

# Saint Lawrence River, Main Stem (0901-0004)

Impaired

## Waterbody Location Information

Revised: 11/17/2017

**Water Index No:** SL (portion 4)  
**Hydro Unit Code:** 0415030101  
**Water Type/Size:** G Lakes Shore 100.1 Miles  
**Description:** from Ogdensburg to Lake Ontario

**Water Class:** A-Spcl  
**Drainage Basin:** Saint Lawrence River  
**Reg/County:** 6/St.Lawrence (45)

## Water Quality Problem/Issue Information

Uses Evaluated	Severity	Confidence
Water Supply	Unassessed	-
Public Bathing	Unassessed	-
Recreation	Impaired	Suspected
Aquatic Life	Impaired	Known
Fish Consumption	Impaired	Known
Conditions Evaluated		
Habitat/Hydrology	Fair	
Aesthetics	Unknown	

**Type of Pollutant(s)** (CAPS indicate Major Pollutants/Sources that contribute to an Impaired/Precluded Uses)  
Known: PESTICIDES (MIREX), PRIORITY ORGANICS (PCBS), PRIORITY ORGANICS (DIOXIN)  
Suspected: Algal/Plant Growth, Water Level/Flow  
Unconfirmed: Pathogens, Nutrients, Silt/Sediment

### Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT  
Suspected: AGRICULTURE, Hydro Alteration, On-Site/Septic Syst  
Unconfirmed: ---

## Management Information

**Management Status:** Verification of Pollutants/Causes Needed  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)  
**Lead Agency/Office:** EPA/Reg2

## Further Details

### Overview

This portion of the St. Lawrence River is assessed as an impaired waterbody due to aquatic life and fish consumption uses that are known to be impaired. Impairment of the fish consumption use is from Mirex, PCBs, and dioxins from industrial waste sites and legacy sediment contamination. No specific pollutant or sources have been identified for the aquatic life impairment, but land use suggests agriculture may contribute to the impacts.

### Use Assessment

This portion of the St. Lawrence River is a Class A-Special waterbody, suitable for drinking water supply, public bathing, general recreation use, and support of aquatic life.

Aquatic life is evaluated as impaired based on biological sampling that shows significant impacts. (DEC, DOW, BWAM, November 2017)

Fish consumption in this portion of the St. Lawrence River is impaired due to a NYS DOH health advisory that recommends eating no channel catfish or carp. The advisory also recommends that consumption of white sucker, white perch, larger lake trout (over 25”), and larger brown trout (over 20”) be limited to no more than one meal per month. It

is recommended that no person eat more than 4 meals per month of any fish species from St. Lawrence River waters. Women under age 50 and children under age 15 are advised to eat no fish of any species from St. Lawrence River waters. The fish consumption advisories are a result of PCB, mirex and dioxin contamination of river sediments from industrial waste sites. The advisory for this waterbody was first issued in 2010. (April 2017 NYS–DOH Health Advisories and DEC/DOW, BWAM, November 2017)

Excessive algal and aquatic weed growth in the shallow warmwater embayments along this length of the Saint Lawrence that affects recreational uses is also of concern. The excessive weed growth has been attributed to high nutrient loads resulting from extensive development around the bay. In the past NYSDOH and "Save The River" have documented the failure of on-site systems serving cottages along the bay shore. Goose Bay and Lake of the Isles have been noted in past assessments as having such impacts. (DEC/DOW, Region 6 and Save the River, 1998)

The management of water levels and flows of the river to support commercial navigation also affects the fishery habitat. The International Joint Commission (IJC) recently called for a new management plan that supports more natural river flows that support fish and wildlife habitat and recreation benefits. The Moses–Saunders Dam was constructed in 1958 for hydropower and to aid commercial navigation on the St. Lawrence River. However the management plan to control water levels on the river and Lake Ontario was developed at a time when there was less consideration of environmental impacts. Research shows that the current plan, which severely limits natural water level fluctuations, has significantly reduced the diversity of plant species in river wetlands, which in turn has impacted populations of many fish and other wildlife. However, these conditions can be reversed by allowing the river to have a more natural flow. A revised management plan can significantly improve the health of the river while continuing to serve commercial interests. (International Joint Commission and American Rivers, December 2008)

#### Water Quality Information

A biological (macroinvertebrate) assessment of this portion of the St. Lawrence River in Point Vivian (at Keewaydin State Park- red buoy 202) and in Ogdensburg (at Oswegatchie River mouth- red buoy R2) was conducted as part of the RIBS monitoring effort in 2014. Sampling results reflect moderately impacted (poor) water quality, with sensitive taxa reduced, and the distribution of major taxonomic groups significantly different from what is naturally expected. Aquatic life is considered to be impaired. (DEC/DOW, BWAM/SBU, November 2017)

#### Source Assessment

The sources of Mirex, PCBs, and dioxins driving the fish consumption advisory is contaminated sediments from Lake Ontario and more localized industrial hazardous waste sites.

Based on surrounding land use and other knowledge of the waterbody, the most likely source(s) nutrients and sediments that impair aquatic life is agriculture.

#### Management Actions

Additional water chemistry sampling to verify levels and types of nutrients causing aquatic life impairments to this waterbody segment is needed.

#### Section 303(d) Listing

This portion of the St. Lawrence River is included on the current (2016) NYS Section 303(d) List of Impaired/TMDL Waters. The waterbody is included on Part 2b of the List as an impaired waterbody due to fish consumption advisories. This listing was added in the 2010 cycle. This updated assessment also suggests it is appropriate to include this waterbody on the next List for aquatic life impairment. It is recommended that this waterbody be added to Part 3b of the List as an impaired waterbody requiring verification of cause/pollutant/source. (DEC/DOW, BWAM/WQAS, November 2017)

#### Segment Description

This segment includes the waters of the Saint Lawrence from the Oswegatchie River in Ogdensburg to the outlet of Lake Ontario. This segment also includes a number of embayments of the river.