

Water-Data Report 2011

13077000 SNAKE RIVER AT NEELEY, ID

Upper Snake Basin
Lake Walcott Subbasin

LOCATION.--Lat 42°46'03", long 112°52'46" referenced to North American Datum of 1983, in NE ¼ SW ¼ sec.31, T.7 S., R.31 E., Power County, ID, Hydrologic Unit 17040209, American Falls SW quad., on right bank 400 ft upstream from fish hatchery buildings, 0.9 mi downstream from American Falls Dam, and at mile 714.1. Records computed to show flow at former site in Sec. 11, T. 8S, R. 30 E, 0.5 mi north of Neeley and 2.5 mi downstream from the present site, by adding the inflow between the sites.

DRAINAGE AREA.--13,600 mi², approximately, excluding indeterminate nontributary area on Snake River Plain.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1906 to current year. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.--WSP 1317: 1910.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4,241.6 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation). Prior to Aug. 8, 1910, nonrecording gage, and Aug. 8, 1910 to June 6, 1930, water-stage recorder, at site 2.5 mi downstream at different datum. June 7, 1930 to Mar. 19, 1945, water-stage recorder, at site 0.4 mi upstream at datum 0.4 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by American Falls Reservoir and other reservoirs, having a combined usable capacity of 4,600,000 acre-ft. Diversions above station for irrigation of about 1,080,000 acres, of which about 228,000 acres are irrigated by withdrawals from ground water (1966 determination). Considerable water leaks into the Snake River Plain aquifer above the station, some of which returns above American Falls Reservoir. Records are computed to show flow at former site in sec.11, T.8 S., R.30 E., 0.5 mi north of Neeley, and 2.5 mi downstream from present site, by adding 30 ft³/s for springs inflow between sites.

EXTREMES FOR PERIOD OF RECORD.--

UNREGULATED PERIOD (1907-1926): Maximum discharge prior to regulation by American Falls Dam, 48,400 ft³/s June 20, 1918, gage height, 13.5 ft, site and datum then in use; minimum daily, 2,180 ft³/s Oct. 7, 1924.

REGULATED PERIOD (1927 to current year): Maximum discharge since regulation began, 46,100 ft³/s June 19, 24, 25, 1997, gage height, 11.46 ft; minimum, 50 ft³/s, Oct. 22, 23, Nov. 14-16, 1941, Oct. 29, 1961, Nov. 6 1970; minimum gage height, 0.82 ft, Oct. 29, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,000 ft³/s June 7, gage height, 9.43 ft; minimum discharge, 363 ft³/s Oct. 25, gage height, 2.21 ft.

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

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	5,120	546	523	525	4,240	4,200	5,740	18,900	28,900	12,500	14,500	13,400
2	3,660	522	524	529	4,250	4,180	5,830	18,100	29,000	12,800	14,200	13,400
3	3,120	519	528	854	4,140	4,120	5,820	16,500	28,900	13,000	14,000	13,600
4	3,120	516	524	1,810	4,020	3,980	6,620	15,200	29,000	13,100	13,900	13,600
5	3,080	512	525	2,460	4,010	3,870	7,320	14,400	28,900	13,800	13,700	13,400
6	3,080	514	521	2,890	3,990	3,840	7,250	14,800	29,000	15,300	13,400	13,100
7	3,080	516	513	3,800	4,090	3,900	8,350	15,000	29,000	15,300	13,300	13,000
8	3,090	519	517	4,030	4,170	3,980	9,930	15,100	28,900	16,200	13,300	12,700
9	3,060	517	516	4,040	4,130	3,970	9,920	16,100	29,000	18,600	13,600	12,600
10	3,070	515	520	4,130	4,130	3,980	9,650	18,100	28,800	20,500	14,000	12,500
11	3,070	511	520	4,130	4,130	3,980	10,000	20,400	28,600	21,100	14,300	12,900
12	3,880	512	521	4,150	4,110	3,990	9,830	22,900	28,700	21,000	14,300	13,400
13	4,570	514	523	4,210	4,120	4,000	11,200	23,600	28,700	20,900	14,100	13,400
14	4,190	517	584	4,220	4,130	3,970	13,400	23,800	25,300	20,300	14,100	13,400
15	3,550	518	514	4,220	4,190	3,950	13,500	24,200	21,300	19,300	14,100	13,400
16	3,510	520	513	4,170	4,220	3,960	13,500	25,100	20,200	18,600	14,000	13,400
17	3,220	519	518	4,230	4,180	3,960	13,400	26,100	19,700	17,800	14,000	13,500
18	3,030	525	520	4,090	4,160	3,960	13,400	26,800	19,600	17,500	14,000	13,500
19	2,910	523	523	4,010	4,130	3,980	13,800	27,000	19,700	17,500	14,300	13,400
20	2,880	524	525	4,060	4,160	3,950	14,000	27,000	19,600	17,500	14,300	13,200
21	2,390	523	523	4,040	4,170	3,950	14,700	26,900	19,800	16,300	13,900	12,800
22	1,680	521	525	4,040	4,220	4,010	16,100	27,000	19,900	15,400	13,500	12,700
23	1,630	519	527	4,050	4,140	3,980	16,300	27,100	19,800	14,900	13,400	12,800
24	1,170	517	528	4,050	4,140	3,980	16,300	27,100	19,700	14,800	13,300	12,800
25	495	517	528	4,060	4,160	3,980	16,400	27,100	19,800	14,700	13,700	12,800
26	572	517	528	4,100	4,160	3,980	16,800	27,000	19,800	14,600	14,000	12,700
27	570	518	523	4,100	4,170	3,970	17,900	27,100	18,600	13,400	13,800	12,700
28	567	523	517	4,020	4,190	3,930	18,600	27,000	15,400	13,300	13,700	12,600
29	563	522	524	4,000	---	4,750	18,800	27,000	13,900	13,500	13,700	12,700
30	565	523	519	4,030	---	5,740	18,900	27,300	13,000	13,600	13,600	12,600
31	569	---	524	4,140	---	5,760	---	28,300	---	14,000	13,500	---
Total	79,061	15,579	16,238	111,188	116,050	127,750	373,260	708,000	700,500	501,100	429,500	392,000
Mean	2,550	519	524	3,587	4,145	4,121	12,440	22,840	23,350	16,160	13,850	13,070
Max	5,120	546	584	4,230	4,250	5,760	18,900	28,300	29,000	21,100	14,500	13,600
Min	495	511	513	525	3,990	3,840	5,740	14,400	13,000	12,500	13,300	12,500
Ac-ft	156,800	30,900	32,210	220,500	230,200	253,400	740,400	1,404,000	1,389,000	993,900	851,900	777,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1926, BY WATER YEAR (WY) (UNREGULATED)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	6,610	7,034	6,134	5,757	5,957	6,760	9,783	16,870	20,590	11,890	6,821	6,058
Max	10,490	9,209	7,590	7,111	6,920	11,650	18,480	24,120	35,470	23,940	10,610	12,420
(WY)	(1913)	(1913)	(1908)	(1914)	(1911)	(1910)	(1910)	(1910)	(1909)	(1907)	(1912)	(1912)
Min	3,911	5,254	4,411	4,526	4,889	5,089	6,084	6,047	6,028	5,162	2,783	2,565
(WY)	(1923)	(1925)	(1920)	(1916)	(1923)	(1920)	(1920)	(1924)	(1924)	(1919)	(1924)	(1919)

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SUMMARY STATISTICS

Water Years 1907 - 1926		
Annual mean	a8,957	
Highest annual mean	11,890	1913
Lowest annual mean	5,375	1924
Highest daily mean	48,400	Jun 20, 1918
Lowest daily mean	2,180	Oct 7, 1924
Annual seven-day minimum	2,440	Sep 21, 1919
Annual runoff (ac-ft)	6,489,000	
10 percent exceeds	18,200	
50 percent exceeds	7,010	
90 percent exceeds	4,630	

^a Statistics 1907-1926 are prior to regulation by American Falls Dam.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	3,504	2,612	2,940	3,464	3,531	4,287	8,277	12,970	13,920	12,470	10,890	7,409
Max	12,630	12,420	10,600	12,640	18,080	19,940	22,500	25,160	35,580	16,570	13,850	13,560
(WY)	(1985)	(1985)	(1987)	(1984)	(1997)	(1997)	(1971)	(1976)	(1997)	(1950)	(2011)	(1997)
Min	276	56.3	55.2	123	92.7	306	1,688	4,776	6,062	7,561	5,664	3,140
(WY)	(1962)	(1967)	(1962)	(1967)	(1961)	(1993)	(1935)	(2005)	(1934)	(1934)	(1934)	(1934)

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1927 - 2011	
Annual total	1,943,968		b3,570,226			
Annual mean	5,326		9,781		7,208	
Highest annual mean					13,800	
Lowest annual mean					3,834	
Highest daily mean	13,900	Jul 7	29,000	Jun 2	46,000	Jun 24, 1997
Lowest daily mean	495	Oct 25	495	Oct 25	50	Oct 22, 1941
Annual seven-day minimum	515	Nov 5	515	Nov 5	51	Nov 10, 1941
Annual runoff (ac-ft)	3,856,000		7,082,000		5,222,000	
10 percent exceeds	11,400		21,000		13,200	
50 percent exceeds	3,220		5,760		6,700	
90 percent exceeds	522		522		511	

^b Statistics from 1927 to Current Year are since regulation by American Falls Dam.

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