



## Lower Grass River Watershed (0415030405)

### Water Index Number

SL- 2 (portion 1)

SL- 2 (portion 2)

### Waterbody

Grass River, Lower, and tribs (0904-0009)

Grass River, Middle, and tribs (0904-0008)

### Category

Impaired Seg

Need Verific

# Grass River, Lower, and tribs ( 0904-0009)

Impaired Seg

## Waterbody Location Information

Revised: 01/15/2009

**Water Index No:** SL- 2 (portion 1)      **Drain Basin:** Saint Lawrence River  
**Hydro Unit Code:** 04150304/090      **Str Class:** B      Grass River  
**Waterbody Type:** River      **Reg/County:** 6/St.Lawrence Co. (45)  
**Waterbody Size:** 29.9 Miles      **Quad Map:** RAQUETTE RIVER (B-21-2)  
**Seg Description:** stream and tribs, from mouth to Massena

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
FISH CONSUMPTION	Precluded	Known

### Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBs)  
Suspected: ---  
Possible: ---

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

Known: TOX/CONTAM. SEDIMENT (PCBs), Industrial (ALCOA)  
Suspected: ---  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DER/Reg6      **Resolution Potential:** Medium  
**TMDL/303d Status:** 2b (Multiple Segment/Categorical Water, Fish Consumption)

## Further Details

### Overview

Fish consumption in this portion of the Grass River is impaired by priority organics (PCBs) in river sediments attributed to past discharges and continuing runoff from industrial waste sites.

### Fish Consumption

Fish consumption in this portion of the Grass River is impaired due to a NYSDOH health advisory that recommends eating no fish of any species. The fish consumption advisory, which apply from the mouth to the Massena Power Canal, are a result of PCB contamination. Advisories for the Grass River were first issued prior to 1998-99. (2008-09 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2008)

### Industrial and Hazardous Waste Sites

The lower six miles of the river is significantly affected by activity at a number of industrial facilities in the area. The most prominent of these is ALCOA in Massena. More than a dozen separate hazardous waste sites have been identified on ALCOA's 3500 acre facility. Landfills, disposal sites, storm water runoff and waste water discharges from the ALCOA facility have resulted in PCB and other priority pollutant contamination of soils, groundwater, river sediments, fish and wildlife in and along the Lower Grass and St. Lawrence Rivers. In fact a 1,000 acre portion of the Grass River itself has been designated a Class 2 Hazardous Waste Site. Remediation of these contaminant sources are in various stages of completion. (DEC/DER,

Environmental Site Remediation Database, December 2008)

#### Saint Lawrence/Massena Remedial Action Plan

The St. Lawrence River at Massena Remedial Action Plan (RAP) Area of Concern (AoC) begins above the power dam facilities and seaway locks at the Massena Village drinking water intake and follows the river downstream for about fifteen miles to the international border. For New York State, the AoC includes portions of the Grass, Raquette and St. Regis Rivers. There are three governmental agency groupings that share jurisdictional responsibilities for the AoC. These are the United States, Canada, and the St. Regis Mohawk Tribe at Akwesasne.

Pollution from past local area industrial production and waste disposal practices created contaminated sediments and hazardous waste sites that to a large degree are being or have been remediated. The sources and causes include PCBs, mercury, DDE, Mirex, nutrients, metals and physical disturbance. Large area remedial projects at Alcoa and General Motors sites have contributed significantly to the restoration and protection of beneficial uses in the AoC. After the Grass River and limited land-based remedial measures are completed, a reassessment of the status of the beneficial use indicators is to be conducted. When including the installation of water and air pollution discharge equipment, the total costs of the Massena area cleanup will likely exceed one billion dollars.

#### Water Quality Sampling

A biological (macroinvertebrate) assessment of the Grass River in Massena Center was conducted in 1997. Multiplate sampling results indicated slightly impacted water quality conditions. Similar slight impacts were noted in sampling in 1977, 83, 86, and 91, however minor improvement appears to have occurred, indicated by a reduction in the percentage of tolerant worms in the sample. (DEC/DOW, BWAM/SBU, 2004)

The St. Regis Mohawk Nation has conducted several studies documenting PCBs in fish tissue around these facility discharges (S.Martin, memo to Phil Waite, March 1998).

#### Segment Description

This segment includes the portion of the stream and all tribs from the mouth to the Massena Power Canal in Massena. The waters of this portion of the stream are Class B. Tribs to this reach/segment are Class C. Other portions of the Grass River are listed separately.

# Grass River, Middle, and tribs ( 0904-0008)

Need Verific

## Waterbody Location Information

Revised: 01/15/2009

**Water Index No:** SL- 2 (portion 2)      **Drain Basin:** Saint Lawrence River  
**Hydro Unit Code:** 04150304/080      **Str Class:** B      Grass River  
**Waterbody Type:** River      **Reg/County:** 6/St.Lawrence Co. (45)  
**Waterbody Size:** 94.9 Miles      **Quad Map:** MASSENA (B-21-1)  
**Seg Description:** stream and tribs, from Massena to Madrid

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Aquatic Life	Stressed	Possible
Recreation	Stressed	Possible

### Type of Pollutant(s)

Known: - - -  
Suspected: NUTRIENTS  
Possible: Silt/Sediment

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

Known: - - -  
Suspected: AGRICULTURE  
Possible: Municipal (Canton WWTP), On-Site/Septic Syst, Streambank Erosion

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 1 (Waterbody Nominated, Problem Not Verified)  
**Lead Agency/Office:** DOW/BWAM      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

### Overview

Aquatic life support and recreational uses in this portion of the Grass River may experience minor impacts. Possible sources are nutrient and sediment loads from heavy agricultural activity and other nonpoint sources in the watershed.

### Water Quality Sampling

A biological (macroinvertebrate) assessment of the Grass River in Massena Center, just below this reach, was conducted in 1997. Multiplate sampling results indicated slightly impacted water quality conditions. Similar slight impacts were noted in sampling in 1977, 83, 86, and 91, however minor improvement appears to have occurred, indicated by a reduction in the percentage of tolerant worms in the sample. Samples collected in 1992 just above Massena (at Route 37) and in Louisville (at Route 39) revealed non-impacted conditions. (DEC/DOW, BWAM/SBU, 2004)

### Source Assessment

The Grass River drains a majority of St. Lawrence County's extensive dairy operations. Agricultural runoff from these farms often flows directly into the river. Cows wading in the river is also a common site. Failing and/or inadequate on-site septic systems, and the municipal WWTP in Canton (v) have also been suggested as possible contributors to water quality problems. (St. Lawrence County WQCC, 1995)

### Segment Description

This segment includes the portion of the stream and all tribs from the Massena Power Canal in Massena to the dam in Madrid. The waters of this portion of the stream are Class B. Tribs to this reach/segment are Class C. Other portions of the Grass River are listed separately.