13210050 BOISE RIVER NEAR MIDDLETON, ID

Middle Snake-Boise Basin
Lower Boise Subbasin

LOCATION.--Lat 43°40′59″, long 116°34′17″ in NW ¼ SW ¼ sec.15, T.4 N., R.2 W., Canyon County, ID, Hydrologic Unit 17050114, on left bank, 3 mi southeast of Middleton, and at mile 29.3.

DRAINAGE AREA.--2,895 mi^2, approximately.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--December 1974 to September 1997 (low-flow periods only December 1974 to September 1990, October 1995 to September 1997), October 2012 to September 2013.

GAGE.--Water-stage recorder. Elevation of gage is 2,420 ft., NAVD 1988. Prior to October 2012 at site 0.2 mi downstream at different datum.

COOPERATION.--Discharge records furnished by Idaho Power and reviewed by U.S. Geological Survey beginning October 2012.

REMARKS.--Station equipment includes satellite telemetry. Natural flow of stream affected by regulation of Lucky Peak Lake (see sta 13201500) and other upstream storage reservoirs, diversions above station for irrigation (of about 296,000 acres), and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 5,800 ft^3/s May 23, 1993; minimum discharge, 27 ft^3/s April 16, 1987, gage height, 4.55 ft., site and datum then in use.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 951 ft^3/s, May 18; minimum daily discharge, 221 ft^3/s, June 6.

13210050 BOISE RIVER NEAR MIDDLETON, ID—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	303	358	361	359	350	335	283	297	315	250	246	232
2	299	363	357	361	341	334	267	334	287	240	259	244
3	305	336	356	373	340	335	300	309	274	250	258	261
4	310	351	360	371	339	335	304	283	250	250	262	277
5	329	353	400	382	337	328	317	319	245	267	272	311
6	347	342	376	353	336	320	347	302	221	270	274	307
7	330	329	365	355	336	321	337	305	244	271	265	263
8	303	368	362	349	337	319	326	302	239	285	258	259
9	301	397	361	349	335	319	317	312	257	283	249	274
10	291	356	359	358	334	320	311	288	258	275	259	263
11	288	362	355	353	333	320	287	277	251	284	253	252
12	282	363	378	348	331	321	267	292	240	289	252	234
13	280	357	364	367	331	319	280	292	232	288	257	243
14	279	355	359	376	331	320	281	293	238	288	244	247
15	307	356	359	350	332	319	261	419	250	295	239	247
16	327	359	361	357	329	318	249	853	257	297	236	238
17	307	360	359	377	330	320	258	920	259	273	241	238
18	289	367	358	380	329	320	256	951	242	264	251	234
19	312	357	364	377	331	318	274	948	233	261	254	236
20	334	354	361	372	340	326	336	949	257	263	245	237
21	340	354	361	372	333	324	335	946	245	267	238	231
22	350	353	354	368	333	308	324	948	243	270	233	244
23	360	349	355	366	364	309	296	793	242	267	262	245
24	346	355	363	382	344	313	284	427	249	257	253	242
25	347	373	354	353	339	313	287	682	283	260	253	267
26	344	362	354	347	340	339	278	696	323	265	254	290
27	345	357	359	348	336	309	275	755	294	275	253	263
28	349	358	360	339	333	297	269	829	268	273	245	255
29	351	358	361	339	---	297	247	859	252	265	237	261
30	349	355	363	341	---	297	265	719	246	259	225	286
31	378	---	361	350	---	295	---	382	---	256	231	---
Total	9,982	10,717	11,220	11,172	9,424	9,868	8,718	17,281	7,694	8,357	7,758	7,681
Mean	322	357	362	360	337	318	291	557	256	270	250	256
Max	378	397	400	382	364	339	347	951	323	297	274	311
Min	279	329	354	339	329	295	247	277	221	240	225	231
Ac-ft	19,800	21,260	22,250	22,160	18,690	19,570	17,290	34,280	15,260	16,580	15,390	15,240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	270	294	269	270	258	267	529	1,332	602	589	434	314
Max	385	365	362	360	337	323	1,221	3,605	1,963	1,672	864	595
(WY)	(1996)	(1997)	(2013)	(2013)	(2013)	(1993)	(1995)	(1995)	(1995)	(1995)	(1997)	(1997)
Min	151	192	192	193	191	169	182	156	198	164	154	167
(WY)	(1993)	(1993)	(1993)	(1993)	(1993)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)	(1992)

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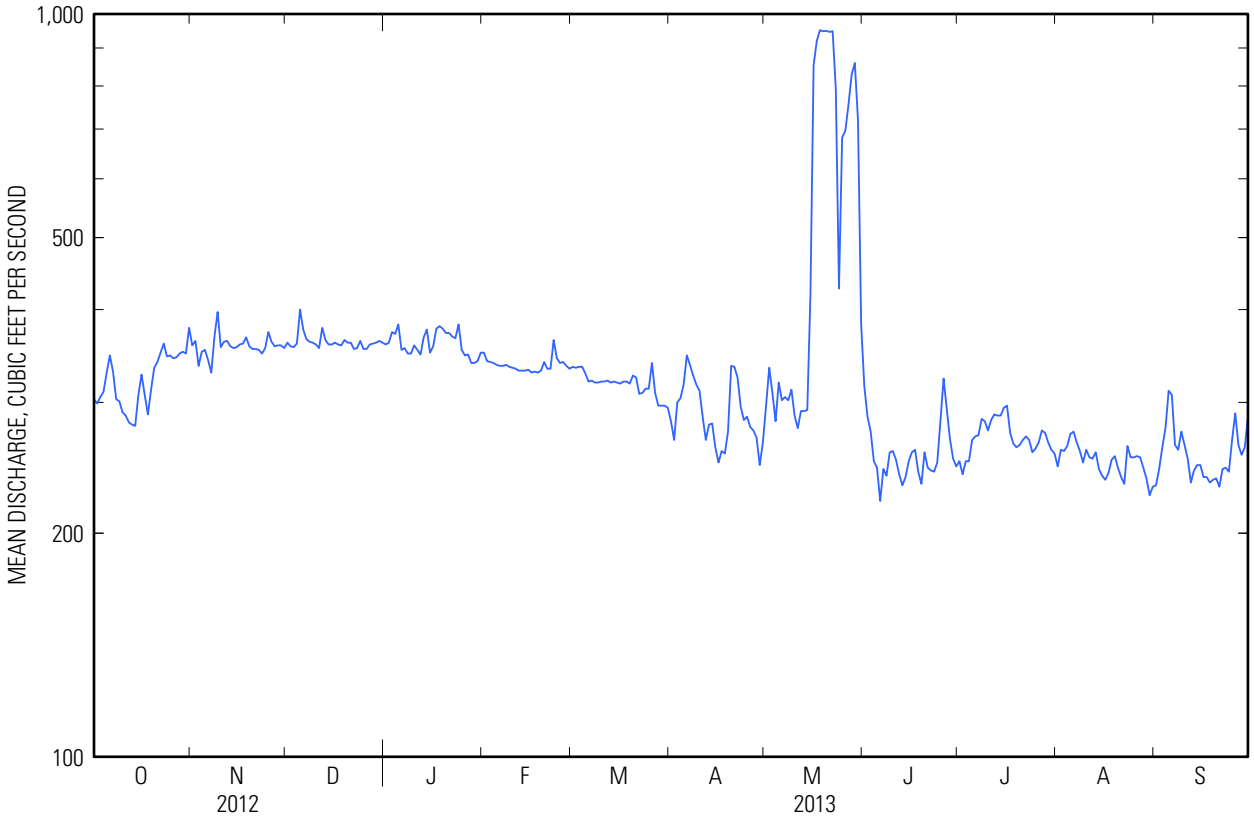
SUMMARY STATISTICS

	Water Year 2013		Water Years 1991 - 2013	
Annual total	119,872			
Annual mean	328		435	
Highest annual mean			920	1995
Lowest annual mean			185	1992
Highest daily mean	951	May 18	5,800	May 23, 1993
Lowest daily mean	221	Jun 6	75	Apr 3, 1992
Annual seven-day minimum	237	Sep 16	121	Mar 28, 1992
Annual runoff (ac-ft)	237,800		314,800	
10 percent exceeds	367		583	
50 percent exceeds	318		267	
90 percent exceeds	245		175	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1977, November 1991 to September 2004, November 2005 to September 2008, November 2008.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: April to September 1997, October 1998 to September 1999 (discontinued).

REMARKS.--

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 2012 TO SEPTEMBER 2013

Part 1 of 3

[%, percent; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft³/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Sampling method (82398)
10-30-2012	**1100**	--	--	--	--	--	--	--	--	--
10-31-2012	**0930**	696	11.5	438	9.0	91	7.5	224	11.9	EWI
11-27-2012	**1435**	704	8.5	366	13.6	119	8.5	234	6.5	EWI
12-11-2012	**1200**	694	5.5	344	12.2	108	8.0	232	6.0	EWI
01-08-2013	**1223**	705	-.5	362	14.2	108	8.0	230	1.3	EWI
02-20-2013	**1051**	695	7.5	361	13.0	109	7.6	231	4.2	EWI
03-05-2013	**1330**	696	10.5	344	14.3	126	7.7	230	6.1	EWI
03-07-2013	**1015**	--	--	--	14.7	--	--	238	5.8	--
04-25-2013	**1355**	697	22.4	266	16.9	174	8.5	173	12.7	EWI
05-22-2013	**1227**	695	11.5	1,010	12.3	119	7.2	110	9.8	EWI
06-24-2013	**1042**	691	22.0	237	10.0	114	7.1	167	16.8	EWI
07-15-2013	**1225**	698	33.0	295	11.1	134	8.2	155	20.1	EWI
07-25-2013	**1000**	--	--	--	--	--	--	--	--	--
08-21-2013	**1100**	699	24.5	220	9.2	111	7.2	167	20.1	EWI
09-17-2013	**1115**	689	20.0	--	8.3	99	7.1	181	19.1	EWI
09-18-2013	**1000**	--	--	--	--	--	--	--	--	--

13210050 BOISE RIVER NEAR MIDDLETON, ID—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 2 of 3

[%, percent; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, unfiltered, analytically determined, mg/L (62855)	Escherichia coli, Defined Substrate Technology, water, MPN/100 mL (50468)	Total coliforms, defined substrate test method (DSTM), water, most probable number per 100 milliliters (90908)	Biomass, periphyton, ash weight, grams per square meter (00572)
10-30-2012	1100	--	--	--	--	--	--	--	24.0
10-31-2012	0930	.011	1.86	.272	.29	2.21	--	--	--
11-27-2012	1435	< .010	2.11	.250	.28	2.39	17	860	--
12-11-2012	1200	< .010	2.14	.341	.38	2.40	17	690	--
01-08-2013	1223	< .010	2.16	.313	.34	2.44	35	660	--
02-20-2013	1051	< .010	2.00	.311	.35	2.32	41	840	--
03-05-2013	1330	< .010	2.06	.361	.40	2.28	13	860	--
03-07-2013	1015	--	--	--	--	--	--	--	30.0
04-25-2013	1355	< .010	1.07	.170	.21	1.40	31	2,400	--
05-22-2013	1227	< .010	.229	.053	.07	.44	110	2,400	--
06-24-2013	1042	.024	.768	.140	.17	1.14	110	4,900	--
07-15-2013	1225	.011	.704	.139	.18	1.08	59	5,200	--
07-25-2013	1000	--	--	--	--	--	--	--	5.00
08-21-2013	1100	.024	.795	.137	.16	1.09	140	6,100	--
09-17-2013	1115	.020	1.10	.163	.19	1.28	84	8,200	--
09-18-2013	1000	--	--	--	--	--	--	--	8.00

13210050 BOISE RIVER NEAR MIDDLETON, ID—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
Part 3 of 3

[%, percent; MPN/100 mL, most probable number per 100 milliliters; N, nitrogen; P, phosphorus; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Chlorophyll a, periphyton, spectrophotometric method, corrected, milligrams per square meter (32223)	Pheophytin a, periphyton, spectrophotometric acid method, corrected, milligrams per square meter (32224)	Chlorophyll a, phytoplankton, spectrophotometric acid method, micrograms per liter (32211)	Pheophytin a, phytoplankton, spectrophotometric acid method, micrograms per liter (32218)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concen-tration, mg/L (80154)
10-30-2012	**1100**	219	122	--	--	--	--
10-31-2012	**0930**	--	--	6.40	7.80	85	6
11-27-2012	**1435**	--	--	--	--	70	4
12-11-2012	**1200**	--	--	--	--	--	--
01-08-2013	**1223**	--	--	--	--	82	4
02-20-2013	**1051**	--	--	--	--	84	5
03-05-2013	**1330**	--	--	19.5	3.10	82	5
03-07-2013	**1015**	137	101	--	--	--	--
04-25-2013	**1355**	--	--	--	--	85	15
05-22-2013	**1227**	--	--	--	--	71	9
06-24-2013	**1042**	--	--	--	--	85	7
07-15-2013	**1225**	--	--	--	--	81	9
07-25-2013	**1000**	29.0	13.0	--	--	--	--
08-21-2013	**1100**	--	--	--	--	79	5
09-17-2013	**1115**	--	--	--	--	--	--
09-18-2013	**1000**	46.0	9.00	--	--	--	--