

Water-Data Report 2009

13081500 SNAKE RIVER NEAR MINIDOKA, ID

Upper Snake Basin
Lake Walcott Subbasin

LOCATION.--Lat 42°40'22", long 113°30'01" referenced to North American Datum of 1983, in SW ¼ NE ¼ sec.2, T.9 S., R.25 E., Minidoka County, ID, Hydrologic Unit 17040209, Lake Walcott West quad., on right bank 1 mi downstream from Minidoka Dam, 6 mi south of Minidoka, and at mile 673.5.

DRAINAGE AREA.--15,700 mi², approximately, excluding indeterminate nontributary area on Snake River Plain.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 21, 1910 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "below Minidoka Dam, at Howell's Ferry", 1911. Records for August 1895 to Apr. 20, 1910, at site 6 mi downstream "at Montgomery Ferry near Minidoka" are not equivalent.

REVISED RECORDS.--WSP 1347: 1911.

GAGE.--Water-stage recorder. Datum of gage is 4,132.2 ft above NGVD of 1929 (river-profile survey). Prior to Apr. 21, 1910, nonrecording gage at site 6 mi downstream at different datum. Apr. 21, 1910 to Aug. 28, 1911, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Flow regulated by Lake Walcott (1906), American Falls Reservoir (1927), and other reservoirs, having a combined usable capacity of about 4,700,000 acre-ft. Diversions above station for irrigation of about 128,000 acres below and about 1,200,000 acres above station, of which about 304,000 acres are irrigated by withdrawals from ground water (1966 determination). Considerable water leaks into the Snake River Plain aquifer above station.

EXTREMES FOR PERIOD OF RECORD.--

UNREGULATED PERIOD (1910-26): Maximum discharge prior to regulation by American Falls Dam, 45,900 ft³/s June 21, 1918, gage height, 16.02 ft; minimum daily, 1,700 ft³/s Aug. 2, 1919.

REGULATED PERIOD (1927 to current year): Maximum discharge since regulation began in 1927, 42,900 ft³/s June 21, 1997, gage height, 15.49 ft; minimum, 37 ft³/s Jan. 28, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge of 47,500 ft³/s May 29, 30, 1897, at site 6 mi downstream at Montgomery Ferry near Minidoka, gage height, 12.6 ft (datum at that site).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 23,500 ft³/s June 23, gage height, 11.51 ft; minimum, 610 ft³/s Nov. 21, 22, gage height, 3.00 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES

[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|---------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 1 | 5,080 | 651 | 625 | e760 | 716 | 703 | 1,730 | 17,100 | 8,800 | 20,400 | 9,590 | 8,940 |
| 2 | 5,050 | 661 | 715 | e750 | 729 | 704 | 1,740 | 17,200 | 9,670 | 19,700 | 9,470 | 9,090 |
| 3 | 5,040 | 662 | 669 | e730 | 704 | 716 | 1,570 | 17,300 | 10,100 | 19,800 | 9,240 | 8,410 |
| 4 | 5,020 | 695 | 691 | e720 | 701 | 737 | 1,700 | 17,400 | 9,940 | 19,600 | 8,920 | 7,790 |
| 5 | 4,790 | 685 | 649 | e740 | 706 | 773 | 1,830 | 17,400 | 9,910 | 19,500 | 8,730 | 7,410 |
| 6 | 4,520 | 640 | 678 | e760 | 712 | 750 | 1,840 | 16,800 | 9,540 | 17,900 | 8,800 | 7,510 |
| 7 | 4,360 | 635 | 655 | e780 | 704 | 745 | 2,180 | 16,100 | 9,190 | 14,700 | 8,730 | 7,650 |
| 8 | 4,190 | 654 | 660 | e800 | 710 | 741 | 3,130 | 16,400 | 8,870 | 12,600 | 8,930 | 7,490 |
| 9 | 4,210 | 655 | 646 | e790 | 734 | 736 | 4,200 | 16,400 | 8,440 | 12,200 | 9,090 | 7,240 |
| 10 | 3,230 | 674 | 652 | e780 | 823 | 769 | 6,030 | 16,300 | 8,410 | 12,200 | 8,700 | 7,000 |
| 11 | 2,810 | 651 | 667 | e780 | 700 | 703 | 7,550 | 15,900 | 8,270 | 12,500 | 7,820 | 6,790 |
| 12 | 2,270 | 688 | e690 | e790 | 692 | 714 | 8,450 | 14,400 | 8,490 | 13,000 | 8,180 | 6,810 |
| 13 | 2,060 | 765 | e680 | e740 | 694 | 710 | 9,400 | 12,800 | 8,520 | 13,100 | 8,430 | 6,900 |
| 14 | 1,960 | 685 | e670 | 715 | 710 | 717 | 10,300 | 12,400 | 8,610 | 12,800 | 8,330 | 6,740 |
| 15 | 1,140 | 682 | e670 | 707 | 708 | 728 | 12,400 | 12,300 | 8,660 | 12,500 | 8,420 | 6,510 |
| 16 | 1,160 | 702 | e650 | 708 | 705 | 737 | 17,500 | 11,900 | 8,640 | 12,300 | 8,420 | 6,360 |
| 17 | 1,230 | 720 | e650 | 714 | 728 | 734 | 19,200 | 12,200 | 10,800 | 12,500 | 8,270 | 6,240 |
| 18 | 1,370 | 691 | e660 | 711 | 714 | 726 | 19,100 | 11,200 | 12,500 | 12,600 | 8,140 | 6,130 |
| 19 | 1,370 | 650 | e660 | 711 | 674 | 722 | 19,200 | 10,200 | 12,700 | 12,500 | 9,340 | 6,140 |
| 20 | 1,160 | 730 | e670 | 709 | 695 | 719 | 19,100 | 9,890 | 15,000 | 12,600 | 9,160 | 6,430 |
| 21 | 840 | 672 | e670 | 711 | 696 | 727 | 19,100 | 8,940 | 15,900 | 12,300 | 9,130 | 6,120 |
| 22 | 696 | 660 | e660 | 711 | 704 | 786 | 19,000 | 8,210 | 19,100 | 12,300 | 9,300 | 5,800 |
| 23 | 648 | 627 | e660 | 710 | 707 | 963 | 18,200 | 8,130 | 22,100 | 12,300 | 9,390 | 5,650 |
| 24 | 659 | 713 | e650 | 712 | 694 | 862 | 17,000 | 8,200 | 22,600 | 12,300 | 9,090 | 5,700 |
| 25 | 668 | 720 | e680 | 725 | 714 | 910 | 17,000 | 8,180 | 22,500 | 12,000 | 9,010 | 5,790 |
| 26 | 647 | 663 | e670 | 707 | 765 | 827 | 16,900 | 8,270 | 22,200 | 11,500 | 9,040 | 5,830 |
| 27 | 650 | 633 | e680 | 704 | 745 | 730 | 17,100 | 8,370 | 22,000 | 11,100 | 9,040 | 5,840 |
| 28 | 652 | 645 | e690 | 716 | 702 | 749 | 17,100 | 8,410 | 22,200 | 10,600 | 8,830 | 5,820 |
| 29 | 658 | 669 | e700 | 722 | --- | 1,160 | 17,000 | 8,390 | 21,900 | 9,890 | 8,880 | 5,610 |
| 30 | 655 | 638 | e690 | 710 | --- | 784 | 17,000 | 8,390 | 21,500 | 9,350 | 9,070 | 5,800 |
| 31 | 656 | --- | e680 | 716 | --- | 956 | --- | 8,420 | --- | 9,470 | 9,120 | --- |
| Total | 69,449 | 20,216 | 20,737 | 22,739 | 19,986 | 24,038 | 343,550 | 383,500 | 407,060 | 418,110 | 274,610 | 201,540 |
| Mean | 2,240 | 674 | 669 | 734 | 714 | 775 | 11,450 | 12,370 | 13,570 | 13,490 | 8,858 | 6,718 |
| Max | 5,080 | 765 | 715 | 800 | 823 | 1,160 | 19,200 | 17,400 | 22,600 | 20,400 | 9,590 | 9,090 |
| Min | 647 | 627 | 625 | 704 | 674 | 703 | 1,570 | 8,130 | 8,270 | 9,350 | 7,820 | 5,610 |
| Ac-ft | 137,800 | 40,100 | 41,130 | 45,100 | 39,640 | 47,680 | 681,400 | 760,700 | 807,400 | 829,300 | 544,700 | 399,800 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1926, BY WATER YEAR (WY) (UNREGULATED)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Mean | 5,941 | 6,683 | 6,047 | 5,740 | 6,081 | 6,342 | 8,108 | 14,000 | 16,910 | 8,233 | 4,800 | 4,732 |
| Max | 10,390 | 9,138 | 7,279 | 7,226 | 7,657 | 7,790 | 11,820 | 19,940 | 30,430 | 18,490 | 8,725 | 11,820 |
| (WY) | (1913) | (1913) | (1918) | (1912) | (1911) | (1911) | (1914) | (1921) | (1918) | (1917) | (1912) | (1912) |
| Min | 2,154 | 4,805 | 4,350 | 3,813 | 5,014 | 4,632 | 4,599 | 4,320 | 3,371 | 2,986 | 2,067 | 2,151 |
| (WY) | (1925) | (1920) | (1920) | (1925) | (1920) | (1920) | (1924) | (1924) | (1924) | (1919) | (1919) | (1919) |

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SUMMARY STATISTICS

| Water Years 1910 - 1926 | | |
|--------------------------|--------------------|--------------|
| Annual mean | ^a 7,841 | |
| Highest annual mean | 10,830 | 1913 |
| Lowest annual mean | 4,562 | 1924 |
| Highest daily mean | 45,800 | Jun 21, 1918 |
| Lowest daily mean | 1,700 | Aug 2, 1919 |
| Annual seven-day minimum | 1,820 | Jul 27, 1919 |
| Annual runoff (ac-ft) | 5,681,000 | |
| 10 percent exceeds | 14,500 | |
| 50 percent exceeds | 6,260 | |
| 90 percent exceeds | 3,450 | |

^a Statistics 1910-1926 are prior to regulation by American Falls Dam.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2009, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Mean | 3,328 | 2,865 | 3,228 | 3,649 | 3,704 | 4,122 | 7,422 | 10,910 | 11,460 | 9,646 | 8,577 | 6,181 |
| Max | 11,900 | 12,620 | 11,400 | 13,250 | 18,120 | 20,020 | 22,130 | 23,390 | 32,370 | 14,670 | 11,640 | 12,870 |
| (WY) | (1985) | (1985) | (1984) | (1984) | (1997) | (1997) | (1971) | (1971) | (1997) | (1983) | (1997) | (1997) |
| Min | 714 | 306 | 294 | 398 | 287 | 251 | 1,015 | 3,891 | 5,959 | 5,982 | 5,192 | 2,774 |
| (WY) | (1962) | (1962) | (1962) | (1967) | (1961) | (1961) | (1935) | (2005) | (1934) | (1934) | (1934) | (1977) |

SUMMARY STATISTICS

| | Calendar Year 2008 | Water Year 2009 | Water Years 1927 - 2009 |
|--------------------------|--------------------|------------------------|-------------------------|
| Annual total | 1,538,477 | ^b 2,205,535 | |
| Annual mean | 4,203 | 6,043 | 6,269 |
| Highest annual mean | | | 13,020 |
| Lowest annual mean | | | 3,330 |
| Highest daily mean | 12,700 | Jul 13 | 22,600 |
| Lowest daily mean | 535 | Feb 10 | 625 |
| Annual seven-day minimum | 547 | Jan 17 | 653 |
| Annual runoff (ac-ft) | 3,052,000 | | 4,375,000 |
| 10 percent exceeds | 10,100 | | 16,600 |
| 50 percent exceeds | 1,530 | | 4,200 |
| 90 percent exceeds | 577 | | 665 |
| | | | 736 |

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

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