

Water-Data Report 2011

## 13038500 SNAKE RIVER AT LORENZO, ID

Upper Snake Basin  
Idaho Falls Subbasin

LOCATION.--Lat 43°44'07", long 111°52'41" referenced to North American Datum of 1983, in NE ¼ SW ¼ sec.28, T.5 N., R.39 E., Jefferson County, ID, Hydrologic Unit 17040201, Rigby quad., on left bank 0.5 mi downstream from bridge on U.S. Highway 191, 0.5 mi north of Lorenzo, 5.5 mi upstream from Henrys Fork, and at mile 837.9.

DRAINAGE AREA.--5,810 mi<sup>2</sup>.

### **SURFACE-WATER RECORDS**

PERIOD OF RECORD.--January 1978 to current year. Prior to January 1978, monthly mean discharges for the period April to September for the years 1924 to 1927, published in WSP 1317.

REVISED RECORDS.--WDR ID-81-1: 1980.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,850 ft above NGVD of 1929, from topographic map. Prior to January 1978, at site 0.5 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Crest-stage gage was used to determine peak stage. Station equipment includes satellite telemetry. Flow partly regulated by Jackson Lake and Palisades Reservoir. Some diurnal fluctuations during winter from powerplant operations at Palisades. Diversion above station for irrigation in Wyoming and Idaho of about 111,600 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,000 ft<sup>3</sup>/s May 19, 1927, result of landslide washout on Gros Ventre River, gage height, 9.85 ft, site and datum then in use;

Maximum discharge excluding 1927, 38,300 ft<sup>3</sup>/s June 22, 1997, gage height, 13.79 ft; minimum, 48 ft<sup>3</sup>/s Nov. 15, 1979, gage height, 2.48 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,100 ft<sup>3</sup>/s June 2, gage height, 10.81 ft; minimum, 581 ft<sup>3</sup>/s Nov. 11, gage height, 1.46 ft.

## 13038500 SNAKE RIVER AT LORENZO, ID—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	3,210	2,040	816	e900	e1,800	1,890	9,810	16,600	e18,700	9,810	9,710	3,930
2	3,200	1,850	810	e920	e1,750	1,890	9,950	16,400	e18,900	11,200	9,850	3,920
3	3,240	1,210	830	e880	e1,800	1,920	10,100	14,900	19,100	11,300	9,790	3,980
4	3,320	787	807	e940	e1,850	1,870	9,940	14,100	18,900	11,400	9,940	4,040
5	3,350	722	803	e920	1,880	1,850	10,000	13,200	18,600	11,300	9,510	4,000
6	3,390	693	800	e940	1,870	1,890	10,600	13,400	18,400	12,200	9,540	4,020
7	3,140	679	808	e920	1,900	1,880	11,600	13,600	18,400	15,200	9,040	3,950
8	3,070	729	792	e960	1,890	1,900	12,400	14,700	18,000	16,100	8,360	3,970
9	3,170	718	787	924	e1,800	1,900	13,200	15,200	15,300	16,600	7,250	3,960
10	3,240	650	811	e880	e1,850	1,900	13,500	16,800	14,000	16,900	6,480	3,950
11	3,160	605	998	e840	1,910	1,970	13,500	16,900	12,600	16,800	6,330	3,970
12	2,920	686	1,040	e880	1,900	1,930	13,700	16,600	12,000	15,900	6,160	4,020
13	2,720	787	1,040	e900	1,900	1,940	13,700	16,600	12,000	15,800	6,060	4,050
14	2,100	793	1,030	e920	1,900	1,970	13,700	16,900	11,800	15,700	5,960	4,060
15	1,630	816	1,040	877	1,890	1,970	14,000	17,100	11,800	16,400	5,870	4,110
16	1,700	776	999	922	1,890	2,040	14,600	17,200	11,500	16,800	5,800	4,240
17	1,570	763	958	965	1,900	2,050	15,000	16,700	12,100	16,700	5,560	4,520
18	1,360	748	969	912	1,890	2,020	15,800	16,200	12,500	15,300	5,390	4,680
19	1,330	743	1,010	1,130	1,900	2,010	16,100	16,600	12,600	14,200	4,950	4,800
20	1,360	783	1,020	1,470	1,920	2,010	16,100	16,100	12,800	15,500	4,410	4,900
21	1,260	779	958	1,830	1,910	2,000	16,600	16,600	12,700	16,400	4,260	4,980
22	1,020	769	956	1,980	1,890	2,040	17,300	17,300	11,300	16,500	4,200	5,010
23	938	765	985	1,950	1,890	2,310	17,300	17,200	11,200	15,200	4,050	5,080
24	944	748	949	1,960	1,890	2,800	17,000	17,300	11,300	13,300	3,980	5,130
25	1,040	e720	931	1,980	1,900	3,120	16,700	17,900	11,200	12,000	4,290	5,150
26	940	e700	932	1,960	1,890	3,470	16,800	17,900	10,900	11,500	4,270	5,170
27	921	831	941	1,960	1,880	4,350	16,600	17,800	10,700	10,900	4,240	5,210
28	907	842	934	1,960	1,890	5,240	16,500	17,800	10,300	10,200	4,170	4,740
29	978	829	952	1,960	---	6,700	16,700	18,700	10,200	10,100	4,130	3,960
30	1,540	817	e940	e1,900	---	9,060	16,700	18,700	10,100	9,200	4,110	3,630
31	1,900	---	e920	e1,850	---	9,750	---	e18,500	---	9,190	3,980	---
<b>Total</b>	64,568	25,378	28,566	40,290	52,530	89,640	425,500	511,500	409,900	425,600	191,640	131,130
<b>Mean</b>	2,083	846	921	1,300	1,876	2,892	14,180	16,500	13,660	13,730	6,182	4,371
<b>Max</b>	3,390	2,040	1,040	1,980	1,920	9,750	17,300	18,700	19,100	16,900	9,940	5,210
<b>Min</b>	907	605	787	840	1,750	1,850	9,810	13,200	10,100	9,190	3,980	3,630
<b>Ac-ft</b>	128,100	50,340	56,660	79,920	104,200	177,800	844,000	1,015,000	813,000	844,200	380,100	260,100

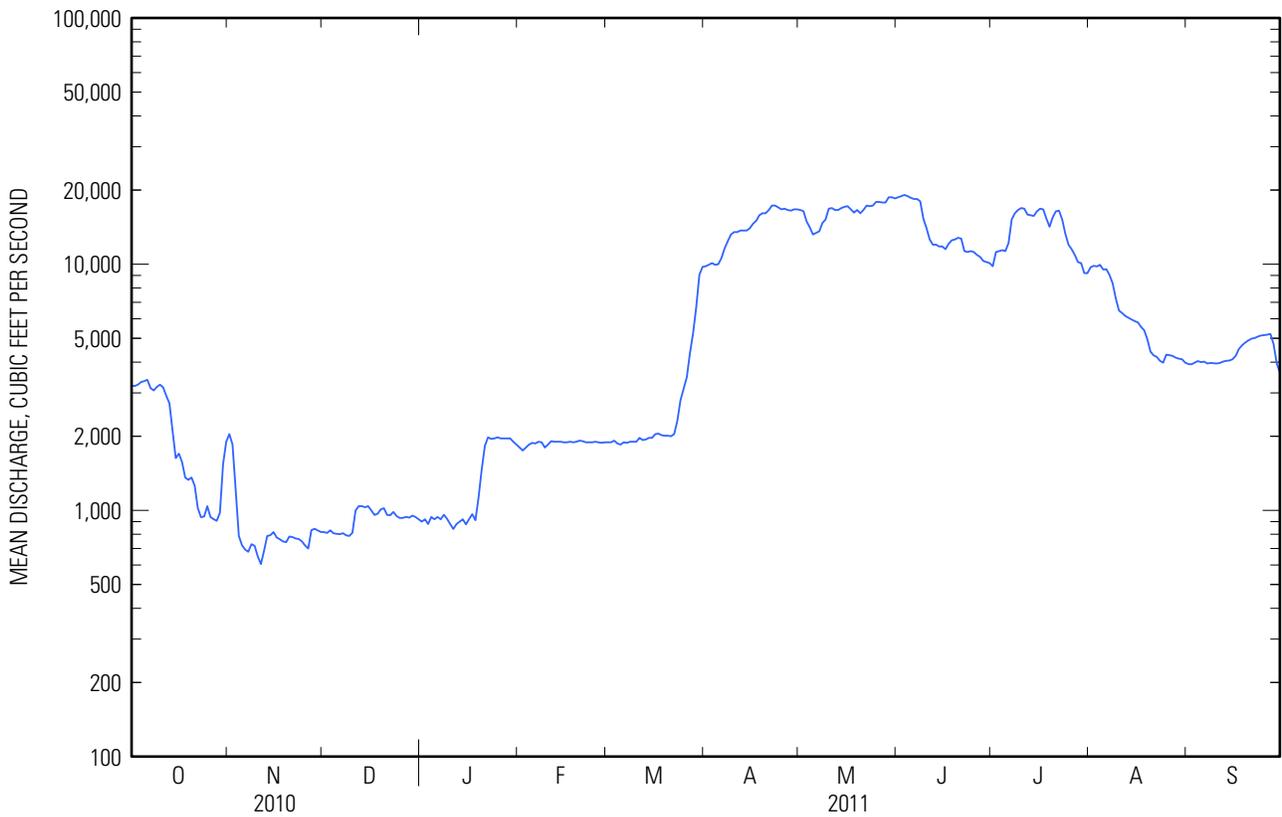
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2011, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	1,441	1,204	1,613	1,780	1,833	2,889	5,270	8,043	9,375	7,541	4,665	3,332
<b>Max</b>	3,028	4,277	5,707	5,976	9,132	12,900	14,180	16,750	26,720	13,730	8,176	6,213
<b>(WY)</b>	(1983)	(1984)	(1984)	(1984)	(1997)	(1997)	(2011)	(1986)	(1997)	(2011)	(2008)	(1990)
<b>Min</b>	405	243	497	409	407	421	733	1,761	4,017	4,297	2,154	744
<b>(WY)</b>	(1982)	(1982)	(1981)	(2008)	(2008)	(2008)	(2002)	(1991)	(1989)	(1985)	(1926)	(1926)

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SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1924 - 2011	
<b>Annual total</b>	1,200,304		2,396,242			
<b>Annual mean</b>	3,289		6,565		4,108	
<b>Highest annual mean</b>					8,813	1997
<b>Lowest annual mean</b>					2,338	2001
<b>Highest daily mean</b>	15,800	Jun 14	19,100	Jun 3	37,800	Jun 22, 1997
<b>Lowest daily mean</b>	603	Mar 16	605	Nov 11	110	Dec 23, 1990
<b>Annual seven-day minimum</b>	618	Mar 11	680	Nov 6	118	Mar 29, 1993
<b>Annual runoff (ac-ft)</b>	2,381,000		4,753,000		2,976,000	
<b>10 percent exceeds</b>	7,330		16,600		9,750	
<b>50 percent exceeds</b>	1,540		3,960		2,870	
<b>90 percent exceeds</b>	748		836		600	



## 13038500 SNAKE RIVER AT LORENZO, ID—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1978 to August 1998, October 2004 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 2004 to current year.

INSTRUMENTATION.--Temperature recorder.

REMARKS.--

EXTREMES FOR PERIOD OF RECORD.----WATER TEMPERATURES: Maximum, 21 °C on several days in July and Aug.2007; minimum, 0.0 °C on many days during winter months many years.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum,18.5°C on many days in August and September; 0.0°C on many days during winter months.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	October			November			December			January		
1	15.3	13.5	14.4	---	---	---	---	---	---	---	---	---
2	15.5	13.8	14.6	---	---	---	---	---	---	---	---	---
3	15.4	13.8	14.6	---	---	---	---	---	---	---	---	---
4	15.0	14.2	14.6	---	---	---	---	---	---	---	---	---
5	15.2	14.0	14.4	---	---	---	---	---	---	---	---	---
6	14.4	13.4	14.0	---	---	---	---	---	---	---	---	---
7	14.4	13.4	13.9	---	---	---	---	---	---	---	---	---
8	13.5	12.9	13.3	---	---	---	---	---	---	---	---	---
9	14.3	12.6	13.3	---	---	---	---	---	---	---	---	---
10	13.5	12.8	13.2	---	---	---	---	---	---	---	---	---
11	13.9	12.7	13.4	---	---	---	---	---	---	---	---	---
12	13.5	11.8	12.6	---	---	---	---	---	---	---	---	---
13	13.2	11.6	12.3	---	---	---	---	---	---	---	---	---
14	13.5	11.5	12.3	---	---	---	---	---	---	---	---	---
15	12.9	11.4	12.1	---	---	---	---	---	---	---	---	---
16	13.4	11.6	12.3	---	---	---	---	---	---	---	---	---
17	13.6	12.1	12.7	---	---	---	---	---	---	---	---	---
18	13.4	11.3	12.2	---	---	---	---	---	---	---	---	---
19	12.9	10.9	11.7	---	---	---	---	---	---	---	---	---
20	12.7	10.3	11.3	---	---	---	---	---	---	---	---	---
21	12.9	10.3	11.4	---	---	---	---	---	---	---	---	---
22	11.4	10.0	10.7	---	---	---	---	---	---	---	---	---
23	11.0	9.7	10.4	---	---	---	---	---	---	---	---	---
24	10.8	10.0	10.3	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

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TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	February			March			April			May		
1	---	---	---	---	---	---	---	---	---	5.6	3.4	4.7
2	---	---	---	---	---	---	---	---	---	6.4	3.5	5.0
3	---	---	---	---	---	---	---	---	---	6.2	4.5	5.4
4	---	---	---	---	---	---	---	---	---	6.5	4.2	5.4
5	---	---	---	---	---	---	---	---	---	6.7	4.1	5.7
6	---	---	---	---	---	---	---	---	---	6.7	5.3	6.0
7	---	---	---	---	---	---	---	---	---	7.2	5.6	6.2
8	---	---	---	---	---	---	---	---	---	6.7	5.7	6.0
9	---	---	---	---	---	---	---	---	---	5.9	5.4	5.6
10	---	---	---	---	---	---	---	---	---	6.1	4.8	5.5
11	---	---	---	---	---	---	---	---	---	7.4	4.8	6.0
12	---	---	---	---	---	---	---	---	---	8.6	5.7	7.2
13	---	---	---	---	---	---	---	---	---	9.5	6.4	7.9
14	---	---	---	---	---	---	---	---	---	9.1	6.7	7.9
15	---	---	---	---	---	---	---	---	---	9.7	6.9	8.4
16	---	---	---	---	---	---	---	---	---	9.0	7.1	7.9
17	---	---	---	---	---	---	---	---	---	8.4	6.7	7.7
18	---	---	---	---	---	---	---	---	---	8.4	6.5	7.6
19	---	---	---	---	---	---	---	---	---	8.3	7.0	7.7
20	---	---	---	---	---	---	---	---	---	8.0	6.9	7.5
21	---	---	---	---	---	---	---	---	---	8.6	7.0	7.9
22	---	---	---	---	---	---	---	---	---	8.8	7.2	8.0
23	---	---	---	---	---	---	5.2	2.5	4.0	9.1	7.4	8.2
24	---	---	---	---	---	---	5.3	2.7	4.2	8.8	7.2	7.7
25	---	---	---	---	---	---	5.1	3.3	4.1	10.0	7.2	8.5
26	---	---	---	---	---	---	4.2	3.2	3.7	9.5	7.8	8.5
27	---	---	---	---	---	---	5.2	2.7	3.9	8.8	6.9	7.9
28	---	---	---	---	---	---	5.2	3.2	4.3	9.6	7.2	8.3
29	---	---	---	---	---	---	4.6	3.1	3.9	9.1	7.6	8.3
30	---	---	---	---	---	---	5.7	3.1	4.5	8.7	7.6	8.2
31	---	---	---	---	---	---	---	---	---	---	---	---
Month	---	---	---	---	---	---	---	---	---	---	---	---

## 13038500 SNAKE RIVER AT LORENZO, ID—Continued

**TEMPERATURE, WATER, DEGREES CELSIUS**  
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
	June			July			August			September		
1	---	---	---	---	---	---	14.3	13.2	13.7	15.8	14.2	15.0
2	---	---	---	---	---	---	15.3	13.1	14.2	15.4	13.2	14.4
3	---	---	---	---	---	---	16.0	13.6	14.9	16.0	13.7	14.8
4	---	---	---	---	---	---	15.4	13.4	14.5	15.9	13.6	14.8
5	---	---	---	---	---	---	16.1	13.5	14.8	15.1	13.7	14.6
6	---	---	---	---	---	---	16.0	13.5	14.9	16.5	13.9	15.1
7	---	---	---	---	---	---	15.5	13.7	14.6	16.1	14.1	15.2
8	---	---	---	---	---	---	16.0	13.4	14.7	16.2	14.1	15.3
9	---	---	---	---	---	---	15.7	13.8	15.0	16.2	14.2	15.2
10	---	---	---	---	---	---	16.0	13.7	15.0	16.2	14.2	15.3
11	---	---	---	---	---	---	16.0	14.1	15.1	16.3	14.2	15.3
12	---	---	---	---	---	---	15.8	13.7	14.9	16.0	14.2	15.1
13	---	---	---	---	---	---	16.0	13.7	15.0	15.9	13.9	15.0
14	---	---	---	---	---	---	16.5	14.2	15.4	15.6	14.2	14.8
15	---	---	---	---	---	---	15.8	14.3	14.9	15.8	13.6	14.8
16	---	---	---	---	---	---	15.8	13.4	14.7	15.2	13.7	14.4
17	---	---	---	---	---	---	16.1	13.6	15.0	15.4	13.6	14.4
18	---	---	---	---	---	---	16.2	13.9	15.2	14.9	13.2	14.1
19	---	---	---	---	---	---	16.3	13.9	15.2	15.1	13.3	14.3
20	---	---	---	---	---	---	16.3	14.1	15.3	15.2	13.4	14.4
21	---	---	---	---	---	---	16.9	14.6	15.7	15.2	13.0	14.2
22	---	---	---	---	---	---	16.8	14.6	15.8	15.3	13.3	14.4
23	---	---	---	---	---	---	16.8	14.5	15.7	15.4	13.3	14.5
24	---	---	---	---	---	---	16.3	14.5	15.4	15.4	13.5	14.6
25	---	---	---	---	---	---	16.7	14.8	15.7	15.4	13.6	14.7
26	---	---	---	---	---	---	17.1	14.8	16.0	15.6	14.0	14.8
27	---	---	---	---	---	---	16.6	14.9	15.9	15.2	13.4	14.4
28	---	---	---	---	---	---	16.9	15.2	16.0	15.3	13.6	14.5
29	---	---	---	15.4	12.8	14.3	17.1	14.9	16.0	15.3	13.5	14.5
30	---	---	---	15.0	13.0	14.1	16.5	14.2	15.5	15.3	13.6	14.4
31	---	---	---	14.6	13.2	13.8	16.7	14.8	15.7	---	---	---
<b>Month</b>	---	---	---	---	---	---	17.1	13.1	15.2	16.5	13.0	14.7