

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 mi².

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 ft³/s, May 20, 28, June 8, 1993; minimum daily discharge, 139,000 ft³/s, Feb. 7, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 279,000 ft³/s, Mar. 7-10; minimum daily discharge, 219,000 ft³/s, Jan. 5, 10.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	243,000	242,000	263,000	220,000	220,000	270,000	262,000	257,000	233,000	226,000	249,000	251,000
2	243,000	243,000	263,000	220,000	220,000	271,000	262,000	257,000	233,000	226,000	249,000	249,000
3	243,000	242,000	267,000	220,000	220,000	270,000	262,000	257,000	231,000	227,000	251,000	249,000
4	243,000	243,000	267,000	220,000	220,000	271,000	262,000	257,000	232,000	226,000	255,000	249,000
5	242,000	244,000	266,000	219,000	220,000	273,000	263,000	257,000	230,000	226,000	256,000	249,000
6	243,000	243,000	267,000	220,000	229,000	275,000	262,000	246,000	231,000	226,000	255,000	249,000
7	243,000	244,000	267,000	220,000	238,000	279,000	262,000	246,000	232,000	226,000	255,000	250,000
8	239,000	243,000	266,000	220,000	238,000	279,000	265,000	246,000	231,000	236,000	255,000	249,000
9	239,000	243,000	267,000	220,000	237,000	279,000	265,000	246,000	231,000	236,000	255,000	252,000
10	239,000	244,000	268,000	219,000	238,000	279,000	265,000	246,000	232,000	236,000	255,000	253,000
11	239,000	243,000	268,000	221,000	229,000	266,000	265,000	246,000	232,000	236,000	256,000	252,000
12	238,000	251,000	268,000	220,000	229,000	266,000	265,000	245,000	232,000	236,000	253,000	252,000
13	239,000	250,000	269,000	220,000	234,000	267,000	265,000	236,000	231,000	236,000	252,000	252,000
14	244,000	250,000	269,000	220,000	252,000	267,000	265,000	236,000	232,000	236,000	252,000	252,000
15	244,000	251,000	268,000	220,000	259,000	266,000	263,000	236,000	232,000	242,000	252,000	252,000
16	239,000	250,000	267,000	220,000	261,000	266,000	264,000	236,000	232,000	242,000	252,000	256,000
17	239,000	250,000	248,000	220,000	259,000	266,000	264,000	237,000	229,000	242,000	253,000	256,000
18	239,000	251,000	248,000	220,000	260,000	268,000	263,000	236,000	228,000	242,000	252,000	255,000
19	239,000	259,000	248,000	220,000	260,000	269,000	264,000	236,000	228,000	242,000	251,000	256,000
20	239,000	257,000	249,000	220,000	260,000	268,000	264,000	232,000	229,000	242,000	251,000	256,000
21	238,000	258,000	248,000	220,000	260,000	272,000	264,000	232,000	228,000	242,000	251,000	256,000
22	240,000	259,000	249,000	220,000	260,000	272,000	258,000	232,000	228,000	247,000	251,000	256,000
23	239,000	258,000	247,000	220,000	260,000	272,000	258,000	232,000	229,000	248,000	251,000	258,000
24	239,000	258,000	237,000	220,000	260,000	273,000	257,000	232,000	224,000	247,000	251,000	259,000
25	240,000	258,000	236,000	220,000	271,000	267,000	257,000	232,000	224,000	247,000	251,000	257,000
26	239,000	263,000	236,000	220,000	270,000	267,000	259,000	232,000	224,000	247,000	251,000	259,000
27	240,000	263,000	237,000	220,000	270,000	266,000	257,000	233,000	224,000	247,000	250,000	257,000
28	240,000	263,000	236,000	220,000	270,000	267,000	259,000	233,000	223,000	247,000	250,000	258,000
29	243,000	263,000	236,000	220,000	---	267,000	257,000	234,000	224,000	249,000	251,000	257,000
30	242,000	264,000	236,000	220,000	---	266,000	258,000	233,000	224,000	249,000	251,000	259,000
31	242,000	---	220,000	220,000	---	267,000	---	233,000	---	249,000	250,000	---
Total	7,458,000	7,550,000	7,881,000	6,819,000	6,904,000	8,371,000	7,856,000	7,449,000	6,873,000	7,406,000	7,817,000	7,615,000
Mean	240,600	251,700	254,200	220,000	246,600	270,000	261,900	240,300	229,100	238,900	252,200	253,800
Max	244,000	264,000	269,000	221,000	271,000	279,000	265,000	257,000	233,000	249,000	256,000	259,000
Min	238,000	242,000	220,000	219,000	220,000	266,000	257,000	232,000	223,000	226,000	249,000	249,000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	249,900	245,800	241,000	226,400	234,800	246,900	256,500	266,100	270,600	267,800	263,000	257,100
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 2005		Water Year 2006		Water Years 1936 - 2006	
Annual total	93,098,000		89,999,000			
Annual mean	255,100		246,600		252,200	
Highest annual mean					309,300	1987
Lowest annual mean					191,800	1936
Highest daily mean	292,000	May 13	279,000	Mar 7	378,000	May 20, 1993
Lowest daily mean	219,000	Jan 26	219,000	Jan 5	139,000	Feb 7, 1936
Annual seven-day minimum	220,000	Jan 21	220,000	Jan 4	148,000	Feb 6, 1936
10 percent exceeds	281,000		267,000		300,000	
50 percent exceeds	252,000		248,000		252,000	
90 percent exceeds	236,000		221,000		208,000	

