



**Upper Seneca River Watershed  
(0414020109)**

Water Index Number	Waterbody Segment	Category
Ont 66-12 (portion 6)	<a href="#">Seneca River, Upper, Main Stem (0705-0023)</a> Van	Need Verific
Ont 66-12 (portion 6a)/P366a	Cleef Lake (0705-0072)	UnAssessed
Ont 66-12 (portion 7)	Seneca River, Upper, Main Stem (0705-0044)	UnAssessed
Ont 66-12-59 thru 70 (selected)	Minor Tribs to Upper Seneca River (0705-0046)	UnAssessed
Ont 66-12-65	Sucker Brook and tribs (0705-0047)	UnAssessed
Ont 66-12-67	Silver Creek and tribs (0705-0048)	UnAssessed
Ont 66-12-69- 3-P367	Gem Lake (0705-0049)	UnAssessed
Ont 66-12-70	Kendig Creek and tribs (0705-0024)	UnAssessed
Ont 66-12-P369 (portion 1)	<a href="#">Seneca Lake, Main Lake, North (0705-0026)</a>	NoKnownImpct
Ont 66-12-P369- 1 thru 58 (sel.)	Minor Tribs to Seneca Lake, Eastern (0705-0073)	UnAssessed
Ont 66-12-P369- 6	<a href="#">Reeder Creek and tribs (0705-0074)</a>	UnAssessed
Ont 66-12-P369-116 thru 139	Minor Tribs to Seneca Lake, Northwest (0705-0027)	UnAssessed
Ont 66-12-P369-128	<a href="#">Kashong Creek and tribs (0705-0017)</a>	Need Verific
Ont 66-12-P369-133	Wilson/Burrell Creek and tribs (0705-0096)	UnAssessed

# Seneca River, Upper, Main Stem (0705-0023)

Need Verific

## Waterbody Location Information

Revised: / /

**Water Index No:** Ont 66-12 (portion 5)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/260      **Str Class:** C      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 8/Seneca Co. (50)  
**Waterbody Size:** 7.2 Miles      **Quad Map:** SENECA FALLS (J-13-2)  
**Seg Description:** portion from Lock 1 near Mud Lock to Waterloo

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Aquatic Life	Threatened	Suspected
Aesthetics	Stressed	Possible

### Type of Pollutant(s)

Known: ---  
Suspected: SILT/SEDIMENT  
Possible: Aesthetics, D.O./Oxygen Demand, Nutrients, Pathogens, Salts, Unknown Toxicity

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

Known: ---  
Suspected: AGRICULTURE  
Possible: Industrial, Municipal, On-Site/Septic Syst, Private/Comm/Inst, Roadbank Erosion, Streambank Erosion, Tox/Contam. Sediment, Urban/Storm Runoff

## Resolution/Management Information

**Issue Resolvability:** ()  
**Verification Status:** (Not Applicable for Selected RESOLVABILITY)  
**Lead Agency/Office:**      **Resolution Potential:** n/a  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support in this portion of Seneca River/Canal is known to experience impacts due to unidentified pollutants. Additional monitoring is necessary to determine the extent, magnitude and cause/source of these impacts.

A biological (macroinvertebrate) assessment of Seneca River/Canal in Seneca Falls (at Bridge Street) was conducted in 2006. Multiplate sampling results indicated slightly impacted water quality conditions. The fauna was comprised many facultative and tolerant midges. Sampling at this site in 2001 indicated moderately impacted conditions, but the communities were very similar in both samples. The cause of the impacts have not been identified and continued monitoring is recommended to verify conditions. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the river from Lock 1 near Mud Lock to the Waterloo water supply intake located at the western edge of the Village of Waterloo. The waters of this portion of the river/canal are Class C. Tribs to this reach/segment are listed separately.

# Seneca Lake, Main Lake, North (0705-0026)

# No Known Impacts

## Waterbody Location Information

Revised: 05/18/2016

**Water Index No:** Ont 66-12-P369 (portion 1)  
**Hydro Unit Code:** Upper Seneca River (0414020109)  
**Water Type/Size:** Lake/Reservoir 2858.7 Acres  
**Description:** portion of lake, as described below

**Water Class:** B(T)  
**Drainage Basin:** Oswego-Seneca-Oneida  
**Reg/County:** 8/Seneca (50)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	Threatened	Suspected
Recreation	Fully Supported	Known
Aquatic Life	Fully Supported	Known
Fish Consumption	Fully Supported	Known

### Conditions Evaluated

Habitat/Hydrology	Unknown
Aesthetics	Unknown

### Type of Pollutant(s)

Known:	- - -
Suspected:	HARMFUL ALGAL BLOOMS
Unconfirmed:	Pathogens

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

Known:	- - -
Suspected:	UNKNOWN SOURCE
Unconfirmed:	- - -

## Management Information

**Management Status:** Restoration/Protection Strategy Needed  
**Lead Agency/Office:** ext/WQCC  
**IR/305(b) Code:** Water Attaining All Standards (IR Category 1)

## Further Details

### Overview

This portion of Seneca Lake is assessed as having no known impacts; all evaluated uses are considered to be fully supported. However although uses are fully supported, public bathing is evaluated as threatened by occasional growths of aquatic plants and algal blooms that can discourage swimming and other recreational uses.

### Use Assessment

This portion of Cayuga Lake is a Class B(T) waterbody, suitable for public bathing, general recreation use and support of aquatic life, but not as a water supply. The waterbody is also designated as a cold water (trout) fishery.

There is no evidence of significant public bathing or other recreation use impacts in this portion of Seneca Lake, consistent with relatively low lake productivity and high water clarity. Recent concerns have been raised regarding algal blooms, including blue-green algae, but these suggest potential threats to uses, rather than impacts.

Aquatic life is considered to be fully supported based on DFWMR assessments that indicate a healthy fishery. Traditionally, lake trout, smallmouth bass and yellow perch have been the mainstay of Seneca Lake's fishery. The

Lake's excellent fishery has benefitted greatly in recent years for steady annual stocking of hatchery-reared lake trout, brown trout and landlocked salmon. The lake's rainbow trout fishery is sustained entirely by natural reproduction – mostly in Catherine Creek and its tributaries. An important factor in recent resurgence of the Seneca salmonid fishery is DEC's ongoing control of the parasitic sea lamprey. The control program involves applications of the highly selective chemical lampricide, TFM, to known sea lamprey nursery areas in Catherine Creek and Keuka Lake Outlet at the three year intervals. The continued quality of Seneca's excellent trout and salmon fishing depends heavily on DEC's ability to apply this management tool at critical times in the future. (DEC/DFWMR, Region 7 Fisheries, December 2014)

There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014)

#### Water Quality Information

The most current water quality sampling of Seneca Lake is conducted by the Finger Lakes Institute of Hobart & William Smith College. FLI collects monthly data every summer on eight Finger Lakes. Results of this sampling indicate the lake is best characterized as oligo/mesotrophic, or moderately unproductive. Chlorophyll/algal levels are well below criteria corresponding to impacted recreational uses, while phosphorus concentrations are consistently below levels of concern. (Finger Lakes Institute, Hobart & William Smith College, May 2016)

The FLI results are consistent with sampling of Seneca Lake conducted as part of the NYSDEC Finger Lakes Water Quality Study. An Interpretive Summary report of the findings of this sampling was published in 2001. These data indicate that the lake is best characterized as oligomesotrophic, or between unproductive and moderately productive. Trophic indicators (phosphorus, chlorophyll a and water clarity) are well below the state guidance values indicating impacted/stressed recreational uses. Hypolimnetic waters of the lake remain well oxygenated throughout the growing season. (Water Quality Study of the Finger Lakes, DEC/DOW, BWAM, July 2001)

#### Source Assessment

Concerns have been raised regarding nonpoint runoff of nutrients into the lake, although in-lake concentrations of phosphorus and other productivity indicators remain low. Continued practices to minimize runoff are recommended, however there are no apparent sources of significant pollutant loading to the waterbody.

#### Management Actions

No specific management actions have been identified for the waterbody.

The Seneca Lake Pure Water Association is locally-led volunteer organization that advocates for the lake. Ongoing efforts of the Association include monitoring and protection of the quality of Seneca Lake as a source for drinking water and resource for tourism and recreation.

#### Section 303(d) Listing

This portion of Seneca Lake is not included on the current (2016) NYS Section 303(d) List of Impaired/TMDL Waters. There are no impacts/impairments that would justify the listing of this waterbody. (DEC/DOW, BWAM/WQAS, January 2016)

#### Segment Description

This segment includes the portion of the lake north of an east–west line extending from Pasttime Park on the east shore to a point 0.2 mile south of the Geneva City line on the west shore.

# Reeder Creek and tribs (0705-0074)

# Impaired

## Waterbody Location Information

Revised: 04/01/2016

<b>Water Index No:</b>	Ont 66-12-P369- 6	<b>Water Class:</b>	C
<b>Hydro Unit Code:</b>	Upper Seneca River (0414020109)	<b>Drainage Basin:</b>	Oswego-Seneca-Oneida
<b>Water Type/Size:</b>	River/Stream 7.5 Miles	<b>Reg/County:</b>	8/Seneca (50)
<b>Description:</b>	entire stream and tribs		

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Stressed	Suspected
Aquatic Life	Impaired	Suspected
Fish Consumption	Fully Supported	Unconfirmed
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
 Suspected: Pathogens  
 Unconfirmed: - - -

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

Known: Municipal Discharges  
 Suspected: LANDFILL/LAND DISPOSAL  
 Unconfirmed: - - -

## Management Information

**Management Status:** Restoration/Protection Strategy Needed  
**Lead Agency/Office:** DOW/BWAM  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)

## Further Details

### Overview

Reeder Creek is assessed as having minor impacts that may rise to the level of an impairment due to recreational uses and aquatic life that are impacted by nutrients (phosphorus). The source of the elevated levels of nutrients are thought to be related to the disposal of munitions and other activities at the Seneca Army Depot. Municipal discharges also contribute nutrients to the creek.

### Use Assessment

Reeder Creek is a Class C waterbody, suitable for general recreation use and support of aquatic life, but not as a water supply or for public bathing.

Aquatic life is evaluated as impaired based on volunteer monitoring data collected by the Seneca Lake Pure Waters Association that reveals significantly high levels of phosphorus in the creek. Although there is no NYSDEC water quality standard for phosphorus in streams, the levels correspond to likely aquatic impacts. Biological monitoring is recommended to verify the actual impacts to aquatic life. This sampling can also be used to infer that there are impacts to recreational (fishing) uses, although more specific sampling is also necessary to confirm this is the case. There are concerns that the high phosphorus levels may be contributing to algal growth in Seneca Lake, however this possibility needs closer evaluation. (DEC/DOW, BWAM, April 2016)

There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014)

#### Water Quality Information

Water quality monitoring of the stream has been conducted by the Seneca Lake Pure Waters Association in 2014 through 2015. Sampling results showed particularly high levels of phosphorus; pathogen (coliform, e-coli) concentrations were also elevated at some sites. Additional monitoring by NYSDEC is planned for the 2016-17 sampling cycle. (DEC/DOW, BWAM, April 2016)

#### Source Assessment

The suspected source of the high levels of phosphorus in the stream is disposal of munitions and other activities at the now-closed Seneca Army Depot. There are other wastewater treatment discharges to the creek, although these alone do not appear to explain the high levels in the creek. There are likely other multiple sources of coliform, e-coli in the watershed.

#### Management Actions

Additional sampling by NYSDEC to verify the level of biological impact in the waterbody is planned for the 2016-17 monitoring cycle. Based on the high levels of phosphorus already documented, the stream has been included on the Section 303(d) List for eventual development of a TMDL or other restoration strategy (see below). The Depot is also the focus of an ongoing environmental remediation and cleanup effort. (DEC/DOW, BWAM and Region 8, April 2016)

#### Section 303(d) Listing

Reeder Creek is included on the current (2016) NYS Section 303(d) List of Impaired/TMDL Waters. The waterbody is included on Part 1 of the List as an impaired waterbody requiring the eventual development of a TMDL or other restoration strategy to address phosphorus. This waterbody was first listed on the 2016 List. (DEC/DOW, BWAM/WQAS, April 2016)

#### Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment are also Class C.

# Kashong Creek and tribs (0705-0017)

Need Verific

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369-128  
**Hydro Unit Code:** 04140201/050      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 50.9 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Yates Co. (62)  
**Quad Map:** GENEVA SOUTH (J-13-4)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

### Type of Pollutant(s)

Known: ---  
Suspected: SILT/SEDIMENT  
Possible: Nutrients

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

Known: ---  
Suspected: AGRICULTURE  
Possible: Roadbank Erosion, 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  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Aquatic life support in Kashong Creek may experience impacts due to silt/sediment and nutrient loads from agricultural and other nonpoint sources in the watershed.

The Kashong Creek watershed was the focus of a 208 study in 1978. Significant impacts from soil erosion were noted in the study. Since then streambank stabilization and agricultural BMPs have been implemented. Additional monitoring to evaluate the effectiveness of these measures is recommended. (DEC/DOW, Region 8, 2001)

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment are also Class C.