04264331 ST. LAWRENCE RIVER AT CORNWALL, ONTARIO, NEAR MASSENA, NY

St. Lawrence Basin
Upper St. Lawrence Subbasin

LOCATION.--Lat 45°00′22″, long 74°47′43″ referenced to North American Datum of 1927, St. Lawrence County, NY, Hydrologic Unit 04150301, at Robert Moses-Robert H. Saunders power dam on Lake St. Lawrence at the International Boundary at Cornwall, Stormont County, Ontario, 2.9 mi upstream from Grass River, 5.9 mi northeast of Massena, NY, and 6.2 mi upstream from Raquette River.

DRAINAGE AREA.--298,800 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1860 to September 1935 (monthly discharges only, published in WSP 1307), October 1935 to current year. Prior to October 1970 published as 04264000 "St. Lawrence River at Ogdensburg."

REVISED RECORDS.--WSP 1437: 1870, 1875, 1881, 1883, 1884, 1890.

GAGE.--There is no gage. Discharge is determined from summation of discharge through the Robert Moses-Robert H. Saunders power dam, the Long Sault Dam, the Massena Diversion, the Raisin River Diversion, the Cornwall and Massena municipal water supply, and the Cornwall and the Wiley-Dondero navigation canals. U.S.-Canada coordinated discharge figures supplied by Corps of Engineers. Prior to 1956, base gage at lock 25 at Iroquois Ont. with supplementary gages. August 1956 to June 1958, base gage at lock 24 between Iroquois and Morrisburg, Ont., and supplementary gages. Prior to August 1956, these were gages of the Canadian Hydrographic Service and from August 1956 to June 1958, were gages of the Hydro-Electric Power Commission of Ontario. Discharge in the reach of river at Cornwall, Ont., near Massena, NY is considered to be the same as discharge at Ogdensburg, NY when adjusted for storage in Lake St. Lawrence.

COOPERATION.--Records of daily discharge provided by Buffalo District, U.S. Army Corps of Engineers through International St. Lawrence River Board of Control, not reviewed by the USGS.

REMARKS.--Since July 1958, flow regulated by international agreement administered by International St. Lawrence River Board of Control under the International Joint Commission. 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. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 378,000 ft^3/s, May 20, 28, June 8, 1993; minimum daily discharge, 139,000 ft^3/s, Feb. 7, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 301,000 ft^3/s, Feb. 23, 25, Mar. 3, 7; minimum daily discharge, 224,000 ft^3/s, Sept. 8-9.

04264331 ST. LAWRENCE RIVER AT CORNWALL, ONTARIO, NEAR MASSENA, NY—Continued

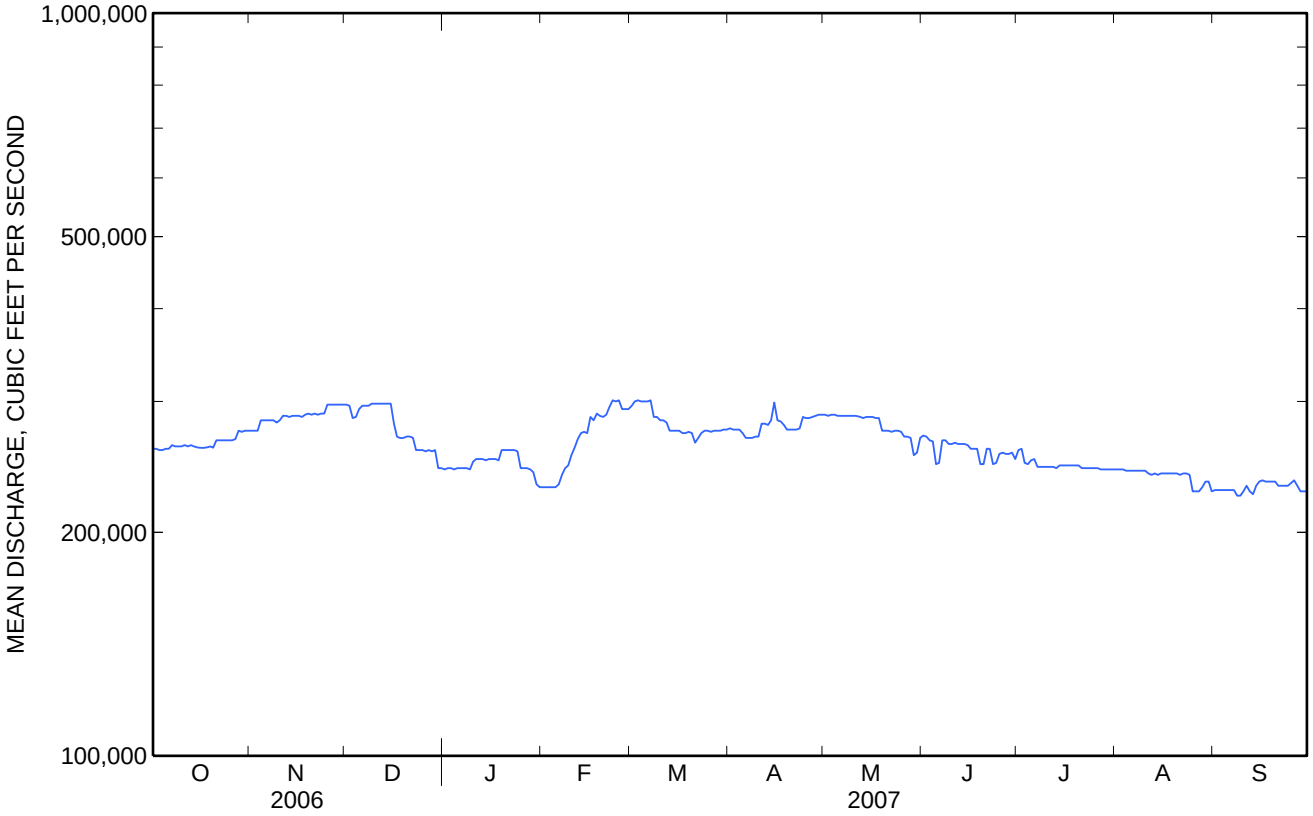
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	259,000	274,000	297,000	243,000	230,000	296,000	276,000	288,000	270,000	258,000	243,000	228,000
2	259,000	274,000	296,000	244,000	230,000	300,000	275,000	287,000	269,000	259,000	243,000	228,000
3	258,000	274,000	285,000	244,000	230,000	301,000	275,000	288,000	266,000	248,000	243,000	228,000
4	258,000	283,000	286,000	243,000	230,000	300,000	275,000	288,000	265,000	247,000	242,000	228,000
5	259,000	283,000	293,000	244,000	230,000	300,000	272,000	287,000	247,000	250,000	242,000	228,000
6	259,000	283,000	296,000	244,000	232,000	300,000	268,000	287,000	248,000	251,000	242,000	228,000
7	262,000	283,000	296,000	244,000	239,000	301,000	268,000	287,000	266,000	245,000	242,000	228,000
8	261,000	283,000	296,000	244,000	244,000	286,000	268,000	287,000	266,000	245,000	242,000	224,000
9	261,000	281,000	298,000	243,000	246,000	286,000	269,000	287,000	263,000	245,000	242,000	224,000
10	261,000	283,000	298,000	249,000	254,000	283,000	269,000	287,000	263,000	245,000	242,000	227,000
11	262,000	287,000	298,000	251,000	260,000	283,000	280,000	287,000	264,000	245,000	240,000	231,000
12	261,000	287,000	298,000	251,000	267,000	281,000	280,000	286,000	263,000	245,000	239,000	227,000
13	262,000	286,000	298,000	251,000	272,000	274,000	279,000	285,000	263,000	244,000	240,000	225,000
14	261,000	287,000	298,000	250,000	273,000	274,000	283,000	286,000	263,000	246,000	239,000	231,000
15	260,000	287,000	298,000	251,000	272,000	274,000	299,000	286,000	262,000	246,000	240,000	234,000
16	260,000	287,000	280,000	251,000	286,000	274,000	283,000	286,000	259,000	246,000	240,000	235,000
17	260,000	286,000	269,000	251,000	283,000	272,000	282,000	285,000	259,000	246,000	240,000	234,000
18	260,000	288,000	268,000	250,000	289,000	272,000	279,000	285,000	259,000	246,000	240,000	234,000
19	261,000	289,000	268,000	258,000	287,000	273,000	275,000	274,000	247,000	246,000	240,000	234,000
20	260,000	288,000	269,000	258,000	286,000	272,000	275,000	274,000	247,000	246,000	240,000	234,000
21	266,000	289,000	269,000	258,000	288,000	264,000	275,000	274,000	259,000	244,000	239,000	231,000
22	266,000	288,000	268,000	258,000	295,000	268,000	275,000	273,000	259,000	244,000	240,000	231,000
23	266,000	289,000	258,000	258,000	301,000	272,000	276,000	274,000	247,000	244,000	240,000	231,000
24	266,000	289,000	258,000	257,000	300,000	274,000	286,000	274,000	248,000	244,000	239,000	231,000
25	266,000	297,000	258,000	244,000	301,000	274,000	285,000	273,000	255,000	244,000	227,000	233,000
26	266,000	297,000	257,000	244,000	293,000	273,000	285,000	269,000	256,000	244,000	227,000	235,000
27	267,000	297,000	258,000	244,000	293,000	274,000	286,000	269,000	255,000	243,000	227,000	231,000
28	274,000	297,000	257,000	243,000	293,000	274,000	287,000	268,000	255,000	243,000	230,000	227,000
29	273,000	297,000	258,000	241,000	---	274,000	288,000	254,000	256,000	243,000	234,000	227,000
30	274,000	297,000	244,000	232,000	---	275,000	288,000	256,000	251,000	243,000	234,000	227,000
31	274,000	---	244,000	230,000	---	275,000	---	268,000	---	243,000	227,000	---
Total	8,162,000	8,610,000	8,614,000	7,673,000	7,504,000	8,699,000	8,361,000	8,659,000	7,750,000	7,628,000	7,385,000	6,894,000
Mean	263,300	287,000	277,900	247,500	268,000	280,600	278,700	279,300	258,300	246,100	238,200	229,800
Max	274,000	297,000	298,000	258,000	301,000	301,000	299,000	288,000	270,000	259,000	243,000	235,000
Min	258,000	274,000	244,000	230,000	230,000	264,000	268,000	254,000	247,000	243,000	227,000	224,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	250,100	246,400	241,500	226,700	235,200	247,400	256,800	266,300	270,400	267,500	262,600	256,800
Max	323,800	338,100	327,000	298,700	293,300	335,100	325,100	353,500	353,500	350,000	330,300	326,400
(WY)	(1987)	(1987)	(1987)	(1987)	(1997)	(1998)	(1973)	(1993)	(1993)	(1973)	(1974)	(1986)
Min	182,600	176,100	174,700	168,700	153,800	179,800	179,200	176,500	188,600	200,600	200,000	194,900
(WY)	(1936)	(1936)	(1936)	(1936)	(1936)	(1965)	(1964)	(1965)	(1965)	(1964)	(1936)	(1936)

04264331 ST. LAWRENCE RIVER AT CORNWALL, ONTARIO, NEAR MASSENA, NY—Continued

SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1936 - 2007	
Annual total	92,496,000		95,939,000			
Annual mean	253,400		262,800		252,400	
Highest annual mean					309,300	1987
Lowest annual mean					191,800	1936
Highest daily mean	298,000	Dec 9	301,000	Feb 23	378,000	May 20, 1993
Lowest daily mean	219,000	Jan 5	224,000	Sep 8	139,000	Feb 7, 1936
Annual seven-day minimum	220,000	Jan 4	227,000	Sep 7	148,000	Feb 6, 1936
10 percent exceeds	283,000		289,000		300,000	
50 percent exceeds	256,000		262,000		252,000	
90 percent exceeds	222,000		234,000		208,000