700	187600	217600	251000	291700	292900	283600	125800
16	75400	104400	139600	164300	170900	188500	218000	253700	291700	292700	277800	120200
17	76400	105600	140700	164600	171300	189300	218600	256300	291600	292500	272200	114700
18	77600	106800	141700	164900	172000	190300	218900	259500	291700	292200	266800	109200
19	78300	107800	142800	165200	173500	191400	218800	263700	291900	292200	261900	103600
20	79200	108800	143800	165600	174900	192600	218500	268200	292100	291800	257100	98100
21	80000	109800	145000	165900	176000	193700	218300	273100	292200	293600	252400	92600
22	80800	110800	146200	166000	176900	195300	218600	278000	291900	294100	247700	87100
23	81700	111500	147200	165900	177600	197100	219200	282600	291400	292500	243400	81400
24	82500	112200	148500	166300	178300	199100	219800	287100	291300	291800	238500	76000
25	83300	113300	149900	166500	179100	200800	220400	291400	291400	291700	234600	70500
26	84100	114400	151100	167000	180200	202900	221000	293100	291800	291400	230700	65100
27	84900	115500	152100	167300	181200	204500	221500	293500	292200	290800	226200	60200
28	85700	116500	153100	167600	182100	205900	222100	294100	292700	289900	220900	56700
29	86600	117600	154200	168200	183200	207000	222700	293600	292800	289200	215700	53700
30	87500	118900	155600	168700	---	208200	223300	292400	292600	289000	210600	51200
31	88500	---	156800	169300	---	209600	---	291800	---	289000	205600	---
MAX	97200	118900	156800	169300	183200	209600	223300	294100	293100	294100	293700	200600
MIN	74000	89400	120100	158100	169700	183600	210400	223900	291100	289000	205600	51200
†	2957.38	2976.42	2996.98	3003.19	3009.82	3021.75	3027.66	3054.50	3054.80	3053.48	3020.01	2928.62
‡	-12600	30400	37900	12500	13900	26400	13700	68500	800	-3600	-83400	-154400

CAL YR 2003 † 46800
WTR YR 2004 ‡ -49900

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

BOISE RIVER BASIN

13202000 BOISE RIVER NEAR BOISE, ID

LOCATION.--Lat 43°31'40", long 116°03'31", in NE¼ sec.11, T.2 N., R.3 E., Ada County, Lucky Peak quad., Hydrologic Unit 17050112, at gate-control house at outlet works of Lucky Peak Lake, 1.8 mi upstream from diversion dam for New York Canal, 7.5 mi downstream from mouth of Mores Creek, 9 mi southeast of Boise, and at mile 63.6.

DRAINAGE AREA.--2,680 mi², approximately. Mean elevation, 5,910 ft.

PERIOD OF RECORD.--January 1895 to September 1916 (no winter records 1904-05, 1907), November 1950 to September 1954 (discharge measurements only), October 1954 to current year. Published as "near Highland" 1905-15 and as "below Moore Creek, near Arrowrock" 1916.

REVISED RECORDS.--WSP 1347: 1895-1901, 1904.

GAGE.--None. See WDR ID-87-1 for history of changes prior to October 1, 1987.

REMARKS.--Flow regulated by Lucky Peak Lake, Arrowrock Reservoir, and Anderson Ranch Reservoir. Diversions above station for irrigation of about 2,300 acres in the basin, and about 5,000 acres outside the basin near Mountain Home (1966 determination).

COOPERATION.--Discharge record provided by Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed (1895-1916), prior to regulation, 35,500 ft³/s June 14, 1896; minimum observed, 432 ft³/s Nov. 14, 1915.

Maximum discharge since construction of Lucky Peak Dam in 1955, 13,200 ft³/s June 13-15, 1983; no flow on several days in 1954, 1955, 1957-59, 1961, 1969, 1974, 1978, 1980, 1982, 1984-86, 1989 when gates were closed.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,460 ft³/s June 27; minimum daily, 241 ft³/s Dec. 2.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3000	253	243	246	745	529	544	3350	3050	4400	4330	3360
2	3000	253	241	248	748	246	458	3360	3070	4410	4330	3330
3	3000	254	246	244	746	247	245	3360	3080	4410	4330	3330
4	3000	246	246	245	744	246	245	3460	3080	4410	4340	3340
5	3000	245	244	728	747	246	1010	3500	3080	4410	4320	3330
6	2720	243	244	556	744	244	1910	3510	3080	4410	4300	3320
7	2580	243	245	747	744	246	2020	3540	3180	4380	4310	3290
8	1260	243	244	745	745	246	2190	3560	3230	4340	4310	3280
9	834	244	246	746	881	244	2290	3550	3230	4330	4310	3270
10	802	245	246	746	943	246	2310	3550	3230	4330	4290	3280
11	802	242	246	746	938	246	2290	3550	3230	4330	4280	3280
12	801	243	248	744	947	246	2390	3550	3230	4320	4280	3290
13	799	243	247	746	947	245	2550	3560	3230	4320	4280	3210
14	802	244	247	748	948	243	2700	3560	3290	4330	4280	3170
15	470	243	246	748	948	245	2880	3560	3430	4330	4280	3120
16	304	243	246	746	948	245	3000	3560	3490	4330	4290	3000
17	303	242	247	744	946	244	3080	3560	3500	4330	4280	2960
18	304	243	247	745	944	245	3130	3450	3660	4340	4140	2950
19	303	242	247	747	934	246	3320	3320	3730	4330	4000	2950
20	304	242	247	743	948	246	3380	3270	3730	4360	3920	2940
21	304	243	246	749	949	245	3380	3260	3970	4330	3910	2910
22	304	243	246	746	945	245	3380	3260	4270	4340	3910	2900
23	304	244	247	746	1050	245	3380	3260	4400	4330	3730	2890
24	304	243	246	746	1110	245	3400	3260	4450	4340	3630	2880
25	302	242	245	746	1110	244	3400	3260	4450	4330	3630	2880
26	302	243	246	745	1100	246	3400	3240	4450	4340	3600	2890
27	304	244	245	743	1110	244	3410	3230	4460	4330	3460	2850
28	304	242	246	747	1110	245	3400	3110	4450	4330	3390	2830
29	304	243	246	746	1110	245	3410	3050	4430	4330	3380	2840
30	271	243	246	746	---	245	3370	3060	4420	4330	3360	2810
31	252	---	247	746	---	244	---	3050	---	4330	3360	---
TOTAL	31643	7326	7619	20914	26829	7884	75872	104720	109580	134810	124560	92680
MEAN	1021	244	246	675	925	254	2529	3378	3653	4349	4018	3089
MAX	3000	254	248	749	1110	529	3410	3560	4460	4410	4340	3360
MIN	252	242	241	244	744	243	245	3050	3050	4320	3360	2810
AC-FT	62760	14530	15110	41480	53220	15640	150500	207700	217400	267400	247100	183800

BOISE RIVER BASIN

13202000 BOISE RIVER NEAR BOISE, ID--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 1916, BY WATER YEAR (WY) (UNREGULATED)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	969	1151	1111	1238	1299	2951	6377	8150	7913	2992	1185	970
MAX	1349	3343	2309	2590	1979	9144	11220	13360	24400	6218	2655	2094
(WY)	1900	1910	1899	1899	1909	1910	1907	1904	1896	1896	1916	1916
MIN	683	509	539	660	925	1388	2823	2023	3186	1272	643	578
(WY)	1907	1916	1916	1898	1913	1915	1915	1915	1915	1905	1905	1905

SUMMARY STATISTICS

^a WATER YEARS 1895 - 1916

ANNUAL MEAN	3038
HIGHEST ANNUAL MEAN	4510
LOWEST ANNUAL MEAN	1627
HIGHEST DAILY MEAN	35500
LOWEST DAILY MEAN	432
ANNUAL SEVEN-DAY MINIMUM	482
ANNUAL RUNOFF (AC-FT)	2201000
10 PERCENT EXCEEDS	8150
50 PERCENT EXCEEDS	1340
90 PERCENT EXCEEDS	812

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2004, BY WATER YEAR (WY) (REGULATED)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	948	207	339	658	1462	2257	4176	6039	5480	4584	4014	2962
MAX	2246	1448	1756	6008	7009	7565	8940	10830	10540	6034	4752	4469
(WY)	1985	1987	1996	1997	1997	1997	1997	1965	1983	1982	1963	1984
MIN	63.0	0.00	0.00	0.00	0.00	90.0	622	2797	3147	2795	1056	403
(WY)	1962	1955	1955	1955	1961	1977	1955	1991	1990	1992	1992	1992

SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

^b WATER YEARS 1955 - 2004

ANNUAL TOTAL	774909.4	744437	
ANNUAL MEAN	2123	2034	2765
HIGHEST ANNUAL MEAN			4914
LOWEST ANNUAL MEAN			1137
HIGHEST DAILY MEAN	4670	4460	13200
LOWEST DAILY MEAN	8.4	241	0.00
ANNUAL SEVEN-DAY MINIMUM	205	243	0.00
ANNUAL RUNOFF (AC-FT)	1537000	1477000	2003000
10 PERCENT EXCEEDS	4420	4330	6200
50 PERCENT EXCEEDS	1870	2100	2650
90 PERCENT EXCEEDS	242	244	101

a Unregulated, prior to construction of Arrowrock Dam.
 b Regulated, unadjusted (since construction of Lucky Peak Dam).

BOISE RIVER BASIN

13203510 BOISE RIVER BELOW DIVERSION DAM NEAR BOISE, ID

LOCATION.--Lat 43°32'23", long 116°05'37", in SE¹/₄SE¹/₄NE¹/₄ sec.4, T.2 N., R.3 E., Ada County, Lucky Peak quad., Hydrologic Unit 17050114, on right bank, 700 ft downstream from Diversion Dam, and 7.0 mi southeast of Boise.

DRAINAGE AREA.--2,680 mi², approximately. Mean elevation, 5,910 ft.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1990 to September 1991, October 1992 to September 2004 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April to September 1997, February to September 1999 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 18.4 °C Sept. 16, 19-20, 1999.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered, 25 degC (00095)	pH, water, unfiltered, field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)	Total coliform, Defined Tech., MPN/100 mL (50569)	Ammonia water, filtered, mg/L as N (00608)	Ammonia + org-N, water, unfiltered, mg/L as N (00625)
OCT													
21...	1127	290	92	7.7	20.0	12.5	11.6	119	2	1	150	<.04	.23
DEC													
16...	1039	240	92	8.0	1.5	4.6	13.3	113	1	<1	13	<.04	.11
FEB													
18...	1032	367	97	7.6	11.5	1.8	13.0	104	1	<1	2	<.04	E.10
APR													
14...	1223	1440	96	7.6	15.0	5.7	13.6	121	1	<1	4	<.04	E.07
MAY													
12...	1111	1810	76	7.5	12.0	8.4	12.5	119	1	<1	4	<.04	.15
JUN													
15...	1010	1750	67	7.3	12.0	10.8	10.7	106	2	1	20	<.04	E.10
JUL													
20...	1148	2050	70	7.2	28.0	13.7	9.1	97	1	1	55	<.04	.10
AUG													
24...	1018	1530	70	7.0	17.0	16.6	7.5	86	4	4	83	<.04	.11
SEP													
21...	1053	1300	78	7.3	8.0	16.9	8.2	93	1	1	180	<.04	.14

Date	Nitrite + nitrate water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT					
21...	.12	E.01	.06	45	35
DEC					
16...	.14	E.01	E.03	6	3.9
FEB					
18...	.17	E.01	E.03	2	2.0
APR					
14...	.23	E.01	E.03	10	39
MAY					
12...	.15	E.01	E.02	4	20
JUN					
15...	.08	<.02	<.04	2	9.5
JUL					
20...	.06	<.02	<.04	3	17
AUG					
24...	E.04	<.02	<.04	3	12
SEP					
21...	E.04	<.02	E.02	4	14

< Less than
E Estimated value

BOISE RIVER BASIN

13204640 COTTONWOOD CREEK BELOW FIVEMILE CREEK NEAR BOISE, ID

LOCATION.--Lat 43°37'43", long 116°06'39", (NAD83)in SW¼NE¼NW¼ sec.4, T.4 N., R.3 E., Ada County, Robie Creek quad., Hydrologic Unit 17050114, on left bank 500 ft downstream from Fivemile Creek, and 5.0 mi east of Boise.

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,780 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair. Station equipment includes satellite telemetry.

COOPERATION.--City of Boise.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14 ft³/s Mar. 9, 2002, gage height, 8.18 ft; no flow for long periods.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 11 ft³/s Mar. 13-19; no flow for long periods.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.51	0.73	1.5	5.8	4.9	1.1	1.1	0.45	0.00	0.00
2	0.00	0.00	0.48	0.69	1.3	5.4	4.6	1.1	1.0	0.41	0.00	0.00
3	0.00	0.00	0.47	0.68	1.2	4.9	4.4	1.1	0.92	0.38	0.00	0.00
4	0.00	0.00	0.47	0.67	1.1	4.7	e4.5	1.0	0.83	0.36	0.00	0.00
5	0.00	0.00	0.51	e0.50	1.0	4.1	4.2	0.98	0.77	0.33	0.00	0.00
6	0.00	0.00	0.56	0.64	0.99	3.9	4.1	0.95	0.74	0.31	0.00	0.00
7	0.00	0.00	0.65	0.65	0.98	4.0	e3.5	0.91	0.76	0.29	0.00	0.00
8	0.00	e0.00	0.61	0.66	0.94	4.9	3.5	0.90	0.71	0.28	0.00	0.00
9	0.00	e0.00	0.59	0.85	0.94	6.6	e3.0	0.89	0.69	0.25	0.00	0.00
10	0.00	e0.00	0.56	0.84	0.96	8.5	e3.0	0.99	0.70	0.23	0.00	0.00
11	0.00	e0.00	0.54	0.80	0.96	9.8	e2.5	2.3	0.69	0.21	0.00	0.00
12	0.00	e0.00	0.57	0.75	0.95	10	2.5	1.3	0.65	0.18	0.00	0.00
13	0.00	e0.00	0.84	0.73	0.91	11	e2.5	1.1	0.61	0.13	0.00	0.00
14	0.00	e0.00	0.81	0.73	0.91	11	2.3	0.98	0.60	0.09	0.00	0.00
15	0.00	e0.00	0.66	0.71	0.92	11	e2.0	0.95	0.59	0.06	0.00	0.00
16	0.00	e0.20	0.62	0.72	1.1	11	2.1	1.3	0.56	0.04	0.00	0.00
17	0.00	e0.50	0.61	0.69	3.5	11	1.9	1.3	0.52	0.04	0.00	0.00
18	0.00	e0.50	0.60	0.68	6.7	11	e2.0	1.2	0.50	0.06	0.00	0.00
19	0.00	e0.40	0.59	0.67	7.2	11	e2.0	1.6	0.49	0.06	0.00	0.00
20	0.00	e0.40	0.57	0.65	6.2	9.8	e2.0	1.1	0.48	0.07	0.00	0.00
21	0.00	e0.30	0.57	0.65	5.3	9.3	e2.0	1.1	0.45	0.04	0.00	0.00
22	0.00	e0.30	0.57	0.61	4.8	9.3	e2.0	1.0	0.42	0.03	0.00	0.00
23	0.00	e0.30	0.58	0.64	4.8	9.2	1.7	1.0	0.38	0.02	0.00	0.00
24	0.00	e0.40	0.82	0.66	5.1	8.8	1.5	0.97	0.36	0.00	0.00	0.00
25	0.00	e0.40	0.84	0.63	5.2	7.9	1.4	0.90	0.34	0.00	0.00	0.00
26	0.00	0.39	0.75	0.56	6.0	8.2	1.3	0.92	0.31	0.00	0.00	0.00
27	0.00	0.38	0.67	0.57	5.8	7.5	1.3	0.98	0.33	0.00	0.00	0.00
28	0.00	0.41	0.69	0.51	5.9	7.1	1.2	2.3	0.31	0.00	0.00	0.00
29	0.00	0.50	0.72	0.92	6.1	6.2	1.2	1.7	0.50	0.00	0.00	0.00
30	0.00	0.55	0.66	2.5	---	5.8	1.2	1.4	0.54	0.00	0.00	0.00
31	0.00	---	0.65	1.9	---	5.5	---	1.2	---	0.00	0.00	---
TOTAL	0.00	5.93	19.34	24.19	89.26	244.2	76.3	36.52	17.85	4.32	0.00	0.00
MEAN	0.00	0.20	0.62	0.78	3.08	7.88	2.54	1.18	0.59	0.14	0.00	0.00
MAX	0.00	0.55	0.84	2.5	7.2	11	4.9	2.3	1.1	0.45	0.00	0.00
MIN	0.00	0.00	0.47	0.50	0.91	3.9	1.2	0.89	0.31	0.00	0.00	0.00
AC-FT	0.00	12	38	48	177	484	151	72	35	8.6	0.00	0.00

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

	2001	2001	2003	2002	2004	2004	2002	2003	2003	2004	2001	2001
MEAN	0.10	0.42	0.75	1.19	2.28	5.52	4.27	2.06	0.60	0.06	0.00	0.00
MAX	0.40	0.69	0.82	1.52	3.08	7.88	8.01	3.31	0.73	0.14	0.00	0.00
(WY)	2001	2001	2003	2002	2004	2004	2002	2003	2003	2004	2001	2001
MIN	0.00	0.20	0.62	0.78	1.65	2.65	2.54	1.09	0.35	0.01	0.00	0.00
(WY)	2002	2004	2004	2004	2001	2003	2004	2001	2001	2001	2001	2001

SUMMARY STATISTICS FOR 2003 CALENDAR YEAR FOR 2004 WATER YEAR WATER YEARS 2001 - 2004

ANNUAL TOTAL	440.58	517.91	
ANNUAL MEAN	1.21	1.42	1.43
HIGHEST ANNUAL MEAN			1.90
LOWEST ANNUAL MEAN			1.18
HIGHEST DAILY MEAN	6.8	Mar 28	11
LOWEST DAILY MEAN	0.00	Jul 16	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 16	0.00
ANNUAL RUNOFF (AC-FT)	874	1030	1040
10 PERCENT EXCEEDS	3.4	4.9	4.1
50 PERCENT EXCEEDS	0.61	0.57	0.65
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

BOISE RIVER BASIN

13205995 DIVERSIONS FROM BOISE RIVER BETWEEN GAGING STATIONS
NEAR BOISE AND AT GLENWOOD BRIDGE, ID

Between "near Boise" and "at Glenwood Bridge" gaging stations (published as "between Dowling Ranch and at Boise gaging stations" prior to 1955 water year, and as "between near Boise and at Boise gaging stations", 1955-82), ten canals and several small farm laterals divert water from Boise River for irrigation.

Records of total diversion during April to September for each canal for years 1919-46, combined daily diversion covering period April to September for years 1947-67, combined daily diversions for water years 1968-75, and daily flow of New York Canal, February 1939 to October 1948, are published in reports of Geological Survey. Records of daily diversion for each canal beginning in 1916 are on file in office of the Idaho Department of Water Resources. Prior to October 1967, there was no record of October to March diversions, except for New York Canal. Winter diversions generally represent flow through New York Canal to fill Lake Lowell.

Records show summation of discharge for the recorded diversions. Staff gages on canals are read daily or several times weekly, and discharge measurements are made weekly. Records provided by watermaster for Boise River.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2360	---	---	e0.00	448	---	1.8	2400	2130	3150	3050	2610
2	2360	---	---	e0.00	447	---	1.8	2420	2140	3150	3040	2600
3	2350	---	---	e0.00	448	---	1.9	2430	2140	3150	3040	2580
4	2350	---	---	e0.00	448	---	1.9	2490	2140	3150	3030	2580
5	2350	---	---	e0.00	448	---	712	2530	2150	3150	3040	2580
6	2080	---	---	377	446	---	878	2530	2160	3140	3030	2580
7	1950	---	---	379	445	---	1020	2530	2270	3140	3040	2580
8	1270	---	---	380	445	---	1230	2530	2320	3140	3030	2580
9	271	---	---	380	572	---	1340	2530	2330	3130	3030	2570
10	177	---	---	380	646	---	1340	2540	2330	3130	3020	2560
11	177	---	---	380	647	---	1350	2540	2330	3130	3030	2560
12	177	---	---	413	647	---	1450	2540	2330	3110	3030	2560
13	177	---	---	448	648	---	1580	2540	2340	3110	3020	2490
14	178	---	---	448	651	---	1710	2540	2400	3130	3020	2450
15	90	---	---	448	653	---	1940	2540	2490	3130	3020	2430
16	3.2	---	---	448	654	---	2030	2540	2540	3140	3020	2350
17	2.5	---	---	447	657	---	2040	2540	2540	3130	3020	2280
18	2.5	---	---	447	662	---	2090	2480	2650	3140	3020	2280
19	2.5	---	---	447	665	---	2220	2370	2710	3140	3040	2280
20	2.5	---	---	448	530	---	2270	2330	2720	3140	3050	2270
21	2.5	---	---	447	e0.00	---	2290	2320	2790	3140	3060	2250
22	2.5	---	---	445	e0.00	---	2300	2320	2940	3130	3060	2250
23	2.5	---	---	445	e0.00	---	2310	2320	3090	3130	2930	2250
24	2.5	---	---	445	e0.00	---	2330	2320	3150	3130	2810	2250
25	2.5	---	---	445	e0.00	---	2350	2310	3150	3130	2790	2250
26	2.5	---	---	445	e0.00	---	2370	2300	3150	3050	2780	2250
27	2.5	---	---	446	e0.00	---	2370	2300	3160	3060	2650	2210
28	2.5	---	---	448	e0.00	---	2380	2160	3160	3050	2590	2190
29	2.5	---	---	448	e0.00	---	2390	2090	3160	3050	2600	2190
30	2.5	---	---	448	---	---	2400	2090	3150	3050	2600	2190
31	0.00	---	---	448	---	---	---	2090	---	3050	2610	---
TOTAL	18355.20	---	---	11180.00	11207.00	---	48697.4	74510	78060	96700	91100	72050
MEAN	592	---	---	361	386	---	1623	2404	2602	3119	2939	2402
MAX	2360	---	---	448	665	---	2400	2540	3160	3150	3060	2610
MIN	0.00	---	---	0.00	0.00	---	1.8	2090	2130	3050	2590	2190
AC-FT	36410	---	---	22180	22230	---	96590	147800	154800	191800	180700	142900

e Estimated

BOISE RIVER BASIN

13206000 BOISE RIVER AT GLENWOOD BRIDGE NEAR BOISE, ID

LOCATION.--Lat 43°39'38", long 116°16'45"(revised), (NAD83), in SW¹/₄NE¹/₄NE¹/₄ sec.25, T.4 N., R.1 E., Ada County, Eagle quad., Hydrologic Unit 17050114, on left bank 175 ft upstream from Glenwood Bridge, 4.4 mi northwest of Boise, and at mile 47.5.

DRAINAGE AREA.--2,800 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1938 to September 1940 (published as "at Strawberry Glen Bridge near Boise"), March 1982 to current year. February 1940 to October 1982, station 13205500 Boise River at Boise at site 5.3 miles upstream, not equivalent due to irrigation diversions between sites.

GAGE.--Water-stage recorder. Datum of gage is 2,600.00 ft above NGVD of 1929. April 1938 to September 1940, 0.30 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Station equipment includes satellite telemetry. Flow regulated by Anderson Ranch Reservoir, Arrowrock Reservoir and Lucky Peak Lake (see sta 13201500). The New York, Ridenbaugh and eight small canals (see sta 13205995) divert between station "near Boise" (see sta 13202000) and this station. Diversion above station for about 5,000 acres are outside the basin near Mountain Home.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, prior to completion of Lucky Peak Dam in 1955, 13,000 ft³/s May 2, 1938; minimum observed, 19 ft³/s Dec. 3, 1939.

Maximum discharge since regulation, 9,840 ft³/s June 13, 1983, gage height, 11.54 ft; minimum, 42 ft³/s Oct. 26, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 20, 1943 reached a discharge of about 21,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,320 ft³/s June 29; minimum daily, 240 ft³/s Nov. 15.

DAY	DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	689	263	259	277	321	1150	275	845	924	1260	1180	730
2	688	262	263	269	317	492	289	848	913	1250	1180	710
3	689	263	259	268	321	313	266	844	899	1250	1190	693
4	688	261	259	267	314	320	266	843	892	1240	1200	693
5	684	255	259	288	311	304	327	852	886	1240	1190	691
6	702	255	262	257	310	299	866	831	881	1250	1180	675
7	689	256	268	294	319	294	949	851	883	1240	1170	650
8	736	256	261	304	311	294	887	875	883	1200	1180	636
9	776	257	260	302	309	294	880	878	879	1190	1210	631
10	683	257	260	301	296	297	894	898	881	1190	1210	646
11	679	276	259	300	295	328	890	922	883	1190	1190	644
12	680	296	262	300	295	279	856	932	880	1190	1190	677
13	682	261	285	299	295	299	899	918	881	1190	1180	661
14	711	253	263	299	295	300	904	921	866	1190	1180	666
15	630	240	261	302	297	302	902	929	880	1180	1190	649
16	330	261	259	299	326	298	868	952	912	1180	1190	634
17	320	260	260	300	369	299	859	935	916	1180	1200	621
18	319	256	260	298	368	301	866	934	932	1180	1120	626
19	314	256	259	298	360	299	905	900	943	1200	964	630
20	312	257	260	298	639	296	947	876	942	1230	816	631
21	312	256	259	300	1080	294	950	887	1090	1190	784	626
22	311	255	258	299	1080	294	937	880	1310	1190	805	622
23	310	257	259	299	1150	295	938	880	1280	1180	779	606
24	309	257	288	304	1250	290	929	881	1270	1180	762	593
25	310	257	272	303	1250	291	930	879	1290	1190	784	583
26	310	258	262	299	1270	299	932	885	1280	1190	779	583
27	308	256	261	303	1250	293	917	902	1280	1160	758	580
28	307	256	263	332	1250	290	893	1030	1280	1180	755	592
29	308	270	282	386	1250	285	887	936	1320	1180	740	595
30	296	263	272	349	---	283	873	932	1310	1180	725	585
31	262	---	269	331	---	279	---	931	---	1180	694	---
TOTAL	15344	7786	8183	9325	17498	10251	23981	27807	30666	37220	31475	19159
MEAN	495	260	264	301	603	331	799	897	1022	1201	1015	639
MAX	776	296	288	386	1270	1150	950	1030	1320	1260	1210	730
MIN	262	240	258	257	295	279	266	831	866	1160	694	580
AC-FT	30430	15440	16230	18500	34710	20330	47570	55160	60830	73830	62430	38000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2004, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MEAN	445	336	478	868	1119	1814	2491	2656	2122	1248	923	655	
MAX	1559	1516	1685	5903	7059	7037	6850	6780	6749	2689	1443	1893	
(WY)	1985	1985	1984	1997	1997	1997	1997	1984	1983	1982	1997	1984	
MIN	150	106	106	107	108	111	460	655	620	554	500	266	
(WY)	1993	1993	1993	1993	1993	1992	2001	1990	1987	1992	1992	1992	

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	FOR WATER YEARS 1982 - 2004
ANNUAL TOTAL	241244	238695	
ANNUAL MEAN	661	652	1226
HIGHEST ANNUAL MEAN			3381
LOWEST ANNUAL MEAN			358
HIGHEST DAILY MEAN	1480	1320	9560
LOWEST DAILY MEAN	214	240	86
ANNUAL SEVEN-DAY MINIMUM	226	255	99
ANNUAL RUNOFF (AC-FT)	478500	473500	888000
10 PERCENT EXCEEDS	1300	1190	3530
50 PERCENT EXCEEDS	679	648	672
90 PERCENT EXCEEDS	256	261	171

BOISE RIVER BASIN

13206000 BOISE RIVER AT GLENWOOD BRIDGE NEAR BOISE, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-73, 1988, 1990 to September 2004 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: July to September 1997, March to June 1998, October 1998 to September 1999, April to September 2001, November 2001 to July 2002 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 22.0 °C Sept. 2-3, 2001; minimum, 0.0 °C Dec. 21-22, 1998.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC col/100 mL (31625)	E coli, Defined Substr. Tech., MPN/100 mL (50468)	Total coliform, Defined Tech., MPN/100 mL (50569)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)
OCT													
21...	1434	315	159	8.4	24.0	15.1	12.2	132	120	48	2200	<.04	.21
DEC													
16...	1407	263	169	8.2	7.0	5.2	14.3	123	85	22	980	<.04	.26
FEB													
18...	1426	385	166	7.9	9.5	5.7	13.0	114	120	44	1400	<.04	.42
APR													
14...	1546	908	120	8.8	16.0	8.5	14.6	138	47	24	690	E.03	.33
MAY													
12...	1508	908	100	8.8	15.0	10.9	13.6	136	23	11	1200	<.04	.31
JUN													
15...	1434	895	91	8.7	23.0	14.3	12.6	135	51	25	2000	<.04	.21
JUL													
20...	1527	1220	87	8.2	31.0	17.5	10.4	119	560	130	>4800	<.04	.19
AUG													
24...	1428	769	96	8.4	21.0	17.6	10.6	123	240	34	5800	<.04	.20
SEP													
21...	1449	615	108	8.4	16.5	17.2	10.4	118	100	36	2000	.04	.25

Date	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT					
21...	.90	.22	.25	12	10
DEC					
16...	.96	.22	.31	5	3.6
FEB					
18...	.76	.26	.35	10	10
APR					
14...	.39	.10	.15	10	25
MAY					
12...	.41	.15	.18	7	17
JUN					
15...	.28	.15	.17	5	12
JUL					
20...	.33	.09	.11	6	20
AUG					
24...	.47	.16	.18	4	8.3
SEP					
21...	.51	.20	.24	5	8.3

< Less than
> Greater than
E Estimated value

BOISE RIVER BASIN

13206305 BOISE RIVER SOUTH CHANNEL AT EAGLE, ID

LOCATION.--Lat 43°40'31", long 116°21'13", (NAD83), in NE¹/₄SE¹/₄NE¹/₄ sec.20, T.4 N., R.1 W., Ada County, Eagle quad., Hydrologic Unit 17050114, on right bank at State Highway 55, 10 ft upstream from bridge, 1.5 mi south of Eagle, and at mile 42.8.

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

GAGE.--Water-stage recorder. Datum of gage is 2,560 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,470 ft³/s Apr. 19, 2000, gage height, 4.73 ft; minimum, 75 ft³/s Mar. 9, 2003, gage height, 1.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 975 ft³/s June 29, gage height, 4.09 ft; minimum daily, 117 ft³/s Nov. 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	434	129	124	137	160	448	138	529	519	715	621	446
2	439	128	126	139	156	251	143	528	514	707	626	435
3	439	130	125	139	157	167	136	519	506	705	635	427
4	440	129	124	138	154	172	134	513	502	702	638	427
5	438	123	124	145	152	165	168	522	504	702	641	429
6	445	120	128	133	152	162	475	515	502	708	642	427
7	439	123	131	150	156	160	537	525	500	689	639	417
8	462	124	126	155	154	159	514	541	500	647	645	409
9	491	124	126	154	152	159	509	540	502	639	658	407
10	444	124	126	153	147	160	516	539	510	638	657	413
11	443	137	125	153	148	173	516	550	512	637	638	413
12	441	152	126	152	146	152	499	554	508	640	640	432
13	442	131	140	150	148	162	517	522	505	642	640	429
14	454	125	129	151	147	162	521	509	509	636	644	427
15	426	117	126	152	150	163	523	512	512	626	653	417
16	238	128	123	150	156	161	513	528	531	623	653	412
17	194	133	121	150	174	161	510	518	531	626	664	405
18	190	127	123	149	171	162	516	518	539	634	627	408
19	192	128	123	149	170	156	541	501	554	637	552	409
20	180	126	125	147	242	147	584	491	558	650	487	407
21	172	123	122	148	395	145	590	497	619	628	484	408
22	173	124	121	148	397	145	593	494	733	636	487	405
23	172	124	121	147	417	146	593	497	729	640	477	397
24	178	123	138	151	467	146	588	497	717	642	468	388
25	172	123	132	151	468	146	591	495	747	641	482	385
26	e170	124	127	148	475	149	592	497	777	643	479	382
27	e170	123	126	149	471	148	584	505	761	640	468	385
28	e170	121	128	163	473	146	569	571	761	634	469	392
29	e170	130	136	183	472	144	562	528	769	633	461	390
30	145	128	137	172	---	141	549	522	739	628	447	379
31	127	---	132	166	---	141	---	520	---	622	427	---
TOTAL	9490	3801	3941	4672	7227	5199	14321	16097	17670	20190	17749	12307
MEAN	306	127	127	151	249	168	477	519	589	651	573	410
MAX	491	152	140	183	475	448	593	571	777	715	664	446
MIN	127	117	121	133	146	141	134	491	500	622	427	379
AC-FT	18820	7540	7820	9270	14330	10310	28410	31930	35050	40050	35210	24410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004		
MEAN	258	146	130	133	158	223	495	580	663	662	631	426
MAX	356	223	176	163	249	576	988	644	761	759	756	557
(WY)	2001	2001	2001	2001	2004	2000	2000	2002	2000	2003	2003	2000
MIN	119	93.0	91.8	92.4	97.2	99.4	280	519	589	542	518	248
(WY)	2002	2002	2002	2002	2002	2002	2001	2004	2004	2001	2001	2001

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 2000 - 2004
ANNUAL TOTAL	139295	132664	
ANNUAL MEAN	382	362	350
HIGHEST ANNUAL MEAN			377
LOWEST ANNUAL MEAN			324
HIGHEST DAILY MEAN	857	777	1270
LOWEST DAILY MEAN	91	117	83
ANNUAL SEVEN-DAY MINIMUM	106	122	86
ANNUAL RUNOFF (AC-FT)	276300	263100	253600
10 PERCENT EXCEEDS	784	639	650
50 PERCENT EXCEEDS	426	413	250
90 PERCENT EXCEEDS	113	126	100

e Estimated

BOISE RIVER BASIN

13210050 BOISE RIVER NEAR MIDDLETON, ID

LOCATION.--Lat 43°41'06", long 116°34'22", in SE¹/₄SE¹/₄SE¹/₄NE¹/₄ sec.16, T.4 N., R.2 W., Canyon County, Middleton quad., Hydrologic Unit 17050114, on right bank, 2.9 mi southeast of Middleton, and at mile 29.1.

DRAINAGE AREA.--3,050 mi², approximately.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1977, November 1991 to September 2004 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: April to September 1997, October 1998 to September 1999 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 22.0 °C Aug. 29, 1999; minimum, 0.2 °C Dec. 21-24, 1998.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	pH, water, unfiltered, field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC col/100 mL (31625)	E coli, Defined Substr. Tech., MPN/100 mL (50468)	Total coliform, Defined Tech., MPN/100 mL (50569)	Ammonia, water, filtered, mg/L as N (00608)	Ammonia + org-N, water, unfiltered, mg/L as N (00625)	
OCT	22...	1432	288	221	8.5	20.0	15.0	12.6	136	19	20	1600	<.04	.32
DEC	17...	1423	302	247	8.6	8.0	5.8	14.6	126	10	7	1200	<.04	.32
FEB	19...	1100	544	221	7.6	6.0	5.4	12.7	109	130	71	1400	.09	.82
APR	13...	1448	363	162	8.8	23.0	12.6	15.3	158	130	83	1200	<.04	.38
MAY	11...	1600	265	158	8.4	16.0	13.0	13.2	138	270	260	11000	<.04	.36
JUN	16...	1402	292	139	8.8	22.0	17.3	13.3	150	100	80	2250	<.04	.29
JUL	21...	1427	565	125	8.0	31.5	19.9	11.2	134	110	72	2500	<.04	.28
AUG	25...	1510	377	144	8.1	24.0	19.1	10.7	127	130	78	4100	<.04	.27
SEP	22...	1536	361	165	8.4	17.5	16.9	11.8	133	79	36	1400	<.04	.27

Date	Nitrite + nitrate water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)	
OCT	22...	1.83	.33	.38	5	3.9
DEC	17...	2.24	.47	.57	5	4.1
FEB	19...	1.67	.37	.50	29	43
APR	13...	.52	.16	.22	11	11
MAY	11...	.63	.16	.20	7	5.0
JUN	16...	.49	.16	.18	5	3.9
JUL	21...	.35	.12	.16	6	9.2
AUG	25...	.54	.15	.19	5	5.1
SEP	22...	.79	.22	.27	4	3.9

< Less than

BOISE RIVER BASIN

13212996 DIVERSIONS FROM BOISE RIVER BETWEEN GAGING STATIONS
AT GLENWOOD BRIDGE AND NEAR PARMA, ID

Between "at Glenwood Bridge" and "near Parma" gaging stations (published as "between at Boise and Notus gaging stations" prior to 1974, and "between at Boise and near Parma gaging stations", 1974-82), 23 canals and several small farm laterals divert water from Boise River for irrigation.

Records of daily diversions for each canal beginning in 1916 are on file in office of the Idaho Department of Water Resources. Prior to October 1967 there was no record of October to March diversions.

Records show summation of discharge for the recorded diversions. Staff gages on canals are read daily or several times weekly, and discharge measurements are made weekly. Records provided by watermaster for Boise River.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	---	---	---	---	---	177	1510	1450	1580	1540	1260
2	1150	---	---	---	---	---	184	1530	1460	1570	1540	1250
3	1140	---	---	---	---	---	190	1550	1470	1570	1560	1240
4	1140	---	---	---	---	---	197	1550	1480	1580	1540	1230
5	1140	---	---	---	---	---	447	1560	1490	1580	1530	1220
6	1140	---	---	---	---	---	463	1570	1500	1560	1530	1210
7	1130	---	---	---	---	---	479	1580	1510	1560	1520	1190
8	1130	---	---	---	---	---	495	1580	1510	1570	1520	1180
9	1130	---	---	---	---	---	591	1590	1520	1570	1520	1170
10	1100	---	---	---	---	---	665	1600	1540	1570	1510	1170
11	1100	---	---	---	---	---	690	1600	1550	1570	1510	1170
12	1100	---	---	---	---	---	716	1600	1560	1570	1520	1160
13	1090	---	---	---	---	---	776	1600	1570	1570	1520	1160
14	1080	---	---	---	---	---	858	1600	1580	1570	1520	1160
15	658	---	---	---	---	---	928	1600	1590	1570	1520	1140
16	245	---	---	---	---	---	998	1600	1610	1570	1520	1110
17	230	---	---	---	---	---	1070	1590	1630	1570	1520	1100
18	215	---	---	---	---	---	1140	1580	1650	1570	1490	1100
19	199	---	---	---	---	---	1210	1520	1660	1570	1460	1090
20	181	---	---	---	---	---	1240	1510	1660	1590	1440	1080
21	164	---	---	---	---	---	1270	1500	1670	1580	1410	1080
22	147	---	---	---	---	---	1300	1490	1680	1570	1380	1080
23	129	---	---	---	---	---	1330	1480	1660	1560	1360	1070
24	112	---	---	---	---	---	1370	1470	1650	1550	1350	1070
25	95	---	---	---	---	---	1400	1480	1640	1540	1340	1060
26	77	---	---	---	---	---	1430	1480	1620	1530	1330	1060
27	72	---	---	---	---	---	1430	1490	1610	1540	1310	1060
28	72	---	---	---	---	---	1450	1490	1600	1540	1300	1030
29	72	---	---	---	---	---	1470	1480	1590	1540	1290	1030
30	72	---	---	---	---	---	1490	1460	1580	1540	1270	1020
31	34	---	---	---	---	---	---	1450	---	1540	1270	---
TOTAL	18484	---	---	---	---	---	27454	47690	47290	48460	44940	33950
MEAN	596	---	---	---	---	---	915	1538	1576	1563	1450	1132
MAX	1150	---	---	---	---	---	1490	1600	1680	1590	1560	1260
MIN	34	---	---	---	---	---	177	1450	1450	1530	1270	1020
AC-FT	36660	---	---	---	---	---	54460	94590	93800	96120	89140	67340

BOISE RIVER BASIN

13213000 BOISE RIVER NEAR PARMA, ID

LOCATION.--Lat 43°46'54", long 116°58'22"(revised), (NAD83), in SE¹/₄NE¹/₄SE¹/₄ sec.7, T.5 N., R.5 W., Canyon County, Parma quad., Hydrologic Unit 17050114, on left bank, at county road crossing, 1.2 mi west of Parma, and at mile 3.8.

DRAINAGE AREA.--3,970 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1938 to June 1939 (gage heights only), September 1971 to September 1997, October 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,196.49 ft above NGVD of 1929. March 1938 to June 1939, nonrecording gage 1.4 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Station equipment includes satellite telemetry.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,240 ft³/s June 14, 1983, gage height, 13.83 ft; minimum, 60 ft³/s Apr. 18, 19, 1987, gage height, 5.88 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 20, 1943, reached a discharge of about 20,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,830 ft³/s Feb. 27; minimum daily, 367 ft³/s Apr. 5.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	967	901	859	885	1100	1740	545	701	1390	978	639	658
2	975	913	839	927	1060	1530	444	622	1240	970	656	633
3	968	920	822	883	1070	1020	436	612	1070	911	618	661
4	965	962	807	857	1050	947	380	525	953	902	625	660
5	927	936	797	832	1010	940	367	474	833	905	658	706
6	920	931	809	847	995	903	410	487	788	839	690	732
7	928	926	830	835	1000	886	809	512	780	812	654	691
8	841	916	826	859	1000	869	817	527	743	738	642	687
9	857	908	807	867	975	871	775	550	702	736	702	692
10	876	896	805	866	962	869	740	662	737	715	743	685
11	821	899	805	868	953	868	709	866	779	703	713	714
12	827	907	819	854	937	902	692	1010	741	716	687	728
13	840	911	892	848	939	852	577	1090	709	689	684	897
14	883	882	908	852	928	863	577	1070	671	635	685	995
15	1050	872	832	843	933	864	605	1060	584	638	720	1030
16	1430	875	819	845	938	869	554	1200	581	638	757	1030
17	1120	913	807	842	1090	864	460	1270	587	656	821	1070
18	1060	894	802	841	1170	865	433	1260	547	665	1030	1040
19	1030	871	803	840	1180	868	481	1410	586	768	971	1060
20	995	854	810	845	1080	858	558	1350	651	845	893	1070
21	979	863	809	839	1400	855	703	1300	567	895	751	1040
22	956	846	795	844	1610	852	895	1320	620	867	722	1020
23	949	841	795	843	1590	818	848	1280	664	921	816	989
24	950	841	831	855	1700	769	817	1320	664	842	860	917
25	954	846	925	872	1810	709	813	1210	771	785	873	880
26	952	849	850	855	1820	677	840	1110	773	804	930	864
27	954	838	822	861	1830	682	788	1150	719	785	899	870
28	950	826	811	891	1770	641	734	1500	833	720	857	849
29	949	870	848	1110	1740	611	777	1810	877	734	814	863
30	948	897	927	1260	---	616	780	1540	969	712	782	873
31	927	---	867	1200	---	584	---	1490	---	689	705	---
TOTAL	29748	26604	25778	27566	35640	27062	19364	32288	23129	24213	23597	25604
MEAN	960	887	832	889	1229	873	645	1042	771	781	761	853
MAX	1430	962	927	1260	1830	1740	895	1810	1390	978	1030	1070
MIN	821	826	795	832	928	584	367	474	547	635	618	633
AC-FT	59010	52770	51130	54680	70690	53680	38410	64040	45880	48030	46800	50790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004, BY WATER YEAR (WY)

MEAN	1084	1037	1103	1504	1978	2481	2900	2944	2047	984	788	990
MAX	2395	2322	2512	6882	7916	7466	6942	6762	6817	3098	1580	2587
(WY)	1985	1985	1984	1997	1997	1997	1986	1984	1983	1982	1983	1984
MIN	423	633	606	652	653	506	219	276	315	282	187	184
(WY)	1993	1993	1993	1993	1993	1992	1977	1992	1977	1992	1992	1992

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1971 - 2004	
ANNUAL TOTAL	301074		320593			
ANNUAL MEAN	825		876		1649	
HIGHEST ANNUAL MEAN					3895	
LOWEST ANNUAL MEAN					459	
HIGHEST DAILY MEAN	1430		1830		9140	
LOWEST DAILY MEAN	519		367		66	
ANNUAL SEVEN-DAY MINIMUM	565		452		82	
ANNUAL RUNOFF (AC-FT)	597200		635900		1195000	
10 PERCENT EXCEEDS	974		1100		4820	
50 PERCENT EXCEEDS	814		853		909	
90 PERCENT EXCEEDS	663		637		497	

BOISE RIVER BASIN

13213000 BOISE RIVER NEAR PARMA, ID--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD--Chemical analyses July 1969 to December 1972, December 1973 to September 1981, October 1986 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: March to September 1973, November 1974 to March 1975, September 1975 to September 1976, October 1986 to September 1995, April to September 1997, October 1998 to September 1999 (discontinued).

INSTRUMENTATION.--Temperature recording data logger.

EXTREMES FOR PERIOD OF RECORD.--

WATER TEMPERATURE: Maximum, 28.5 °C June 27-28, 1973; minimum, 0.0 °C on many days during winter months.

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

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, uS/cm 25 degC (00095)	pH, water, unfltrd field, std units (00400)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	E coli, Defined Substr. Tech., water, MPN/100 mL (50468)	Total coliform, Defined Tech., MPN/100 mL (50569)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia + org-N, water, unfltrd mg/L as N (00625)
OCT													
22...	1107	885	501	8.1	11.0	13.4	9.9	103	120	50	1500	<.04	.37
DEC													
17...	1100	812	518	8.2	3.0	5.9	11.9	103	140	79	2000	<.04	.38
FEB													
19...	1423	1190	442	8.1	10.0	8.2	12.1	111	300	93	2000	.07	1.0
APR													
13...	1120	588	360	7.8	17.0	13.3	10.0	104	1300	980	10000	.09	.84
MAY													
11...	1128	891	369	7.9	15.0	12.2	9.6	98	1100	1300	24000	E.04	.85
JUN													
16...	1028	560	399	7.9	17.0	16.1	9.2	101	250	200	10000	<.04	.63
JUL													
21...	1044	891	346	7.4	25.0	21.4	6.8	84	260	64	4000	E.03	.72
AUG													
25...	1105	848	374	7.6	21.0	18.0	7.7	89	210	78	12000	<.04	.49
SEP													
22...	1114	968	375	7.8	12.5	13.7	9.4	98	220	120	10000	<.04	.45

Date	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT					
22...	3.17	.27	.31	20	48
DEC					
17...	3.96	.41	.50	14	31
FEB					
19...	3.15	.29	.48	85	273
APR					
13...	1.66	.26	.38	61	97
MAY					
11...	1.93	.26	.41	84	202
JUN					
16...	1.71	.23	.29	29	44
JUL					
21...	1.54	.26	.40	77	185
AUG					
25...	1.77	.22	.30	46	105
SEP					
22...	2.01	.22	.28	26	68

< Less than
E Estimated value

SNAKE RIVER MAIN STEM

13213100 SNAKE RIVER AT NYSSA, OR

LOCATION.--Lat 43°52'34", long 116°58'57"(revised), (NAD83), in NW¹/₄SW¹/₄NE¹/₄ sec.7, T.6 N., R.5 W., Canyon County, Nyssa quad., Hydrologic Unit 17050115, on right bank, 300 ft upstream from U.S. Highway 20-26 bridge at Nyssa, Oregon, 2.3 mi downstream from Boise River, and at mile 385.2.

DRAINAGE AREA.--58,700 mi², approximately.

PERIOD OF RECORD.--November 1974 to September 1986, February 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 2,170 ft above NGVD of 1929, from topographic map. Prior to 1989, station located on left bank, in Oregon.

REMARKS.--No estimated daily discharges. Records good. Station equipment includes satellite telemetry. Flow regulated by many reservoirs above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,900 ft³/s Apr. 19, 1984, gage height, 13.34 ft; minimum, 4,110 ft³/s June 7, 1992, gage height, 4.32 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 10,700 ft³/s Feb. 21; minimum daily, 5,230 ft³/s June 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7780	7770	8320	8410	8110	9270	7080	6660	9280	5800	5520	6820
2	7350	7960	8540	8080	8330	9500	7110	6640	9040	5930	5860	6550
3	7540	8300	8090	7940	8110	8250	8200	6990	8740	5740	5640	6150
4	7670	7830	7860	8020	8240	8080	7840	6750	7500	5760	5610	6280
5	8000	7970	7640	8090	8080	8190	7250	6830	7370	6070	5640	6630
6	7800	8170	8450	8070	7830	8250	7420	6900	7320	5600	5630	6920
7	7970	8240	8180	7970	8040	8070	8030	7120	7020	5740	5680	7080
8	7720	8140	8560	7940	8170	8010	7910	7080	6940	5470	5860	6940
9	7770	7560	8340	7690	7600	8550	7790	6990	6540	5490	5700	6810
10	7980	8030	8600	8130	7940	8560	7410	7010	6650	5490	6000	6800
11	8170	7960	7890	7820	8020	8400	7330	7470	6910	5440	5860	6780
12	8010	7700	7340	7900	7760	9250	7100	7680	6920	5500	5870	6820
13	8350	7980	8480	7620	8120	9160	7040	8050	6920	5520	5930	7580
14	8380	8620	8840	7860	7540	9230	7190	9230	6870	5370	5730	7660
15	9480	7410	8200	7630	7440	9170	6640	8480	6530	5420	5930	8240
16	8730	8060	7830	7890	7890	9040	6730	9140	6360	5460	6020	8160
17	8730	7920	8320	7970	8050	9390	6610	9010	6030	5280	5930	7740
18	8340	7940	8360	7860	9170	9180	6430	8030	5260	5340	6300	7630
19	8280	8110	7640	7380	8790	9220	6500	8970	5230	5520	6270	8330
20	8290	8360	7900	7560	10200	9070	6890	8800	5490	5920	6350	8350
21	8080	7510	8180	7590	10700	9430	7460	8320	5250	6080	6450	8420
22	8240	7980	7870	7850	10200	9550	7560	8920	5580	5980	6560	8480
23	7690	7760	8070	7850	8590	9230	7750	8580	5690	6020	6900	8820
24	7780	8140	8100	7800	9120	8670	7500	8710	5490	6210	6520	8460
25	7900	7760	8070	7330	9320	9290	7420	8560	5850	6040	7180	8930
26	8030	7780	8240	7660	9830	9590	7310	8670	5780	5950	6990	8420
27	7700	8280	7590	8070	9490	8260	7540	8760	5580	5690	7090	8320
28	6970	7980	7770	7980	9080	8630	6960	8930	5720	5720	7140	8500
29	7480	8020	8080	8020	8980	8340	7060	9600	5740	5650	7350	8480
30	7460	7960	8170	8120	---	8780	6830	9100	5780	5670	7360	8230
31	7400	---	7950	8590	---	8040	---	9510	---	5710	6830	---
TOTAL	247070	239200	251470	244690	248740	273650	217890	251490	195380	176580	193700	229330
MEAN	7970	7973	8112	7893	8577	8827	7263	8113	6513	5696	6248	7644
MAX	9480	8620	8840	8590	10700	9590	8200	9600	9280	6210	7360	8930
MIN	6970	7410	7340	7330	7440	8010	6430	6640	5230	5280	5520	6150
AC-FT	490100	474500	498800	485300	493400	542800	432200	498800	387500	350200	384200	454900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2004, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
MEAN	11980	12450	12900	13990	14930	17280	19420	18410	15740	8573	8528	10410																			
MAX	21360	24660	24320	30290	38580	40010	43970	49060	41100	16480	12620	17110																			
(WY)	1985	1985	1984	1984	1997	1986	1984	1984	1984	1983	1997	1997																			
MIN	7970	7973	8112	7893	8212	7987	6033	5367	5223	5352	5075	6664																			
(WY)	2004	2004	2004	2004	2002	2003	1992	1992	1992	2003	1992	1992																			

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR				FOR 2004 WATER YEAR				WATER YEARS 1975 - 2004			
ANNUAL TOTAL	2699780				2769190							
ANNUAL MEAN	7397				7566				13620			
HIGHEST ANNUAL MEAN									26260			
LOWEST ANNUAL MEAN									7365			
HIGHEST DAILY MEAN	9520				May 13				10700			
LOWEST DAILY MEAN	4690				Jun 11				5230			
ANNUAL SEVEN-DAY MINIMUM	4930				Jul 12				5410			
ANNUAL RUNOFF (AC-FT)	5355000				5493000				9871000			
10 PERCENT EXCEEDS	8420				8940				25100			
50 PERCENT EXCEEDS	7720				7810				10400			
90 PERCENT EXCEEDS	5680				5740				7010			

MALHEUR RIVER BASIN

13233300 MALHEUR RIVER BELOW NEVADA DAM NEAR VALE, OR

LOCATION.--Lat 43°59'15", long 117°13'08"(revised), (NAD83), in NE¹/₄SW¹/₄ sec.21, T.18 S., R.45 E., Malheur County, Vale East quad., Hydrologic Unit 17050117, on right bank, 510 ft downstream from dam and headgates of Nevada Canal, and 1.5 mi northeast of Vale, Oregon.

DRAINAGE AREA.--3,880 mi², approximately.

PERIOD OF RECORD.--June 1926 to September 1934, October 1950 to September 1954, October 1993 to current year. Monthly discharge only for 1936-42, 1944-50, furnished by the State Engineer of Oregon, published in WSP 1317.

GAGE.--Water-stage recorder. Elevation of gage is 2,220 ft above NGVD of 1929, from topographic map. Prior to Nov. 17, 1930, at datum 1.00 ft higher.

REMARKS.--Records fair. Station equipment includes satellite telemetry. Many diversions for irrigation above station. Since March 1930, Vale-Oregon Canal has diverted in sec.31 T.20 S., R.41 E., for irrigation above station and on Willow Creek, a tributary which enters partly above and partly below station. Gillerman-Frohman Canal diverts on left bank in sec.8, T.19 S., R.44 E., for irrigation above and below station. Nevada Canal diverts on right bank 300 ft above station for irrigation below station. Flow regulated by Warm Springs Reservoir and, since December 1935, by Beulah Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,530 ft³/s Feb. 28, 1940, gage height, 8.88 ft; no flow at times some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 24, 1957 reached a stage of 14.6 ft, discharge 21,000 ft³/s. Flood of Mar. 19, 1993 reached a stage of 13.31 ft, discharge 16,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 762 ft³/s Mar. 11; minimum daily, 0.40 ft³/s Oct. 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004												
DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.40	71	67	58	52	174	105	14	68	184	23	106
2	0.40	69	66	58	59	168	114	39	51	112	24	e90
3	0.40	77	66	59	76	166	190	40	37	113	15	e100
4	0.80	74	63	51	76	160	195	30	28	99	20	e95
5	1.1	73	63	43	69	159	107	18	12	78	24	e90
6	1.2	72	63	53	68	147	34	23	13	62	28	e95
7	1.2	70	63	52	68	136	26	26	77	48	38	e110
8	1.4	71	63	55	68	158	28	27	133	48	40	e70
9	1.7	71	63	56	68	376	26	41	81	52	47	e45
10	1.8	71	63	55	68	676	24	59	48	45	29	e36
11	2.0	69	63	50	68	762	22	85	44	48	15	55
12	2.1	66	65	52	68	649	13	105	46	58	15	53
13	2.0	66	66	49	68	629	46	87	38	56	23	59
14	2.1	66	66	47	66	605	30	104	27	57	22	54
15	2.9	66	66	45	65	670	33	111	14	55	33	51
16	3.5	66	66	45	64	595	28	118	4.9	57	39	52
17	14	66	66	44	79	594	13	92	4.1	48	44	60
18	10	62	66	44	80	683	5.6	96	4.6	52	118	66
19	8.5	60	64	44	79	674	12	158	13	60	75	66
20	14	58	64	44	259	648	5.0	207	20	83	71	68
21	22	58	65	44	382	616	7.5	189	15	48	64	69
22	23	58	61	44	301	e520	9.7	140	12	44	65	64
23	22	57	61	44	245	e480	12	116	11	32	124	55
24	19	59	65	48	199	e420	7.1	105	24	36	196	47
25	18	62	70	45	129	368	3.8	101	44	38	190	41
26	18	62	63	50	138	302	11	85	56	33	173	34
27	18	61	61	50	139	281	1.9	75	60	e22	197	30
28	17	62	59	50	145	248	1.6	71	85	19	206	34
29	19	68	61	51	162	235	1.4	75	141	16	188	27
30	20	69	59	52	---	189	6.2	80	109	12	169	19
31	65	---	59	52	---	173	---	87	---	16	138	---
TOTAL	332.50	1980	1976	1534	3408	12661	1118.8	2604	1320.6	1731	2453	1841
MEAN	10.7	66.0	63.7	49.5	118	408	37.3	84.0	44.0	55.8	79.1	61.4
MAX	65	77	70	59	382	762	195	207	141	184	206	110
MIN	0.40	57	59	43	52	136	1.4	14	4.1	12	15	19
AC-FT	660	3930	3920	3040	6760	25110	2220	5170	2620	3430	4870	3650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)												
MEAN	138	131	132	271	412	529	489	246	138	92.4	91.2	124
MAX	228	175	314	1589	1322	1881	1695	988	541	179	220	300
(WY)	2000	2001	1997	1997	1997	1999	1999	1998	1998	1998	1999	1998
MIN	10.7	66.0	63.7	49.5	65.8	44.0	11.4	16.8	15.2	17.8	4.62	1.96
(WY)	2004	2004	2004	2004	2003	2003	2003	2003	2002	2002	2003	2003

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR			FOR 2004 WATER YEAR			WATER YEARS 1994 - 2004		
ANNUAL TOTAL	11756.95			32959.90					
ANNUAL MEAN	32.2			90.1			232		
HIGHEST ANNUAL MEAN							535		
LOWEST ANNUAL MEAN							36.5		
HIGHEST DAILY MEAN	191			Jul 27			762		
LOWEST DAILY MEAN	0.32			Sep 30			0.40		
ANNUAL SEVEN-DAY MINIMUM	0.39			Sep 27			0.79		
ANNUAL RUNOFF (AC-FT)	23320			65380			167700		
10 PERCENT EXCEEDS	67			185			536		
50 PERCENT EXCEEDS	18			59			129		
90 PERCENT EXCEEDS	1.8			12			13		

e Estimated