Water-Data Report 2012

01358000 HUDSON RIVER AT GREEN ISLAND, NY

Upper Hudson Basin
Hudson-Hoosic Subbasin

LOCATION.--Lat 42°45′08″, long 73°41′20″ referenced to North American Datum of 1983, Albany County, NY, Hydrologic Unit 02020003, on right bank at Green Island, just upstream from Troy lock and dam, and 0.5 mi downstream from 5th branch Mohawk River.

DRAINAGE AREA.--8,090 mi^2, approximately (including that above site of former auxiliary gage).

SURFACE-WATER RECORDS

PERIOD OF RECORD.--February 1946 to current year (October 1997 to September 2000, discharges only for days when inflatable rubber dam was considered to have been collapsed; see REMARKS).

GAGE.--Water-stage recorder. Datum of gage is 0.31 ft below NGVD of 1929 (Corps of Engineers benchmark). From July 1, 1946 to Mar. 12, 1962 auxiliary water-stage recorder on bypass channel at datum 10.59 ft higher. Power transducer on each turbine in powerplant. Since Oct. 1, 2008, auxiliary acoustic velocity meter about 1,600 ft upstream from base gage.

COOPERATION.--Information on turbine operation provided by Green Island Power Authority.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Records include flow over spillway, flow through lock, and flow through powerplant. Powerplant, located on the right bank just downstream from gage, was inoperative from Nov. 20, 1960 to Feb. 23, 1971. An inflatable rubber dam was installed on the spillway during August 1991. August 1991 through September 1997, and since October 2000, estimated water-discharge data based on records for Hudson River above Lock 1 near Waterford (01335754) and Mohawk River at Cohoes (01357500) due to inflatable rubber dam. October 1997 to September 2000, discharges only for days when inflatable rubber dam was considered to have been collapsed. Satellite gage-height and power transducer telemeter readings at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 181,000 ft^3/s, Dec. 31, 1948, Aug. 29, 2011, gage height, 27.05 ft; minimum discharge not determined; minimum gage height, 13.68 ft, July 6, 1981, when pool was lowered for inspection of flashboards.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 19, 1936, reached a stage of 29.48 ft at gage on opposite bank, from information by Corps of Engineers (discharge, 215,000 ft^3/s). Flood of Mar. 28, 1913, prior to construction of Sacandaga Reservoir and Troy lock and dam, reached a stage about 0.2 ft higher upstream from former dam near same site. Downstream from dams, flood in 1913 was about 3.3 ft higher than flood in 1936, from information by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 62,300 ft3/s, May 9, gage height, 20.63 ft; minimum discharge not determined; minimum gage height, 14.40 ft, Apr. 13.

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 01358000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/01358000.2012.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	34,000	21,600	25,700	21,100	20,800	11,000	9,360	11,300	13,100	5,460	4,360	3,620
2	29,200	18,800	22,100	21,700	28,200	7,970	8,690	15,000	14,100	4,730	5,170	3,490
3	30,600	18,100	19,400	20,800	25,300	9,390	9,400	13,700	15,800	4,750	4,630	3,370
4	30,200	17,000	16,500	17,700	21,200	15,200	7,920	14,300	15,800	5,230	4,460	3,350
5	25,500	17,800	15,400	15,800	18,600	14,700	7,210	16,700	16,400	4,430	4,220	3,840
6	22,200	16,400	19,100	16,400	15,900	12,500	7,510	15,000	15,600	4,740	5,630	3,940
7	20,100	16,300	22,800	17,400	17,200	11,500	6,770	12,400	15,900	4,200	5,740	3,980
8	19,600	15,700	37,100	16,600	16,500	11,400	7,550	28,100	15,400	4,130	4,710	3,850
9	16,800	15,800	33,800	14,600	15,100	26,500	6,430	51,300	14,100	4,720	4,040	4,550
10	15,300	13,800	25,600	13,600	15,400	26,300	6,490	34,300	14,200	4,250	4,980	4,620
11	16,100	13,800	22,400	13,900	14,300	18,000	6,800	29,800	13,400	3,790	5,130	4,740
12	14,700	13,500	20,800	14,600	13,100	16,900	7,620	22,300	12,600	3,700	5,920	4,040
13	16,200	13,400	20,300	14,700	12,600	17,000	6,790	17,700	13,700	3,420	7,310	3,950
14	18,400	14,100	18,400	15,800	12,700	20,200	6,580	17,400	14,800	3,910	5,440	3,500
15	25,500	17,800	19,600	15,500	12,300	22,000	5,920	21,300	11,400	3,870	5,860	3,480
16	25,600	19,700	26,400	e12,100	12,500	22,000	5,250	32,300	10,800	4,170	4,770	3,360
17	24,500	17,300	26,000	e13,600	12,600	24,000	4,190	27,800	9,140	3,670	5,240	3,080
18	23,700	16,600	23,500	e15,300	12,500	21,700	4,460	19,100	8,140	5,350	5,200	5,180
19	22,800	13,900	18,800	e15,700	11,200	22,900	4,540	14,600	6,570	3,390	4,550	9,010
20	20,700	12,700	19,200	e15,100	8,990	22,400	3,700	11,100	6,010	3,410	3,950	7,830
21	20,300	16,900	19,600	e14,000	9,570	22,100	4,000	14,800	6,560	3,860	3,970	6,940
22	20,700	16,100	27,800	e12,300	8,840	22,400	7,630	11,600	6,430	3,850	4,020	6,130
23	21,100	28,800	34,200	e12,200	9,910	21,100	16,600	12,600	5,760	3,510	3,900	5,430
24	20,700	39,600	33,900	e14,800	10,100	18,400	25,700	10,200	4,590	4,530	3,730	5,850
25	19,200	27,600	26,300	e17,100	10,700	16,900	21,200	12,300	4,780	5,090	3,780	4,920
26	17,500	22,100	22,900	17,100	10,200	14,700	16,300	11,000	5,620	5,050	3,570	4,780
27	18,600	19,100	21,600	26,200	8,940	12,900	14,100	11,200	5,920	4,660	3,690	4,630
28	25,900	17,800	26,600	46,100	8,790	11,900	14,100	9,620	5,460	5,660	4,930	5,820
29	26,800	21,900	27,500	35,400	10,300	10,600	13,200	9,320	5,470	6,640	4,950	6,470
30	24,300	18,900	23,700	29,600	---	9,560	11,500	17,000	5,820	6,540	4,000	6,850
31	22,300	---	21,400	21,500	---	9,430	---	18,200	---	5,220	3,790	---
Total	689,100	552,900	738,400	568,300	404,340	523,550	277,510	563,340	313,370	139,930	145,640	144,600
Mean	22,230	18,430	23,820	18,330	13,940	16,890	9,250	18,170	10,450	4,514	4,698	4,820
Max	34,000	39,600	37,100	46,100	28,200	26,500	25,700	51,300	16,400	6,640	7,310	9,010
Min	14,700	12,700	15,400	12,100	8,790	7,970	3,700	9,320	4,590	3,390	3,570	3,080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	10,090	14,080	16,090	14,270	14,100	22,690	30,670	18,860	10,760	7,191	6,423	6,912
Max	30,140	26,790	34,940	33,970	31,260	44,240	61,820	40,520	31,420	23,780	17,470	31,510
(WY)	(1978)	(2006)	(1997)	(1949)	(1976)	(1979)	(1993)	(1972)	(2006)	(2006)	(2011)	(2011)
Min	2,967	3,270	6,096	4,187	4,527	9,123	9,073	5,505	3,573	3,082	2,912	2,875
(WY)	(1965)	(1965)	(1965)	(1961)	(1980)	(1965)	(1995)	(1987)	(1965)	(1965)	(1965)	(1964)

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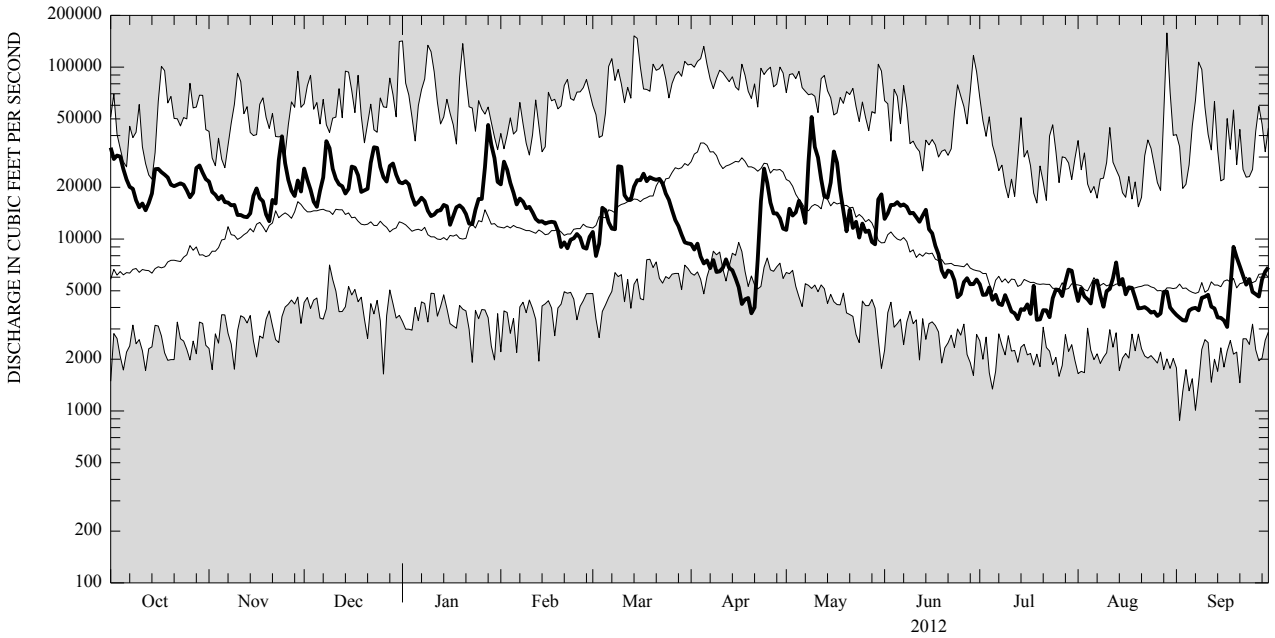
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1946 - 2012	
Annual total	8,239,870		5,060,980			
Annual mean	22,570		13,830		14,350	
Highest annual mean					22,840	2011
Lowest annual mean					6,386	1965
Highest daily mean	158,000	Aug 29	51,300	May 9	158,000	Aug 29, 2011
Lowest daily mean	3,530	Aug 6	3,080	Sep 17	882	Sep 2, 1968
Annual seven-day minimum	5,000	Jul 20	3,630	Aug 31	2,110	Aug 23, 1995
10 percent exceeds	42,300		25,500		29,600	
50 percent exceeds	18,900		13,600		10,100	
90 percent exceeds	7,290		4,030		4,390	



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.