

Water-Data Report 2010

## 01358000 HUDSON RIVER AT GREEN ISLAND, NY

Upper Hudson Basin  
Hudson-Hoosic Subbasin

LOCATION.--Lat 42°45'08", long 73°41'22" referenced to North American Datum of 1927, 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<sup>2</sup>, 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<sup>3</sup>/s, Dec. 31, 1948, gage height, 27.05 ft, from floodmark in gage well; 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<sup>3</sup>/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, 101,000 ft<sup>3</sup>/s, Mar. 23, gage height, 22.54 ft; maximum gage height, 22.64 ft, Mar. 24; minimum discharge not determined; minimum gage height, 14.35 ft, July 15.

## 01358000 HUDSON RIVER AT GREEN ISLAND, NY—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11,400	24,400	16,400	15,900	e14,100	14,900	64,300	7,700	5,430	17,500	e5,320	8,420
2	10,100	25,800	16,500	15,900	e14,200	14,900	47,000	e8,300	4,640	11,800	e4,910	8,660
3	10,500	21,800	22,900	e13,000	e14,300	16,500	39,700	e8,370	4,880	9,960	e5,080	7,570
4	12,600	19,600	28,900	e11,300	e13,800	16,200	36,200	e8,220	6,470	8,700	e4,920	7,960
5	13,000	19,200	25,200	e12,000	e13,600	15,400	33,200	e8,370	6,380	7,960	e5,390	5,310
6	12,600	17,000	21,900	e12,400	e13,000	15,900	29,000	e8,630	11,200	6,390	6,430	5,040
7	12,100	17,500	18,900	e10,900	e13,100	15,700	25,800	e8,520	13,000	4,510	5,910	e4,830
8	17,800	17,500	18,800	e10,700	e11,400	16,900	23,500	e9,660	10,200	3,760	4,600	e5,160
9	18,300	17,100	18,700	e10,300	e12,000	18,000	24,900	15,700	8,350	3,380	4,520	e6,040
10	15,200	16,100	17,200	e9,220	e12,600	18,100	23,400	14,800	e7,330	5,250	4,880	e4,010
11	15,200	15,700	17,800	e8,690	e12,000	19,600	21,000	12,200	7,940	5,850	5,080	e4,860
12	15,400	15,200	17,600	e9,010	e11,600	21,300	19,200	e9,740	7,350	e5,500	e4,180	e4,930
13	15,200	15,000	17,100	e9,550	e11,900	27,500	17,600	e8,720	13,300	e5,880	e4,760	e4,290
14	13,800	16,100	18,300	e8,540	e11,500	36,600	16,300	e10,900	13,700	e6,440	e4,460	4,960
15	12,000	19,000	19,700	e8,890	e12,000	44,000	15,200	e12,400	11,000	e6,140	e4,770	5,270
16	10,800	18,400	20,600	e9,120	e11,900	45,200	14,600	e10,700	8,730	e5,400	e4,580	4,640
17	11,100	18,100	19,500	e9,120	e11,400	41,800	15,400	e9,980	8,400	e5,130	4,950	5,840
18	11,000	16,500	16,000	e9,110	e11,800	38,700	21,600	e7,200	10,900	e5,290	4,590	5,980
19	9,770	16,300	15,900	e9,680	e11,700	37,900	19,900	e7,780	9,360	e6,310	4,570	6,260
20	10,400	22,300	17,000	e9,720	e9,600	39,600	15,800	e7,950	7,930	6,230	4,250	7,210
21	9,360	26,300	15,300	9,540	e8,030	40,300	13,200	e7,290	7,660	4,830	4,540	4,920
22	9,080	22,400	13,300	9,200	e7,730	38,100	11,900	6,890	7,200	4,820	5,580	5,150
23	10,800	20,800	13,300	8,510	e7,890	68,800	11,900	6,130	8,290	5,780	37,700	5,630
24	18,300	19,800	12,100	7,970	e8,060	85,800	12,600	6,380	11,400	14,900	33,700	e4,170
25	43,600	19,100	13,200	13,000	10,500	58,200	10,200	6,680	7,550	14,700	26,900	e4,490
26	26,700	16,900	14,200	56,900	16,400	47,300	9,730	6,340	8,600	13,300	21,300	e4,350
27	20,800	16,100	17,200	50,100	17,500	39,300	e9,940	6,050	7,840	8,410	19,200	e4,560
28	25,900	15,100	25,200	33,700	15,800	31,000	e10,300	5,880	7,010	5,670	12,100	e4,710
29	49,200	16,900	20,600	22,400	---	28,700	e10,400	4,630	16,100	5,840	10,100	7,450
30	28,500	15,800	14,900	e16,700	---	35,200	e5,900	5,140	20,600	e5,600	10,500	12,900
31	22,100	---	13,900	e14,300	---	74,800	---	4,490	---	e6,340	8,760	---
<b>Total</b>	522,610	557,800	558,100	455,370	339,410	1,062,200	629,670	261,740	278,740	227,570	288,530	175,570
<b>Mean</b>	16,860	18,590	18,000	14,690	12,120	34,260	20,990	8,443	9,291	7,341	9,307	5,852
<b>Max</b>	49,200	26,300	28,900	56,900	17,500	85,800	64,300	15,700	20,600	17,500	37,700	12,900
<b>Min</b>	9,080	15,000	12,100	7,970	7,730	14,900	5,900	4,490	4,640	3,380	4,180	4,010

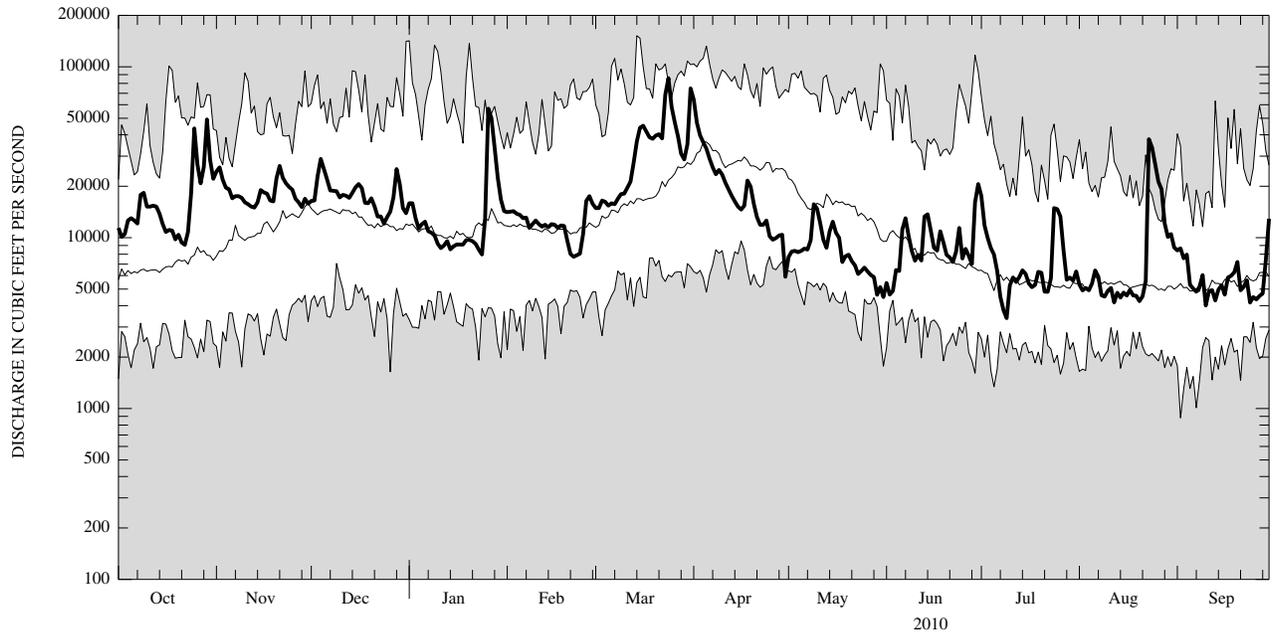
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	9,631	13,900	15,880	14,250	14,170	22,580	30,850	18,640	10,680	7,200	6,272	6,549
<b>Max</b>	30,140	26,790	34,940	33,970	31,260	44,240	61,820	40,520	31,420	23,780	14,630	17,030
<b>(WY)</b>	(1978)	(2006)	(1997)	(1949)	(1976)	(1979)	(1993)	(1972)	(2006)	(2006)	(1976)	(1975)
<b>Min</b>	2,967	3,270	6,096	4,187	4,527	9,123	9,073	5,505	3,573	3,082	2,912	2,875
<b>(WY)</b>	(1965)	(1965)	(1965)	(1961)	(1980)	(1965)	(1995)	(1987)	(1965)	(1965)	(1965)	(1964)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1946 - 2010	
<b>Annual total</b>	6,051,970		5,357,310			
<b>Annual mean</b>	16,580		14,680		14,210	
<b>Highest annual mean</b>					22,100	1976
<b>Lowest annual mean</b>					6,386	1965
<b>Highest daily mean</b>	65,300	Mar 9	85,800	Mar 24	152,000	Mar 14, 1977
<b>Lowest daily mean</b>	4,800	Sep 22	3,380	Jul 9	882	Sep 2, 1968
<b>Annual seven-day minimum</b>	5,160	Sep 20	4,600	Aug 14	2,110	Aug 23, 1995
<b>10 percent exceeds</b>	26,200		26,500		29,500	
<b>50 percent exceeds</b>	15,100		11,900		9,920	
<b>90 percent exceeds</b>	8,640		4,960		4,380	



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.