

04216000 NIAGARA RIVER AT BUFFALO, NY

Eastern Lake Erie Basin
Niagara Subbasin

LOCATION.--Lat 42°52'40", long 78°55'00" referenced to North American Datum of 1927, 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 (M), 1955 (M), 1936 (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, Feb. 1936. Maximum and minimum instantaneous discharges not determined.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 252,000 ft³/s, June 1; minimum daily discharge, 150,000 ft³/s, Feb. 1. Maximum and minimum instantaneous discharge not determined.

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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	183,000	179,000	219,000	188,000	150,000	182,000	198,000	218,000	252,000	222,000	223,000	208,000
2	178,000	178,000	212,000	212,000	167,000	188,000	199,000	222,000	244,000	223,000	221,000	206,000
3	162,000	182,000	193,000	194,000	178,000	179,000	196,000	221,000	240,000	226,000	220,000	209,000
4	175,000	184,000	187,000	196,000	180,000	177,000	200,000	229,000	237,000	222,000	211,000	213,000
5	183,000	183,000	195,000	187,000	171,000	190,000	209,000	231,000	239,000	222,000	213,000	206,000
6	187,000	181,000	206,000	177,000	178,000	198,000	202,000	227,000	234,000	222,000	215,000	193,000
7	195,000	188,000	202,000	187,000	172,000	195,000	198,000	224,000	237,000	216,000	221,000	182,000
8	196,000	182,000	196,000	181,000	175,000	187,000	195,000	220,000	242,000	217,000	218,000	192,000
9	184,000	178,000	184,000	185,000	169,000	189,000	197,000	219,000	241,000	217,000	221,000	203,000
10	187,000	175,000	191,000	168,000	172,000	203,000	198,000	215,000	231,000	216,000	230,000	205,000
11	186,000	176,000	183,000	165,000	166,000	236,000	205,000	214,000	232,000	220,000	221,000	208,000
12	185,000	180,000	186,000	180,000	176,000	213,000	194,000	215,000	234,000	222,000	219,000	212,000
13	184,000	177,000	200,000	184,000	173,000	210,000	197,000	219,000	235,000	217,000	215,000	215,000
14	189,000	191,000	201,000	184,000	180,000	199,000	192,000	219,000	227,000	212,000	212,000	207,000
15	187,000	184,000	199,000	195,000	167,000	193,000	164,000	213,000	225,000	209,000	210,000	206,000
16	190,000	173,000	194,000	168,000	170,000	202,000	192,000	222,000	227,000	212,000	215,000	204,000
17	191,000	207,000	193,000	151,000	170,000	199,000	222,000	220,000	227,000	215,000	216,000	199,000
18	185,000	190,000	202,000	177,000	187,000	201,000	192,000	224,000	225,000	217,000	216,000	200,000
19	190,000	186,000	188,000	179,000	190,000	196,000	192,000	234,000	218,000	215,000	213,000	205,000
20	197,000	196,000	183,000	173,000	178,000	191,000	223,000	234,000	216,000	216,000	213,000	205,000
21	195,000	174,000	178,000	188,000	158,000	197,000	220,000	231,000	219,000	220,000	216,000	203,000
22	191,000	188,000	180,000	167,000	166,000	195,000	204,000	228,000	222,000	215,000	215,000	206,000
23	191,000	203,000	182,000	179,000	176,000	171,000	216,000	229,000	227,000	218,000	214,000	205,000
24	184,000	182,000	182,000	175,000	177,000	189,000	214,000	233,000	232,000	219,000	220,000	205,000
25	185,000	177,000	177,000	177,000	174,000	198,000	208,000	226,000	234,000	219,000	225,000	201,000
26	186,000	224,000	170,000	174,000	176,000	198,000	219,000	234,000	227,000	220,000	211,000	202,000
27	196,000	219,000	180,000	178,000	176,000	197,000	221,000	241,000	222,000	214,000	211,000	206,000
28	213,000	188,000	204,000	176,000	182,000	200,000	237,000	240,000	231,000	218,000	200,000	206,000
29	195,000	181,000	185,000	172,000	---	199,000	230,000	241,000	232,000	225,000	211,000	216,000
30	203,000	183,000	178,000	173,000	---	194,000	216,000	242,000	226,000	221,000	211,000	229,000
31	183,000	---	179,000	165,000	---	196,000	---	241,000	---	221,000	206,000	---
Total	5,836,000	5,589,000	5,909,000	5,555,000	4,854,000	6,062,000	6,150,000	7,026,000	6,935,000	6,768,000	6,683,000	6,157,000
Mean	188,300	186,300	190,600	179,200	173,400	195,500	205,000	226,600	231,200	218,300	215,600	205,200
Max	213,000	224,000	219,000	212,000	190,000	236,000	237,000	242,000	252,000	226,000	230,000	229,000
Min	162,000	173,000	170,000	151,000	150,000	171,000	164,000	213,000	216,000	209,000	200,000	182,000

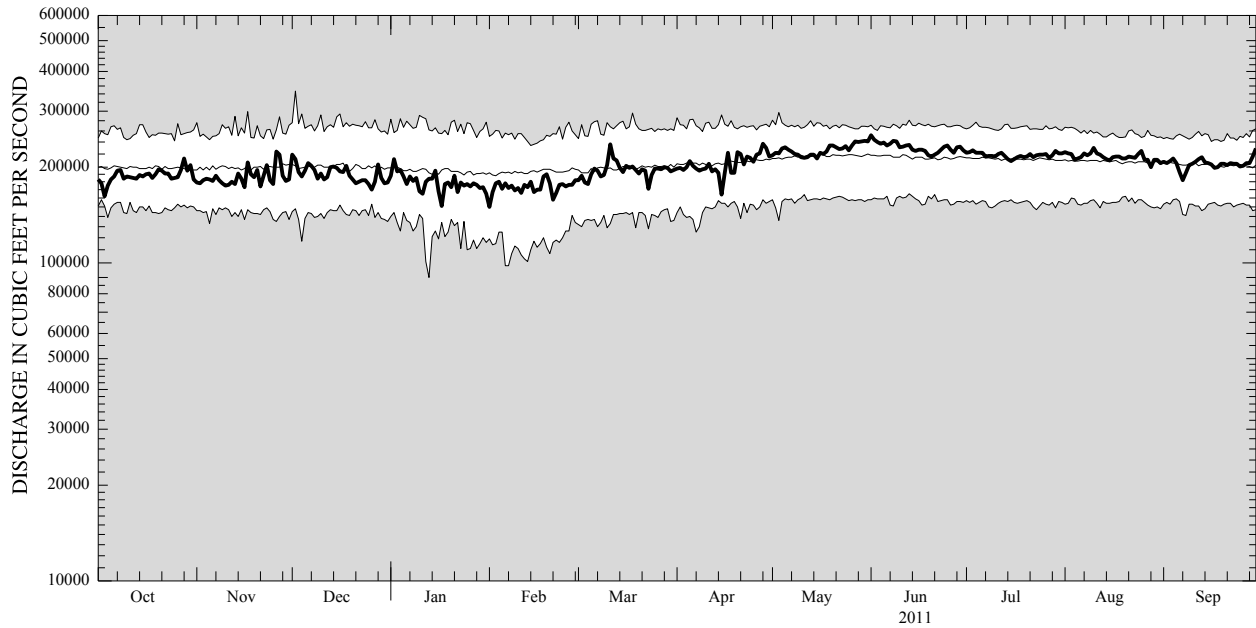
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	199,500	199,700	200,800	195,500	192,900	199,100	207,600	215,900	215,100	211,500	207,600	202,900
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 2010		Water Year 2011		Water Years 1926 - 2011	
Annual total	71,475,000		73,524,000			
Annual mean	195,800		201,400		204,400	
Highest annual mean					249,600	1986
Lowest annual mean					155,300	1934
Highest daily mean	235,000	May 8	252,000	Jun 1	347,000	Dec 2, 1985
Lowest daily mean	155,000	Jan 30	150,000	Feb 1	90,000	Jan 13, 1964
Annual seven-day minimum	177,000	Jan 29	169,000	Jan 27	105,000	Feb 6, 1936
10 percent exceeds	212,000		227,000		238,000	
50 percent exceeds	196,000		200,000		204,000	
90 percent exceeds	182,000		176,000		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.