

Little River and tribs (0905-0090)

Impaired Seg

Waterbody Location Information

Revised: 01/20/2009

Water Index No: SL-25-101
Hydro Unit Code: 04150302/020 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 159.1 Miles
Seg Description: entire stream and tribs

Drain Basin: Saint Lawrence River
Oswegatchie River
Reg/County: 6/St.Lawrence Co. (45)
Quad Map: OSWEGATCHIE (E-20-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Fish Consumption	Stressed	Known
Aquatic Life	Stressed	Suspected
RECREATION	Impaired	Known

Type of Pollutant(s)

Known: OIL AND GREASE (weathered #2 oil), PRIORITY ORGANICS (PCBs, PAHs), Aesthetics, Metals
Suspected: - - -
Possible: Pathogens

Source(s) of Pollutant(s)

Known: LANDFILL/LAND DISP. (Jones & Laughlin), TOX/CONTAM. SEDIMENT
Suspected: On-Site/Septic Syst
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/DER
TMDL/303d Status: 1*

Resolution Potential: Medium

Further Details

Overview

Recreational use in the Little River are thought to be impaired due to contamination historic and continuing contamination from a hazardous waste site. Fish consumption is also affected. Impacts from other industrial and municipal landfills may also be contributing to water quality impacts. Failing and/or inadequate on-site wastewater treatment systems serving homes in the area are also a possible source.

Source Assessment

The upper reach of the Little River flows through the center of a hazardous waste site that is a source of a wide range of contaminants and impacts to the river. These impacts began in the early 1900s when Benson Mines first began operations at the site. Today the former Jones & Laughlin Ore Processing facility (Environmental Remediation Site No. 6-45-029) encompasses about 30 acres where past industrial activity resulted in the leak, spill and/or discharge of petroleum hydrocarbons (fuel oil) to the ground, which subsequently made its way into the Little River. Other contamination includes widespread low level PCB contamination, high levels of metals inherent with a iron mining operation and PAH contamination associated with coal/coke/smelting operations. Beyond the immediate site there are large piles of tailings concentrates (estimated to be between 700-1000 acres) which continue to leach to the stream. The sediment along the bank

of the Little River is saturated with petroleum, and periodic releases of product are evident. Previously, over 100,000 gallons of oil have been removed and a membrane and interceptor ditch was installed in the fall of 1994. It is considered possible that de-watering process at Benson Mines--which is now closed--caused the watertable to be low enough that it kept the oil out of the stream. Then after the mine closed, the groundwater rebounded and is causing the oil to move. There is a DEC fishing access down stream of the facility. Fishermen have noted as recently as 2004 that the trout remain tainted (still taste like fuel oil). (DEC/DER, Environmental Site Remediation Database and DEC\DER Region 6, December 2008)

In addition to the Benson Mines/Jones & Laughlin site, there is also a pre-regulation era industrial landfill site within the hard-rock spoil area on the banks of the Little River which accepted all of the site's industrial waste during its 70 year operation. The potential impacts from this disposal facility have never been assessed. On the back side of one of the tailing concentrates pile is the local municipal landfill which was never lined or capped with an impermeable membrane. This is also close to the river and may be leaching into it. (DEC/DER, Region 6, December 2008)

Water Quality Sampling

A biological (macroinvertebrate) assessment of the Little River in Lower Oswegatchie (at Oswegatchie Trail Road) was conducted in 1997. Sampling results indicated non-impacted water quality conditions. Some indices were in the range of slight impact, but these were determined to be the result of high dominance of an intolerant midge often encountered in streams in forested areas. This sampling location is well below the Benson Mines/Jones & Laughlin hazardous waste site location. Follow-up sampling at an alternate location farther upstream is recommended. (DEC/DOW, BWAM/SBU, December 2004)

Previous Assessment

In the same section of the river, seventeen (17) homes discharge wastewater to a wetland tributary of the Little River in the Star Lake/Benson Mines area. The wastewater discharge creates odors and nuisances and is eventually flushed to the Little River. NYS DEC has been working with the Town of Clifton to plan and implement a solution. However, there has been little progress since 1996. (DEC\DOW Region 6, January 2009)

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(T). Tribs to this reach/segment, including Twin Lake Stream (-5), Tamarack Creek (-24), Alice Brook (-25), are Class C,C(T),C(TS). This segment also include minor unnamed ponds (P270 thru P273) located on the stream.

Star Lake (0905-0180)

NoKnownImpct

Waterbody Location Information

Revised: 12/05/2008

Water Index No:	SL-25-101..P281	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150302/020	Str Class:	AA(T)
Waterbody Type:	Lake	Reg/County:	6/St.Lawrence Co. (45)
Waterbody Size:	205.1 Acres	Quad Map:	OSWEGATCHIE (E-20-2)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	8 (No Known Use Impairment)	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	n/a	Resolution Potential: n/a
TMDL/303d Status:	n/a	

Further Details

Water Quality Sampling

Star Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1984 and most recently in 1998. An Interpretive Summary report of the findings of this sampling was published in 1999. These data indicate that the lake continues to be best characterized as oligotrophic, or unproductive. Phosphorus levels in the lake are well below the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements easily exceed the recommended minimum for swimming beaches. Measurements of pH are somewhat low but typically fall within the state water quality range of 6.5 to 8.5. (DEC/DOW, BWAM/CSLAP, 1999)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be very favorable since the lake was first evaluated and continuing through the most recent assessment. The recreational suitability of the lake is described most frequently as "could not be nicer" or "excellent." The lake itself is most often described as "not quite crystal clear," an assessment that is consistent measured water quality characteristics. Assessments have noted that aquatic plants rarely grow to the lake surface. Aquatic plants have not been surveyed in the lake but have not been cited as impacting recreational uses. (DEC/DOW, BWAM/CSLAP, 1999)

Lake Uses

This lake waterbody is designated class AA, suitable for use as a water supply, public bathing beach, general recreation and aquatic life support. Water quality monitoring by NYSDEC focuses primarily on support of general recreation and aquatic life. Samples to evaluate the bacteriological condition and bathing use of the lake or to evaluate contamination from organic compounds, metals or other inorganic pollutants have not been collected as part of the CSLAP monitoring program. Monitoring to assess potable water supply and public bathing use is generally the responsibility of state and/or local health departments.

Section 303(d) Listing

Historical surveys of a small pond within this segment indicate that low pH due to acid deposition is limiting the fishery. Monitoring by ALSC (1984) revealed pH greater than 6.0 but no presence of fish in Readway Pond (P279). It is possible that aquatic life support in this, and perhaps other, small ponds included in this segment may be limited due to low pH, a result of atmospheric deposition (acid rain). Since available data indicate such impacts do not affect Star Lake and since data suggesting impacts is limited to a small pond within this segment and is more than 20 years old, the assessment of this segment will reflect the more recent data collect in the larger Star Lake. However, Readway Pond is included on the NYS 2008 Section 303(d) List of Impaired Waters in Appendix A as a Smaller Lake Impaired by Acid Rain. (DEC/DOW, BWAM, 2008)

Segment Description

This segment includes the total area of Star Lake (P281), as well as smaller Readway Ponds (P277, P278, P279, P280).

Streeter Pond (0905-0174)

NoKnownImpct

Waterbody Location Information

Revised: 01/23/2009

Water Index No:	SL-25-101..P285	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150302/020	Str Class:	C(T)
Waterbody Type:	Lake	Reg/County:	6/St.Lawrence Co. (45)
Waterbody Size:	68.3 Acres	Quad Map:	OSWEGATCHIE SE (E-20-3)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	8 (No Known Use Impairment)	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	n/a	Resolution Potential: n/a
TMDL/303d Status:	n/a	

Further Details

Water Quality Sampling

Monitoring of Streeter Pond was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Crystal Lake, more (0905-0030)

Impaired Seg

Waterbody Location Information

Revised: 09/05/2008

Water Index No:	SL-25-101..P289	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150302/020	Str Class:	C(T)
Waterbody Type:	Lake	Reg/County:	6/St.Lawrence Co. (45)
Waterbody Size:	14.5 Acres	Quad Map:	OSWEGATCHIE SE (E-20-3)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
AQUATIC LIFE	Precluded	Known

Type of Pollutant(s)

Known: ACID/BASE (PH)
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ATMOSPH. DEPOSITION
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	()	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	ext/EPA	Resolution Potential: n/a
TMDL/303d Status:	2a (Multiple Segment/Categorical Water, Atmosph Dep)	

Further Details

Overview

Aquatic life support in this segment is considered to be impaired by low pH, a result of atmospheric deposition (acid rain).

Water Quality Sampling

Historical surveys of the lakes in this segment indicate that low pH due to acid deposition is limiting the fishery. Monitoring by ALSC (1984) revealed pH below 5.0 and no presence of fish in Crystal Lake (P289) and unnamed pond (P288e). Aquatic life in these ponds is considered to be impaired. (DEC/DOW, BWAM, 2008)

Water Quality Management

Efforts are underway on a national level to address problems caused by acid rain by reducing pollutant emissions, as required by the Clean Air Act. New York State (and other northeastern states) have taken legal action against USEPA to accelerate implementation of controls. Monitoring of these waters will continue, in order to assess changes in water quality resulting from implementation of the Clean Air Act. However, these changes are expected to occur only slowly over time.

Section 303(d) Listing

Crystal Lake and unnamed pond (P288e) are included on the NYS 2008 Section 303(d) List of Impaired Waters. These ponds are included on Part 2a of the List as an Atmospheric Deposition (Acid Rain) Water. (DEC/DOW, BWAM, 2008)

Segment Description

This segment includes the total area of Crystal Lake (P289), as well as smaller Pine Pond (P286), Mud Pond (P287), Little Otter Pond (P290) and unnamed pond (P288e).

Tooley Pond (0905-0185)

NoKnownImpct

Waterbody Location Information

Revised: 01/23/2009

Water Index No:	SL-25-111-P306	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150302/090	Str Class:	C(T)
Waterbody Type:	Lake	Reg/County:	6/St.Lawrence Co. (45)
Waterbody Size:	45.9 Acres	Quad Map:	TOOLEY POND (D-21-4)
Seg Description:	entire lake		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: ---

Resolution/Management Information

Issue Resolvability:	8 (No Known Use Impairment)	
Verification Status:	(Not Applicable for Selected RESOLVABILITY)	
Lead Agency/Office:	n/a	Resolution Potential: n/a
TMDL/303d Status:	n/a	

Further Details

Water Quality Sampling

Monitoring of Tooley Pond was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Dillon Pond (0905-0186)

Need Verific

Waterbody Location Information

Revised: 09/05/2008

Water Index No:	SL-25-116-P308	Drain Basin:	Saint Lawrence River
Hydro Unit Code:	04150302/090	Str Class:	C(T)
Waterbody Type:	Lake	Reg/County:	6/St.Lawrence Co. (45)
Waterbody Size:	15.3 Acres	Quad Map:	CRANBERRY LAKE (E-21-2)
Seg Description:	entire lake		

Water Quality Problem/Issue Information (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: ---
Suspected: ACID/BASE (PH)
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ATMOSPH. DEPOSITION
Possible: ---

Resolution/Management Information

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

Further Details

Overview

Aquatic life support in this segment is considered to be impaired by low pH, a result of atmospheric deposition (acid rain). However available data indicating such impacts is more than 20 years old and limited to one of the smaller ponds within this segment. Until data on the larger waterbody is available, this segment will be considered to be Threatened.

Water Quality Sampling

Historical surveys of a small pond within this segment indicate that low pH due to acid deposition is limiting the fishery. Monitoring by ALSC (1984) revealed a pH between 5.5 and 6.0 but no presence of fish in Lost Pond (P307). Aquatic life in this pond is considered to be impaired.

Water Quality Management

Efforts are underway on a national level to address problems caused by acid rain by reducing pollutant emissions, as required by the Clean Air Act. New York State (and other northeastern states) have taken legal action against USEPA to accelerate implementation of controls. Monitoring of these waters will continue, in order to assess changes in water quality resulting from implementation of the Clean Air Act. However, these changes are expected to occur only slowly over time.

Section 303(d) Listing

Lost Pond is included on the NYS 2008 Section 303(d) List of Impaired Waters. This pond is included on Part 2a of the

List as an Atmospheric Deposition (Acid Rain) Water. (DEC/DOW, BWAM, 2008)

Segment Description

This segment includes Dillon Pond (P308), as well as smaller Lost Pond (P307).