

04216000 NIAGARA RIVER AT BUFFALO, NY

Eastern Lake Erie Basin
Niagara Subbasin

LOCATION.--Lat 42°52'40", long 78°54'59" referenced to North American Datum of 1983, Erie County, NY, Hydrologic Unit 04120104, at head of Niagara River at Buffalo, and 34.3 mi upstream from mouth.

DRAINAGE AREA.--263,700 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1860 to September 1960 (monthly discharges only published in WSP 1912), October 1960 to current year. Records of January 1926 to September 1960 daily discharges available in files of U.S. Department of Commerce and U.S. Geological Survey.

REVISED RECORDS.--WSP 1912: 1862, 1936, 1955 (M). WDR NY-77-1: Drainage area.

GAGE.--Discharge determined from several powerplants at Niagara Falls and discharge over the falls. Discharge before 1926 determined from records of Corps of Engineers gages at Buffalo and Cleveland.

COOPERATION.--Records of daily discharge provided by Detroit District, U.S. Army Corps of Engineers and Canada Department of the Environment, not reviewed by the USGS.

REMARKS.--Records do not include water diverted from Lake Michigan by Illinois and Michigan Canal during period of its operation prior to 1910 and by Chicago Sanitary and Ship Canal, which began operation in 1900, and from Lake Erie by Welland and New York State Canals before 1918. Records include water diverted into Lake Superior from Hudson Bay drainage by the Long Lake project, which began operation in July 1939, and by the Ogoki project, which began operation in July 1943. Figures of monthly mean discharge for 1860 to 1960 and daily discharge for 1961 to 1965, published in WSP 1912, are the official records of the U.S. Lake Survey, and have been coordinated with and concurred by the counterpart Canadian agencies, as have been the extremes for period of record through December 1976 and records October 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 347,000 ft³/s, Dec. 2, 1985, result of high, storm-generated Lake Erie level; minimum daily, 90,000 ft³/s, Jan. 13, 1964, Aug. 29, 1984. Maximum monthly mean discharge, 268,400 ft³/s, June 1986; minimum monthly mean, 116,200 ft³/s, February 1936. Maximum and minimum instantaneous discharges not determined.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 245,000 ft³/s, Jan 31; minimum daily discharge, 146,000 ft³/s, Dec. 26. Maximum and minimum instantaneous discharges not determined.

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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	175,000	207,000	168,000	183,000	212,000	188,000	187,000	198,000	197,000	191,000	218,000	201,000
2	170,000	195,000	182,000	184,000	202,000	185,000	191,000	195,000	210,000	194,000	218,000	205,000
3	175,000	188,000	173,000	193,000	185,000	187,000	186,000	196,000	202,000	201,000	214,000	208,000
4	178,000	184,000	181,000	226,000	179,000	184,000	184,000	195,000	200,000	202,000	211,000	212,000
5	183,000	181,000	182,000	188,000	180,000	173,000	184,000	195,000	190,000	206,000	209,000	199,000
6	188,000	177,000	173,000	191,000	183,000	164,000	180,000	195,000	185,000	203,000	207,000	199,000
7	178,000	174,000	177,000	181,000	174,000	181,000	189,000	196,000	196,000	208,000	210,000	203,000
8	178,000	182,000	176,000	181,000	179,000	181,000	179,000	197,000	199,000	205,000	208,000	194,000
9	178,000	184,000	164,000	193,000	182,000	181,000	185,000	199,000	196,000	204,000	211,000	195,000
10	190,000	180,000	186,000	175,000	176,000	182,000	184,000	197,000	196,000	211,000	210,000	205,000
11	191,000	182,000	183,000	175,000	202,000	182,000	167,000	206,000	204,000	207,000	206,000	200,000
12	174,000	194,000	191,000	181,000	202,000	196,000	197,000	219,000	199,000	202,000	207,000	202,000
13	170,000	193,000	180,000	184,000	183,000	198,000	214,000	207,000	199,000	202,000	210,000	196,000
14	182,000	178,000	182,000	194,000	184,000	194,000	199,000	195,000	205,000	204,000	208,000	195,000
15	198,000	179,000	171,000	188,000	195,000	193,000	193,000	201,000	203,000	207,000	210,000	200,000
16	174,000	180,000	177,000	193,000	181,000	177,000	199,000	199,000	207,000	206,000	205,000	191,000
17	172,000	178,000	176,000	192,000	182,000	182,000	192,000	190,000	203,000	209,000	201,000	189,000
18	172,000	175,000	184,000	191,000	176,000	172,000	190,000	192,000	193,000	211,000	202,000	192,000
19	170,000	177,000	178,000	198,000	208,000	213,000	211,000	193,000	196,000	218,000	202,000	194,000
20	187,000	179,000	169,000	217,000	210,000	200,000	215,000	193,000	196,000	230,000	204,000	194,000
21	181,000	176,000	200,000	192,000	186,000	196,000	190,000	195,000	194,000	214,000	204,000	205,000
22	174,000	179,000	203,000	206,000	166,000	197,000	187,000	194,000	198,000	213,000	207,000	197,000
23	173,000	208,000	192,000	188,000	181,000	188,000	192,000	196,000	197,000	218,000	198,000	196,000
24	172,000	203,000	173,000	180,000	184,000	176,000	204,000	193,000	196,000	210,000	197,000	195,000
25	174,000	190,000	175,000	177,000	177,000	170,000	204,000	193,000	198,000	211,000	201,000	191,000
26	175,000	184,000	146,000	180,000	167,000	188,000	197,000	195,000	199,000	211,000	210,000	194,000
27	167,000	176,000	173,000	178,000	182,000	191,000	195,000	191,000	196,000	213,000	204,000	189,000
28	164,000	189,000	180,000	182,000	194,000	189,000	194,000	192,000	200,000	221,000	202,000	190,000
29	168,000	190,000	176,000	181,000	---	186,000	196,000	203,000	205,000	219,000	202,000	196,000
30	179,000	164,000	190,000	189,000	---	180,000	196,000	195,000	201,000	213,000	203,000	196,000
31	199,000	---	207,000	245,000	---	185,000	---	194,000	---	209,000	203,000	---
Total	5,509,000	5,526,000	5,568,000	5,906,000	5,212,000	5,759,000	5,781,000	6,099,000	5,960,000	6,473,000	6,402,000	5,923,000
Mean	177,700	184,200	179,600	190,500	186,100	185,800	192,700	196,700	198,700	208,800	206,500	197,400
Max	199,000	208,000	207,000	245,000	212,000	213,000	215,000	219,000	210,000	230,000	218,000	212,000
Min	164,000	164,000	146,000	175,000	166,000	164,000	167,000	190,000	185,000	191,000	197,000	189,000

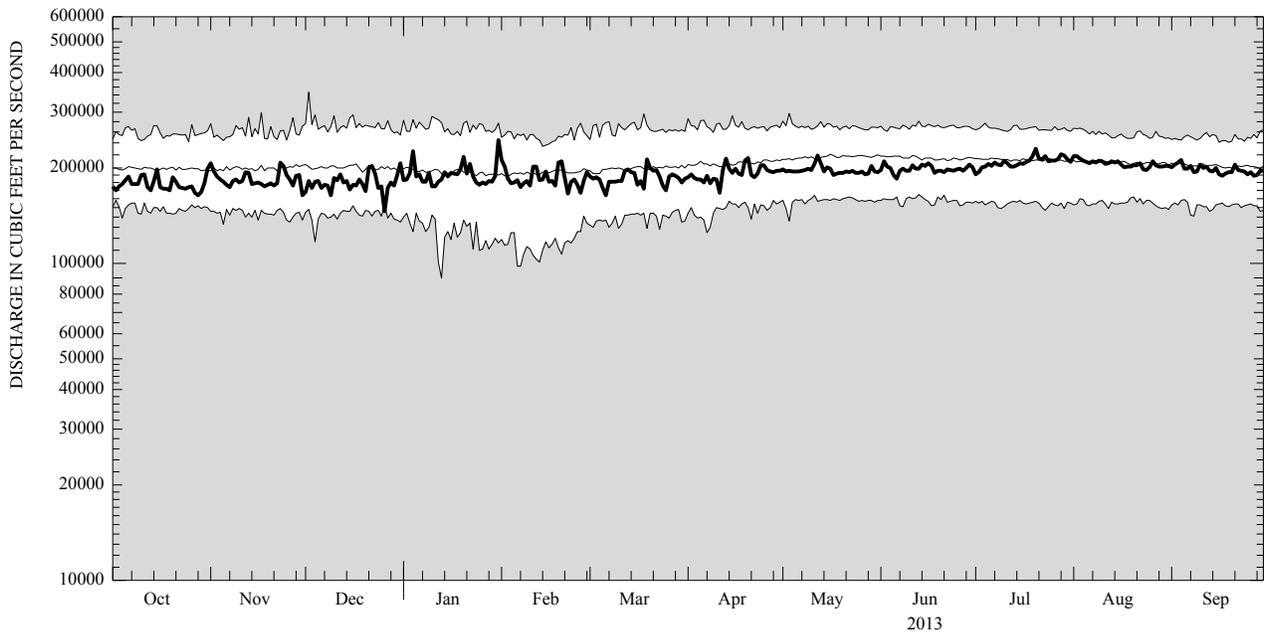
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	199,400	199,700	200,900	195,900	193,200	199,200	207,500	215,600	214,700	211,200	207,300	202,600
Max	254,000	248,000	260,900	254,000	241,600	255,500	264,200	264,700	268,400	265,200	253,500	243,700
(WY)	(1987)	(1987)	(1986)	(1987)	(1987)	(1986)	(1985)	(1974)	(1986)	(1986)	(1986)	(1986)
Min	152,700	148,100	149,800	138,500	116,200	142,700	152,000	159,100	158,000	154,100	155,000	153,900
(WY)	(1935)	(1935)	(1965)	(1964)	(1936)	(1934)	(1935)	(1934)	(1934)	(1934)	(1934)	(1934)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1926 - 2013	
Annual total	73,281,000		70,118,000			
Annual mean	200,200		192,100		204,400	
Highest annual mean					249,600	1986
Lowest annual mean					155,300	1934
Highest daily mean	278,000	Jan 13	245,000	Jan 31	347,000	Dec 2, 1985
Lowest daily mean	146,000	Dec 26	146,000	Dec 26	90,000	Jan 13, 1964
Annual seven-day minimum	170,000	Oct 23	170,000	Oct 23	105,000	Feb 6, 1936
10 percent exceeds	228,000		209,000		238,000	
50 percent exceeds	196,000		193,000		204,000	
90 percent exceeds	176,000		175,000		172,000	



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
 SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.