

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

Upper St. Lawrence Watershed

LOCATION.--Lat 45°00'22", long 74°47'43" referenced to North American Datum of 1927, St Lawrence County, 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.--298800 mi<sup>2</sup>.

**WATER-DISCHARGE 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<sup>3</sup>/s, May 20, 28, June 8, 1993; minimum daily, 139,000 ft<sup>3</sup>/s, Feb. 7, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 292,000 ft<sup>3</sup>/s, Oct 1, May 13; minimum daily, 219,000 ft<sup>3</sup>/s, Jan 26.

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

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005**  
**DAILY MEAN VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	292,000	264,000	241,000	220,000	241,000	275,000	248,000	269,000	273,000	255,000	250,000	238,000
2	290,000	264,000	240,000	220,000	241,000	276,000	269,000	265,000	273,000	253,000	250,000	238,000
3	289,000	264,000	240,000	220,000	251,000	275,000	267,000	273,000	273,000	253,000	257,000	244,000
4	289,000	264,000	254,000	220,000	251,000	275,000	249,000	281,000	265,000	252,000	250,000	245,000
5	290,000	264,000	255,000	220,000	260,000	275,000	238,000	287,000	265,000	253,000	249,000	244,000
6	289,000	262,000	254,000	220,000	260,000	275,000	259,000	289,000	265,000	254,000	248,000	245,000
7	290,000	261,000	255,000	220,000	260,000	275,000	268,000	290,000	264,000	252,000	248,000	244,000
8	289,000	261,000	253,000	220,000	260,000	275,000	269,000	291,000	265,000	253,000	247,000	244,000
9	282,000	265,000	255,000	220,000	261,000	275,000	281,000	291,000	265,000	250,000	248,000	244,000
10	282,000	260,000	254,000	220,000	259,000	274,000	281,000	291,000	265,000	250,000	247,000	243,000
11	282,000	261,000	261,000	220,000	260,000	275,000	281,000	291,000	259,000	249,000	247,000	243,000
12	282,000	262,000	261,000	220,000	260,000	272,000	281,000	290,000	259,000	250,000	248,000	243,000
13	282,000	260,000	261,000	220,000	260,000	274,000	281,000	292,000	265,000	250,000	244,000	243,000
14	282,000	260,000	261,000	220,000	260,000	274,000	281,000	286,000	268,000	250,000	244,000	244,000
15	283,000	260,000	261,000	220,000	260,000	272,000	281,000	286,000	259,000	250,000	248,000	243,000
16	286,000	259,000	261,000	220,000	260,000	273,000	285,000	286,000	259,000	250,000	247,000	243,000
17	279,000	260,000	261,000	220,000	260,000	273,000	286,000	286,000	258,000	250,000	244,000	241,000
18	274,000	259,000	245,000	220,000	260,000	273,000	285,000	286,000	258,000	250,000	243,000	240,000
19	273,000	260,000	246,000	220,000	274,000	272,000	285,000	286,000	257,000	250,000	245,000	240,000
20	274,000	242,000	245,000	221,000	274,000	273,000	285,000	286,000	258,000	250,000	252,000	241,000
21	273,000	241,000	245,000	220,000	273,000	273,000	285,000	281,000	259,000	249,000	240,000	241,000
22	273,000	242,000	245,000	220,000	274,000	283,000	285,000	282,000	258,000	250,000	239,000	240,000
23	272,000	242,000	244,000	220,000	273,000	282,000	285,000	281,000	257,000	252,000	239,000	240,000
24	272,000	242,000	246,000	220,000	274,000	283,000	284,000	281,000	257,000	252,000	239,000	241,000
25	272,000	241,000	244,000	220,000	274,000	283,000	284,000	281,000	255,000	252,000	239,000	241,000
26	272,000	242,000	243,000	219,000	275,000	272,000	283,000	281,000	255,000	252,000	239,000	241,000
27	272,000	241,000	243,000	220,000	275,000	272,000	274,000	281,000	255,000	252,000	238,000	241,000
28	272,000	240,000	233,000	231,000	275,000	271,000	274,000	272,000	256,000	252,000	238,000	241,000
29	271,000	240,000	232,000	231,000	---	271,000	275,000	273,000	255,000	251,000	237,000	240,000
30	265,000	241,000	233,000	231,000	---	271,000	274,000	273,000	254,000	250,000	238,000	241,000
31	263,000	---	232,000	231,000	---	256,000	---	273,000	---	251,000	238,000	---
<b>Total</b>	8,656,000	7,624,000	7,704,000	6,864,000	7,365,000	8,498,000	8,263,000	8,761,000	7,834,000	7,787,000	7,580,000	7,257,000
<b>Mean</b>	279,200	254,100	248,500	221,400	263,000	274,100	275,400	282,600	261,100	251,200	244,500	241,900
<b>Max</b>	292,000	265,000	261,000	231,000	275,000	283,000	286,000	292,000	273,000	255,000	257,000	245,000
<b>Min</b>	263,000	240,000	232,000	219,000	241,000	256,000	238,000	265,000	254,000	249,000	237,000	238,000

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2005, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	250,100	245,700	240,800	226,500	234,600	246,600	256,500	266,500	271,200	268,200	263,100	257,200
<b>Max</b>	323,800	338,100	327,000	298,700	293,300	335,100	325,100	353,500	353,500	350,000	330,300	326,400
<b>(WY)</b>	(1987)	(1987)	(1987)	(1987)	(1997)	(1998)	(1973)	(1993)	(1993)	(1973)	(1974)	(1986)
<b>Min</b>	182,600	176,100	174,700	168,700	153,800	179,800	179,200	176,500	188,600	200,600	200,000	194,900
<b>(WY)</b>	(1936)	(1936)	(1936)	(1936)	(1936)	(1965)	(1964)	(1965)	(1965)	(1964)	(1936)	(1936)

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SUMMARY STATISTICS

	Calendar Year 2004		Water Year 2005		Water Years 1936 - 2005	
<b>Annual total</b>	95,330,000		94,193,000			
<b>Annual mean</b>	260,500		258,100		252,300	
<b>Highest annual mean</b>					309,300	1987
<b>Lowest annual mean</b>					191,800	1936
<b>Highest daily mean</b>	297,000	Sep 19	292,000	Oct 1	378,000	May 20, 1993
<b>Lowest daily mean</b>	215,000	Jan 8	219,000	Jan 26	139,000	Feb 7, 1936
<b>Annual seven-day minimum</b>	216,000	Jan 8	220,000	Jan 21	148,000	Feb 6, 1936
<b>10 percent exceeds</b>	278,000		283,000		300,000	
<b>50 percent exceeds</b>	260,000		259,000		252,000	
<b>90 percent exceeds</b>	240,000		238,000		208,000	

