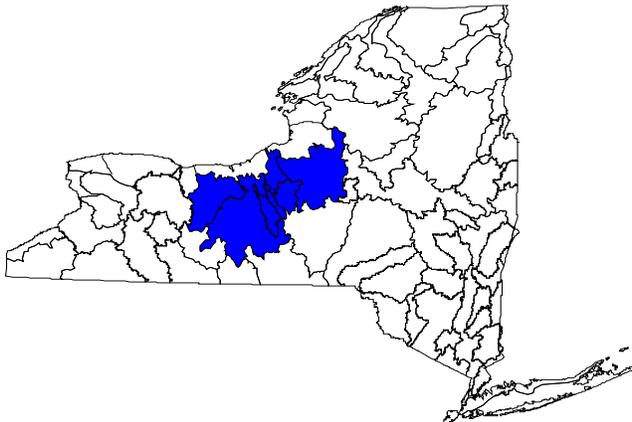


Bureau of Watershed Assessment and Management  
Division of Water  
NYS Department of Environmental Conservation

# **The Oswego River Finger Lakes Basin Waterbody Inventory and Priority Waterbodies List**

Encompassing all or portions of  
Cayuga, Chemung, Cortland, Lewis,  
Madison, Oneida, Onondaga, Ontario,  
Oswego, Schuyler, Seneca, Steuben,  
Tompkins, Wayne and Yates Counties



**February 2008**

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# The Waterbody Inventory and Priority Waterbodies List

In order to fulfill certain requirements of the Federal Clean Water Act, the New York State Department of Environmental Conservation (NYSDEC) must provide regular, periodic assessments of the quality of the water resources in the state. These assessments reflect monitoring and water quality information drawn from a number of programs and sources, both within and outside the NYSDEC. This information has been compiled by the NYSDEC Division of Water into an inventory database of all waterbodies in New York State used to record current water quality information, characterize known and/or suspected water quality problems and issues, and track progress toward their resolution. This inventory of water quality information is the division's Waterbody Inventory/Priority Waterbodies List (WI/PWL).

In addition to providing a baseline assessment of water quality, the Waterbody Inventory/Priority Waterbodies List supports program management within the Division of Water in other ways. For example:

#### *A Focus for Division Program Activities*

Because of limited resources, various division programs (monitoring, compliance, restoration and protection activities, grant funding, etc) need to address those specific water quality issues – both statewide problems (e.g., stormwater, toxic/contaminated sediment) and site/waterbody-specific concerns – where program efforts will have the greatest impact.

#### *A Consistent and Objective Inventory*

WI/PWL assessments of water quality problems and issues are used in the development of program-specific priority ranking/scoring systems and efforts.

#### *A Record of Water Quality History*

Because the WI/PWL provides information for specific waterbodies, staff can easily respond to questions – from both within and outside the division (including the public) – concerning what is known about the water quality of specific rivers, lakes and watersheds.

#### *A Measure of Progress*

The WI/PWL also aids in the tracking of progress by division programs and other efforts toward improving the water resources of the state.

## **Comprehensive Assessment Strategy**

The Waterbody Inventory/Priority Waterbodies List is a key component of the Division of Water's larger *Comprehensive Assessment Strategy*. This strategy is designed to integrate a variety of division activities into a more coordinated and comprehensive water quality program. The specific goals of the *Comprehensive Assessment Strategy* are to provide a:

- thorough (appropriate to available resources) monitoring of state waters,
- complete evaluation and consideration of all available monitoring data,
- comprehensive assessment of the quality of all waters in the state, and
- coordinated approach to improving and protecting these water resources.

Implementation of the *Comprehensive Assessment Strategy* relies on a rotating drainage basin approach. This approach focuses water quality monitoring and assessment activities on a portion of the state for a designated period of time, and then turns attention to other parts of the state. New York State's use of the rotating basin approach enables the updating of the WI/PWL in two or three of fourteen drainage basins (about 20% of the state) each year. This schedule allows for a comprehensive re-assessment of the water quality throughout the entire state over a five-year cycle (see Figure 1).

### **Statewide Waters Monitoring Program**

Prior to the updating of the WI/PWL, the Division conducts a two-year monitoring effort in the targeted drainage basins. These basin studies – conducted within the Division of Water's Statewide Waters Monitoring Program – involve a variety of sampling activities conducted by the Division, other NYSDEC programs, and other water quality partners outside the Department.

The first year of these basin studies focuses on the review of existing water quality information and the incorporation of monitoring efforts being conducted by other basin/watershed partners. Division monitoring activities in the first year are generally limited to Biological Screening. Biological Screening relies on the use of resident biological communities as indicators of water quality. The primary biological communities are fish, macroinvertebrates (aquatic insects) and algae. Of these, macroinvertebrates have proven the most appropriate for screening water quality at a large number of sites in a reasonable amount of time.

The second year of the basin studies involves more intensive chemical monitoring of basin waters. This includes water chemistry sampling at selected sites, sediment sampling, multiple site surveys along specific river reaches, and other site- or problem-specific monitoring investigations.

### **Water Quality Assessments: Updating the WI/PWL**

At the conclusion of the monitoring effort in a basin, the water quality data are evaluated to assess the support of specific water uses (water supply, public bathing, aquatic life, secondary recreation, etc). As was the case with the monitoring effort, the evaluation and assessment of data and subsequent updating of WI/PWL information incorporates input from Division/Department staff and outside partners as well. WI/PWL assessment workshops are conducted for NYSDEC regional staff and watershed partners within each targeted basin and participants are encouraged to submit assessment worksheets for waterbodies for which they have information. This information – along with Statewide Waters Monitoring Program data and information – is compiled and distributed to participants for review and comment before the Final WI/PWL Assessment Report is issued.

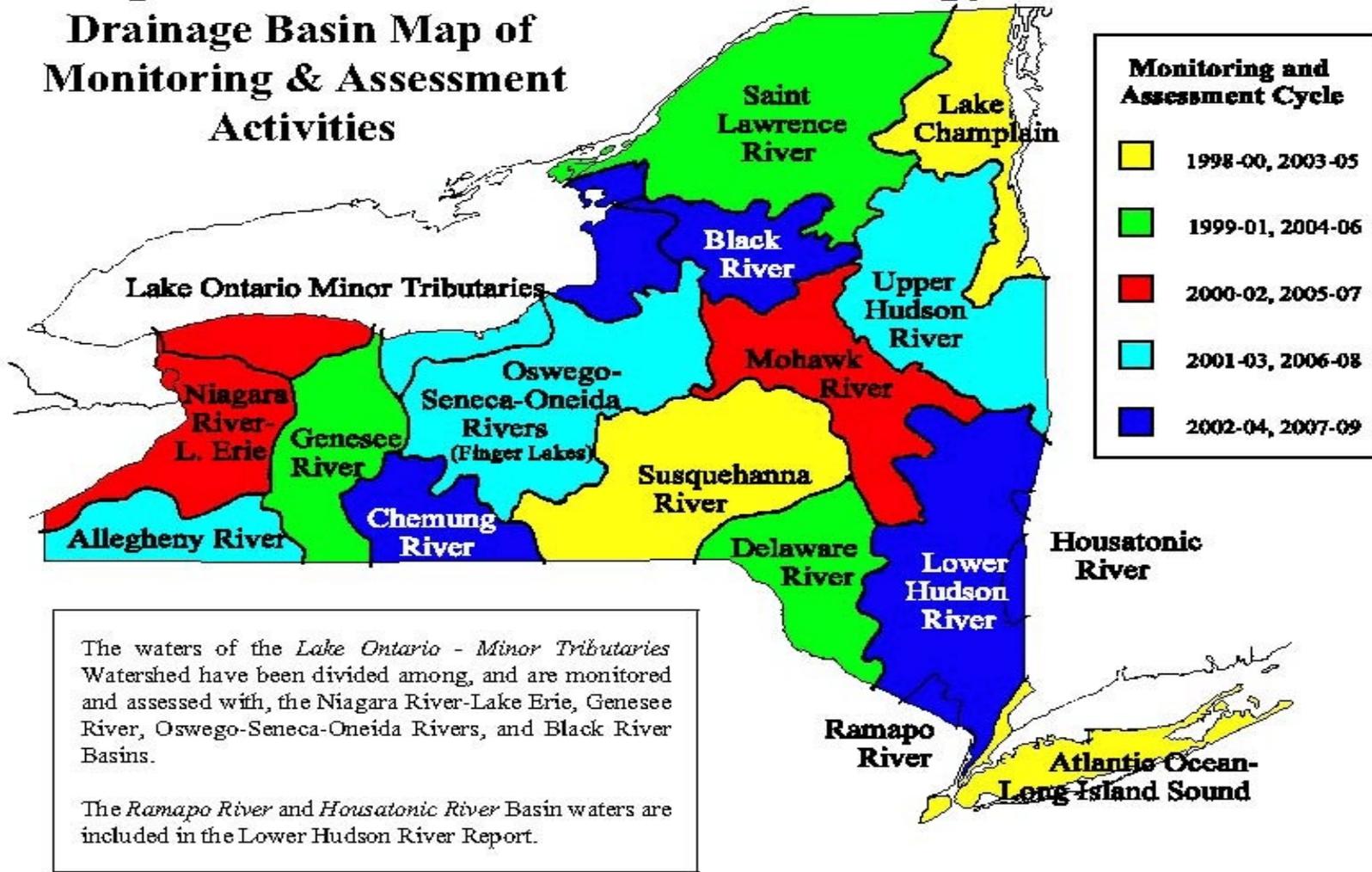
### **An Expanded *Waterbody Inventory***

Upon its inception in 1983 and through the mid-1990s, the Priority Waterbodies List was limited to recording information for only those waters with known or suspected water quality problems. The expansion of the database to include information for **all** waters in the state and record good water quality in the state is a fairly recent effort. However, while this expanded waterbodies database provides more complete water quality information, for program management purposes the Division must also be able to cull from the inventory of all waters the subset of “*priority*” waterbody segments on which the Division can and should spend resources. In other words, there is a need for both a comprehensive ***Waterbody Inventory*** of water quality information for all waters in the state, and a subset of this inventory that is limited to segments with well documented, potentially resolvable, higher priority problems and issues. This subset of the Waterbody Inventory is the ***Priority Waterbodies List***.

Figure 1  
 Statewide Waters Assessment Section

# Comprehensive Assessment Strategy

## Drainage Basin Map of Monitoring & Assessment Activities



In order to achieve these multiple objectives, segments in the larger comprehensive Waterbody Inventory are segregated into one of six (6) *Water Quality Assessment Categories*. These are outlined below.

## **WI/PWL Waterbody Assessment Categories**

**Impaired Waters:** These are waterbodies with well documented water quality problems that result in *precluded*, or *impaired* uses. (Waters with *stressed*, *threatened* uses are not included in this category). This category includes both *High/Medium Resolvability* segments, where the Division considers the expenditure of additional resources to improve water quality to be worthwhile given public interest and/or the expectation that a measurable improvement can be achieved; and *Low Resolvability* segments, with persistent/intractable problems on which the Division is not likely to spend any significant resources (e.g., atmospheric deposition, etc.).

**Waters with Minor Impacts:** These are waterbodies where less severe water quality impacts are apparent, but uses are still considered fully supported. These water correspond to waters listed as having *stressed* uses.

**Threatened Waterbodies:** These are waterbodies for which uses are not restricted and no water quality problems exist, but where specific land use or other changes in the surrounding watershed are known or strongly suspected of threatening water quality. Also included in this category are waterbodies where the support of a specific and/or distinctive use make the waterbody more susceptible to water quality threats.

**Waterbodies with Impacts Needing Verification:** These are segments that are thought to have water quality problems or impact, but for which there is not sufficient or definitive documentation. These segments require additional monitoring to determine whether uses are restricted. (Generally, this monitoring will be done during the *Comprehensive Assessment Strategy* rotating basin schedule).

**Waterbodies Having No Known Impacts:** These are segments where monitoring data and information indicate that there are no use restrictions or other water quality impacts/issues.

**UnAssessed Waterbodies:** These are segments where there is insufficient water quality information available to assess the support of designated uses.

**Taken together, the *Impaired Waters, Waters with Minor Impacts* and *Threatened Waterbodies* comprise the Division of Water Priority Waterbodies List (PWL).** These segments are the focus of remedial/corrective and resource protection activities by the Division and its water quality partners.

***Waterbodies with Impacts Needing Verification, Waterbodies Having No Known Impacts* and *UnAssessed Waterbodies* are tracked on the comprehensive Waterbody Inventory, but are not considered to be “on the Priority Waterbodies List.”** For these waters, additional monitoring and assessment activities to document possible or potential future use impacts, causes and sources are more appropriate than remedial/corrective or resource protection efforts.

Maintaining a comprehensive Waterbody Inventory allows Division staff to easily respond to questions – from both within and outside the Department – concerning the water quality of specific rivers, lakes and watersheds. By segregating the database in the manner described above, the Division can also identify specific priorities where the coordination of limited resources can most effectively address water quality problems.

# The Oswego River/Finger Lakes Basin

## Basin Description

The Oswego River/Finger Lakes Basin, located in Central New York State, encompasses the area drained by the Oswego, Oneida, Seneca and Clyde Rivers. The headwaters of these rivers originate along the northern edge of the Appalachian Plateau and the southwestern Adirondacks and flow across the central lowlands before emptying into Lake Ontario. The basin is one of the largest in the state, draining 5,070 square miles. Most of the largest of the New York Finger Lakes are also contained within the drainage basin; in fact lake surface area makes up about 300 square miles – or nearly 6% of the basin. The drainage area of the of the Oswego River/Finger Lakes Basin includes all of Seneca County; most of Onondaga, Cayuga, Tompkins, Schuyler, Yates and Ontario Counties; large parts of Oswego, Oneida, Madison and Wayne Counties; and smaller parts of Lewis, Cortland, Chemung, Steuben, and Livingston Counties.

The Oswego River/Finger Lakes Basin is largely rural, with considerable agricultural lands as well as tracts of forest and woodland. The Syracuse Metropolitan Area provides the basin with a highly urbanized and populated hub that dominates the economic landscape of the region. This urban area – the third largest in the state – generates considerable industrial, manufacturing, commercial and service sector activity in the area. The majority of the total basin population of 970,888 (2000) is located in and around the larger urban centers. In addition to the City of Syracuse (147,306) and surrounding towns, these population centers include Ithaca (29,287), Auburn (28,574), Oswego (17,954, portion), Geneva (13,617), Fulton (11,855), Canandaigua (11,264) and Oneida (10,987). The remaining population centers within the basin are smaller villages that largely support farming or suburban bedroom communities. The basin supports a wide variety of agricultural activities including dairy and row crops as well as a renowned wine industry in the Finger Lakes Region

There are about 8,896 miles of rivers and streams (and canals) in the basin and over 400 lakes and ponds. Many of the ponds are too small to be individually assessed, but 76 significant\* lake, pond and reservoir waterbody segments (covering 189,722 acres) are included in the Oswego River/Finger Lakes Basin Waterbody Inventory. The largest of the river watersheds in the basin include the Oneida River/Lake watershed with about 2,330 miles of streams or 26% of the basin total, the Clyde River/Canandaigua watershed (1,630 miles, 18%), the Cayuga Lake watershed (1,500 miles, 17%) and the Seneca Lake watershed (1,240 miles, 14%). Of the lakes/reservoirs, the largest are Oneida Lake (51,091 acres, or 27% of the basin lake acres), Cayuga Lake (42,812 acres, 23%), Seneca Lake (42,646 acres, 22%), Keuka Lake (11,712 acres, 6%) and Canandaigua Lake (10,605 acres, 6%). Together, these 5 lakes account for 85% of the lake acres in the basin.

## Water Quality Issues and Problems

The primary water quality impacts in the Oswego River/Finger Lakes Drainage Basin are typically the result of one of two sources. In the more populated urban centers – namely the Syracuse Metropolitan Area – municipal discharges and industrial activities (including the legacy of past industrial activities) are the primary source of impacts. These impacts restrict uses of Onondaga Lake and its urban tributary waters. Through considerable investments in wastewater treatment upgrades and hazardous waste remediation, water quality in Onondaga Lake has experienced notable improvement in recent years, though impacts remain.

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\* *Significant Lakes* are lakes of 6.4 acres (0.01 square miles) or larger and are included the New York State Lakes Gazetteer.

In other more rural areas of the drainage basin, elevated nutrient and sediment loads from heavy agricultural use and other nonpoint sources are the cause of less severe but frequently occurring impacts. Though less severe, these nonpoint sources pose a significant threat to maintaining and protecting the highly valued water resources of the basin. In particular, many of the Finger Lakes – which provide drinking water supplies and support a variety of recreation activities for both residents and tourists – have been identified as experiencing minor impacts and threats to uses.

### *Onondaga Lake*

As recently as the 1970s, Onondaga Lake was one of the most polluted lakes in the nation – a result of decades of industrial and municipal discharges. Onondaga Lake remains impaired by a variety of pollutants from municipal wastewater discharges, CSOs, urban runoff, and past industrial operations and uses. However water quality in the lake is improving. Ammonia levels now meet standards and municipal phosphorus discharges have been reduced by 80% or more. On a parallel track, industrial waste impacts are being addressed through various remediation efforts. Considerable additional actions – many of which are underway - are necessary to restore the multiple uses of the lake. These efforts – outlined in the Amended Consent Judgement (ACJ) and overseen by the multi-party Onondaga Lake Partnership – extend to addressing issues affecting many of the urban tributaries of Onondaga Lake as well.

### *Owasco Lake*

Various uses in Owasco Lake are limited by pathogen contamination that results in beach closures along the north shore and by excessive growth of aquatic vegetation and algae in other parts of the lake, particularly its southern end. The sources of pathogens and nutrients include agricultural runoff, municipal discharges in the watershed, on-site wastewater treatment systems, wildlife and waterfowl. Though nutrient levels are low in much of the lake, elevated levels in the southern end of the lake exacerbate the growth of aquatic vegetation. Water supply uses of the lake are also considered to be threatened due to the potential formation of disinfection by-products when the water is treated with chlorine for public water use.

### *Southern Cayuga Lake*

Recreational use in the southern end of Cayuga Lake is restricted by various pollutants including pathogens, nutrients and silt/sediment. The sources of these pollutant loadings are numerous and occur throughout the watershed. Multiple municipal wastewater discharges and urban/storm runoff from the City of Ithaca impact the lake. Agricultural activity in the Southern Cayuga Lake watershed includes significant levels of dairy farming, poultry operations and cropland. Nonpoint source loadings from increasing development, stream erosion and roadbank erosion are also identified as sources of pollutants to the tribs and lake.

### *Fish Consumption Advisories*

Fish consumption in a number of notable waters in the basin is impaired due to various toxic pollutants that result in NYS DOH fish consumption health advisories. An advisory for Onondaga Lake recommends eating no walleye and no more than one meal per month of other species due to mercury contamination. Dioxin and PCBs also restrict the consumption of other species. An advisory is also in place for Keuka Lake limiting the consumption of larger lake trout (over 25 inches) to no more than one meal per month due to elevated DDT levels. Consumption of some species taken from portions of two rivers in the basin – the Oswego River and Skaneateles Creek – are restricted to one meal per month due to PCB contamination. The source of contaminants for all these advisories are thought to be past historic discharges rather than the result of continuing discharges.

### *Oswego Harbor Delisted as Area of Concern*

A recent water quality success was noted in July of 2006 when Oswego Harbor was officially removed from the list of Great Lakes Areas of Concern, the first and only one of 31 Areas of Concern in the United States to be delisted. Pollution reduction activities in the Oswego Remedial Action Plan (RAP) that led to the delisting include remediation of State Superfund hazardous waste sites, upgrade of the Oswego WWTP and collection system, increased control of point and nonpoint water discharges, reduction of nutrients and stormwater runoff, implementation of river corridor enhancement projects and modification of the Oswego River power dam license during the recent Federal Energy Regulatory Commission's (FERC) re-licensing of the dam to increase and better support suitable fish habitat in the AOC. These actions have resulted in improved water quality, a more productive fishery, expanded recreational uses and a revitalized river shoreline and downtown area.

### *Protection of Finger Lakes Water Resources*

More than half of the lake acres in the basin – including most of the larger Finger Lakes – have uses that are considered to be threatened. However the designation of these waters on the DEC/DOW Priority Waterbodies List as threatened is largely due to the particular resource value reflected in their Class AA designation and the need to provide additional protection, rather than any specifically identified threats. Although there are no significant known water quality impacts in these waters and uses are fully supported, the segments are considered highly valued water resources due to their Class AA drinking water supply designation. This designation indicates that water quality is to be maintained such that the water can be used as a potable source with limited treatment.

### *Habitat Modifications and Invasive Species*

The impact of invasive species and other alterations of aquatic habitat have also been identified as causing impacts to recreation and aquatic life support. Such problems result in impacts to the largest lake in the basin, Oneida Lake. The appearance of zebra mussels and other invasive species such as water chestnut, the increase in cormorant predation and the decline of fish populations are seen as related and in need of addressing. The impact of zebra mussels is even more severe in the Seneca River where dense populations cause drastic reductions in dissolved oxygen in the river. Hydrologic stratification related to Onondaga Lake outflow exacerbate the dissolved oxygen impacts in the river.

### *Groundwater Resources*

Although groundwater resources are not specifically tracked through the WI/PWL, they are considered *Priority Waters* nonetheless. Groundwater provides drinking water for about one-third of the population of New York State and is the source of base flow for most rivers and streams in the state. Management and protection of both the quantity and quality of this resource is critical for protecting public health and is also a key element of surface water quality and wetland management efforts. In the Oswego River/Finger Lakes Basin, the more significant threats to groundwater resources include inactive hazardous waste sites, pesticide application, animal feeding operations, deep-well injection, on-site wastewater treatment systems and chemical spills.

## Oswego River/Finger Lakes Basin Water Quality Assessment

The series of charts presented on the following pages provides an overall assessment of water quality conditions in the entire Oswego River/Finger Lakes Basin. For each waterbody type (rivers/streams and lakes/reservoirs) the first chart shows the percentage of the miles/acres of waters in the basin that fall into the various *Water Quality Assessment Categories*. The **red** portion of the first pie indicates the percentage of waters characterized as *Impaired Segments* which do not support appropriate uses. The **purple** portion represents segments with *Minor Impacts* and *Threatened Waterbody Segments*. Taken **together**, waters in both of these categories (represented by the **red** and **purple** segments) comprise the **Priority Waterbodies** (for that waterbody type) within the basin. The percentage of miles/acres for the other Water Quality Assessment Categories – *Waterbodies Having No Known Impacts*, *UnAssessed Waterbodies*, and *Waterbodies with Impacts Needing Verification* – are shown in **blue**, **light blue**, and **green** respectively.

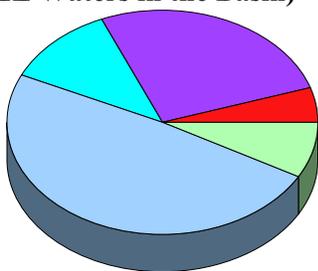
The second pie chart shows the severity of the most significant use impact or restriction for *Priority Waterbodies*. The levels of severity are:

- Precluded:* waters do not support appropriate uses
- Impaired:* waters frequently do not support appropriate uses
- Stressed:* waters support appropriate uses, but other water quality impacts are apparent
- Threatened:* waters support uses and have no impacts, but activities threaten future use support

More detailed descriptions of these levels of severity are outlined in Appendix A - Assessment Methodology. The bar charts indicate the pollutant sources that are most frequently cited as major contributors to the water quality impacts for *Priority Waterbodies* in the Oswego River/Finger Lakes Basin. The charts reflect the percentage of miles/acres of the total waterbody area on the Priority Waterbodies List where the source is listed as a major contributor to the water quality impact. For each source, the color shading of the bar indicates the severity (*Precluded, Impaired, Stressed, Threatened*) of the most significant water use impact to the waterbody.

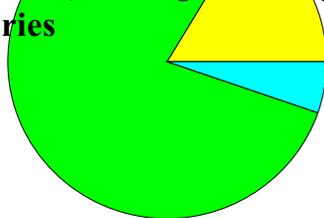
### Rivers/Streams

**Water Quality Assessment Categories**  
(for ALL Waters in the Basin)



- PWL - Not Supporting Uses
- PWL - Other Minor Impacts
- No Known Impacts
- UnAssessed Waters
- Impacts Needing Verification

**Severity of Problems**  
(PWL Segments Only)

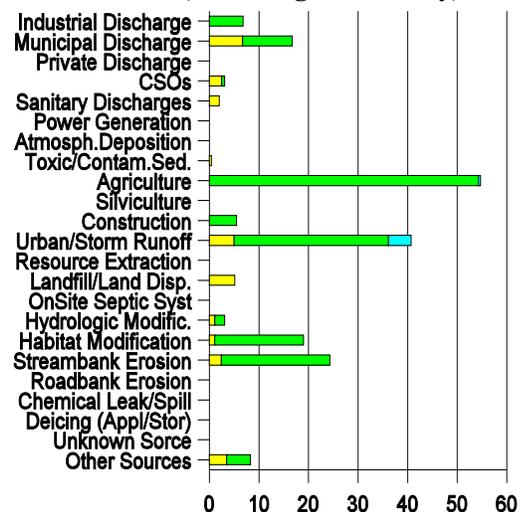


- Precluded
- Impaired
- Stressed
- Threatened

#### Oswego River Basin

Total River Miles: 8,896  
Total PWL Miles: 2,796

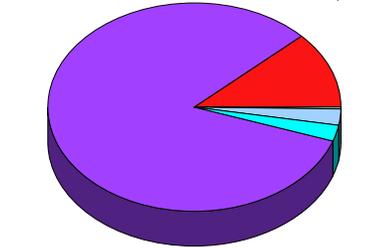
**Major Sources of Impact**  
(PWL Segments Only)



Percent of PWL Waters Affected

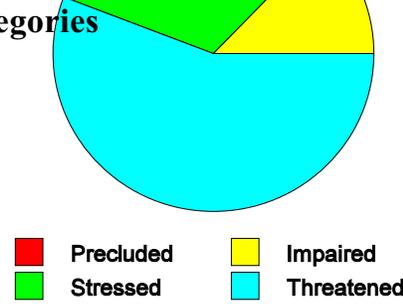
# Lakes/Reservoirs

## Water Quality Assessment Categories (for ALL Waters in the Basin)



- PWL - Not Supporting Uses
- PWL - Other Minor Impacts
- No Known Impacts
- UnAssessed Waters
- Impacts Needing Verification

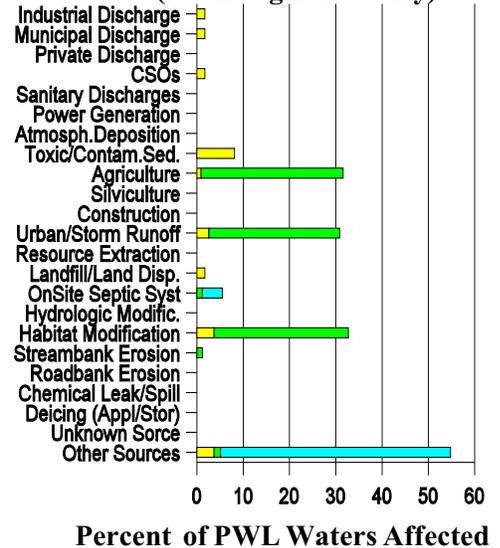
## Severity of Problems (PWL Segments Only)



- Precluded
- Stressed
- Impaired
- Threatened

|                           |         |
|---------------------------|---------|
| <b>Oswego River Basin</b> |         |
| Total Lake Acres:         | 190,446 |
| Total PWL Acres:          | 180,917 |

## Major Sources of Impact (PWL Segments Only)



## Basin Water Quality Summary

About one-third (31%) of the 8,896 river miles in the Oswego River/Finger Lakes Basin (2,796 miles) are included on the Priority Waterbodies List as either not supporting uses or having minor impacts or threats to water quality. The large majority (83%) of these Priority Waterbody Listed river miles are considered *Stressed* or *Threatened* waters that fully support appropriate uses, but that have minor impacts/threats to uses. Only about five percent (5%) of all basin river miles are *Impaired* and do not fully support appropriate uses.

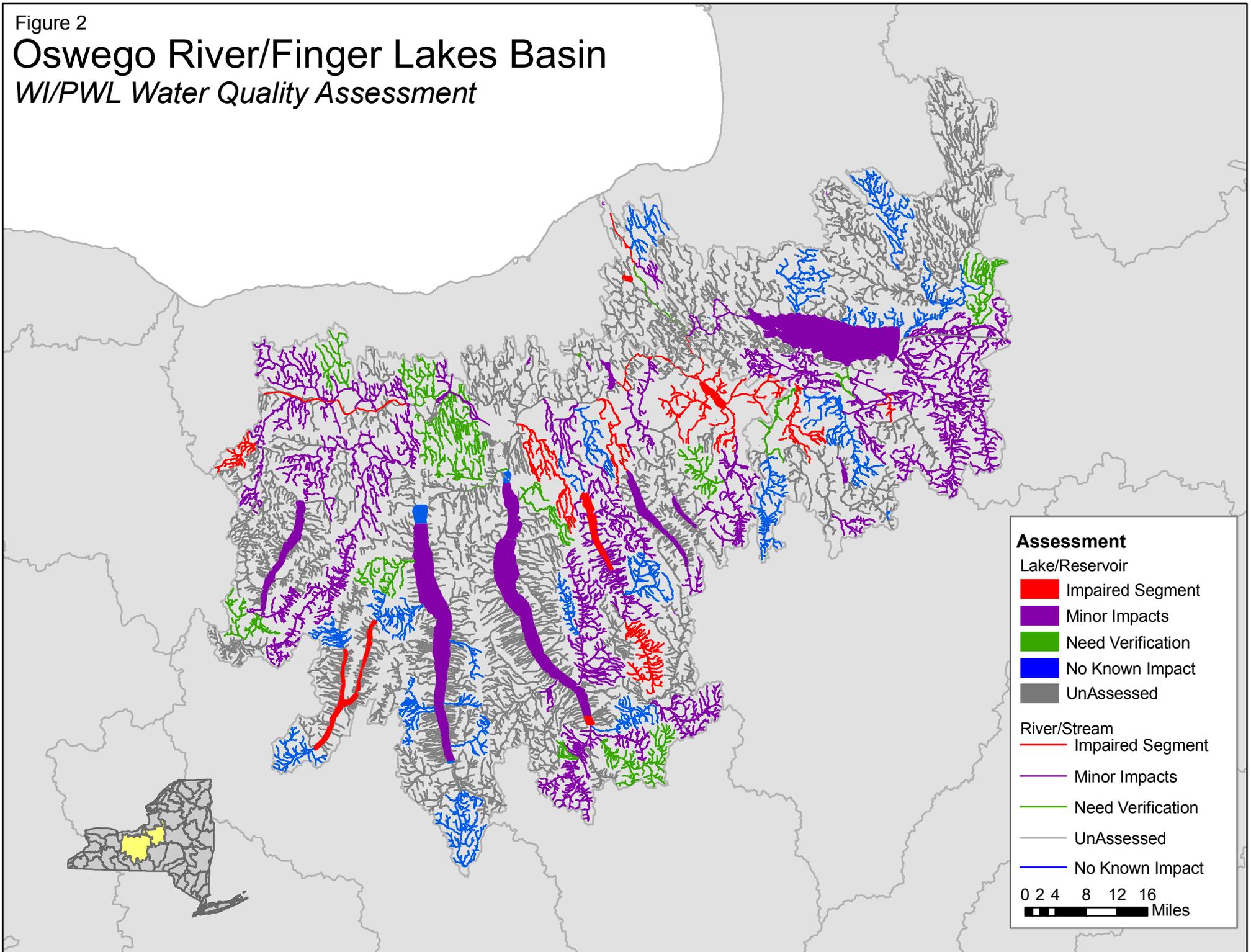
Nineteen of the 76 separate lake segments in the basin are included on the PWL as having either impaired uses or minor impacts/threats to uses. However these 19 impaired/impacted lakes represent nearly all (95%) of the total lake acres in the basin. For six of these lakes (totaling 23,198 acres, or 12% of basin lake acres) the impacts are such that fish consumption, recreational uses and/or aquatic life support are not fully supported. Half of the impaired lake acres are the result of a fish consumption advisory for one lake (Keuka Lake). It is also worth noting that 56% of the Priority Waterbody listed lake acres do not presently exhibit signs of impact or stress, but are listed as *Threatened* due to their AA classification, reflecting the value of these water resources and the need to protect them.

The most frequently cited sources affecting water quality in the basin are agricultural activity and urban/stormwater runoff. Habitat modification and streambank erosion are also often noted as contributing sources. The sources of the more severe impairments to the waters of the basin include toxic/contaminated sediments from past/historical discharges, municipal point discharges, landfill disposal and urban/stormwater runoff. Combined sewer overflows and untreated or inadequately treated sanitary discharges have also been noted. Most of the lake acres listed as *Threatened* are listed as being the result of *Other Sources*. These listings can be interpreted as including a wide range of unspecified potential sources that may impact future water quality in the basin.

Figure 2

# Oswego River/Finger Lakes Basin

## WI/PWL Water Quality Assessment



# The Oswego River/Finger Lakes Basin Waterbody Inventory/Priority Waterbodies List

This inventory of water quality information includes individual waterbody *Data Sheets* describing the water quality conditions in the Oswego River/Finger Lakes Basin of New York State. Causes (pollutants) and sources of water quality problems for those waterbodies with known or suspected impacts are also outlined.

The data sheets on the following pages are compiled in hydrological order and grouped by US Geological Survey Hydrologic Unit Code (HUC) basin and smaller watersheds in the Oswego River/Finger Lakes Basin (see Figure 2). An outline of the specific waterbodies in each watershed is presented at the beginning of each Watershed Section. Data sheets are included for each waterbody that has been assessed; that is, waterbodies listed as *Impaired Waters*, *Waters with Minor Impacts*, *Threatened Waters*, waters with water quality impacts *Needing Verification*, or waterbodies with *No Known Impact*. *UnAssessed* waterbodies are listed in the hydrologic outline of waterbodies at the front of each Watershed Section; however, separate data sheets for these segments are not included because they have yet to be assessed.

The information outlined on the data sheets includes *Waterbody Location Information*, *Water Quality Problem/Issue Information*, *Resolution/Management Information* and *Further Details*. More detailed explanations of these data fields are outlined in Appendix B: *Waterbody Inventory Data Sheet Background Information*.

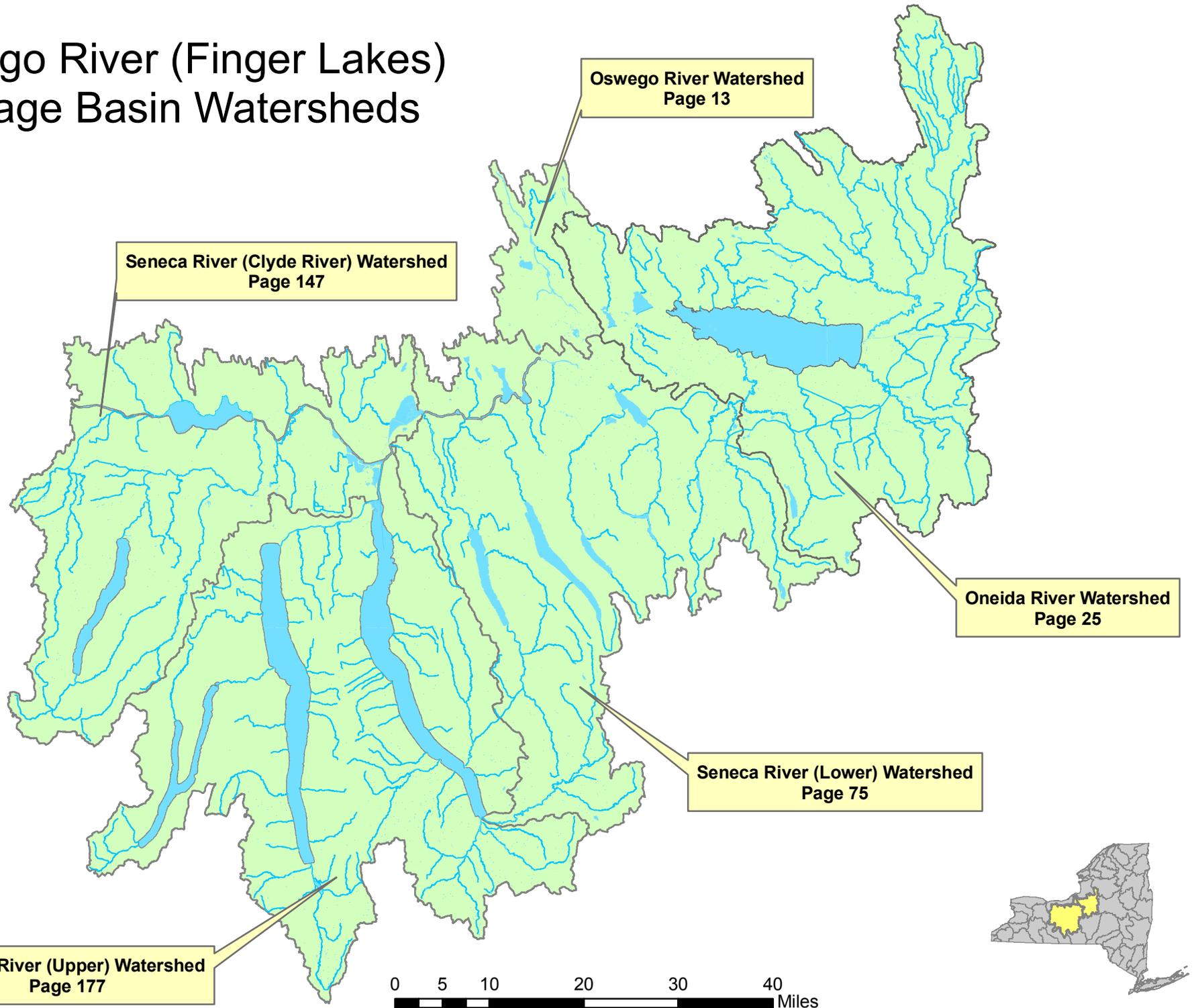
Note that this inventory and the assessments reflect the best available water quality information at the time of publication. Water quality information may be added or modified subsequent to the preparation of this edition of the Waterbody Inventory and Priority Waterbodies List. When water quality information is updated, the corresponding waterbody segment data sheet is issued with an appropriate revision date. The information on more recently revised data sheets supercedes the information in this listing.

In addition to the more detailed data sheets, a *Summary Listing of Priority Waters* provides a brief overview of all *Priority Waterbodies* (i.e., *Impaired Segments*, *Segments with Minor Impacts* and/or *Threatened Waters*). This listing follows the Data Sheet Section of the report.

Cross-referenced lists of the waterbody data sheets are included at the end of the report as Appendix C: County Index of Data Sheet Segments, and Appendix D: Alphabetic Index of Data Sheet Segments.

Figure 3

# Oswego River (Finger Lakes) Drainage Basin Watersheds



# Waterbody Inventory for Oswego River Watershed

| Water Index Number            | Waterbody Segment                          | Category     |
|-------------------------------|--|--------------|
| <b>Oswego River Watershed</b> |  |              |
| Ont 66 (portion 1)            | Oswego River, Lower, Main Stem (0701-0022) | MinorImpacts |
| Ont 66 (portion 2)            | Oswego River, Lower, Main Stem (0701-0006) | Impaired Seg |
| Ont 66 (portion 3)            | Oswego River, Upper, Main Stem (0701-0021) | Need Verific |
| Ont 66- 1 thru 10 (selected)  | Minor Tribs to Oswego River (0701-0023)    | UnAssessed   |
| Ont 66- 2                     | Black Creek and tribs (0701-0024)          | NoKnownImpct |
| Ont 66- 2-P6,P7,P8            | Paddys, Crooks and Mud Ponds (0701-0025)   | UnAssessed   |
| Ont 66- 3-P9                  | Lake Neatahwanta (0701-0018)               | Impaired Seg |
| Ont 66- 3-P9-                 | Tribs to Lake Neatahwanta (0701-0050)      | UnAssessed   |
| Ont 66- 4                     | Waterhouse Creek and tribs (0701-0026)     | MinorImpacts |
| Ont 66- 6                     | Ox Creek and tribs (0701-0027)             | UnAssessed   |
| Ont 66- 6-1-P13               | Mud Lake (0701-0028)                       | UnAssessed   |

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# Oswego River, Lower, Main Stem ( 0701-0022)

# MinorImpacts

## Waterbody Location Information

Revised: 06/05/2007

|  |  |
|--|--|
| <b>Water Index No:</b> Ont 66 (portion 1)            | <b>Drain Basin:</b> Owsego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> 04140203/010                 | <b>Str Class:</b> C                      |
| <b>Waterbody Type:</b> River                         | <b>Reg/County:</b> 7/Oswego Co. (38)     |
| <b>Waterbody Size:</b> 2.9 Miles                     | <b>Quad Map:</b> OSWEGO EAST (H-15-1)    |
| <b>Seg Description:</b> portion from mouth to Oswego |  |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Recreation      | Stressed | Suspected             |
| Aesthetics      | Stressed | Suspected             |

### Type of Pollutant(s)

Known: ---  
 Suspected: AESTHETICS (floatables), PATHOGENS  
 Possible: ---

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

Known: ---  
 Suspected: COMB. SEWER OVERFLOW  
 Possible: ---

## Resolution/Management Information

|  |                                     |
|--|-------------------------------------|
| <b>Issue Resolvability:</b> 3 (Strategy Being Implemented)             |                                     |
| <b>Verification Status:</b> 5 (Management Strategy has been Developed) |                                     |
| <b>Lead Agency/Office:</b> DEC/Reg7                                    | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b> n/a   |                                     |

## Further Details

Recreational uses in this portion of the Oswego River experience impacts due to pathogens, floatables and other pollutants from combined sewer overflows.

The City of Oswego is served by a system of combined sewers originally designed to convey both stormwater and sanitary wastewater to local waterways for disposal. Subsequently, these sewers were redirected to sewage treatment facilities which were designed for dry weather flow conditions. As a result, the system's conveyance and treatment capacity is exceeded during wet weather, resulting in the overflow and discharge of untreated wastewater to local waterbodies. Although the City implemented a number of sewer separation projects, there are still locations where combined sewage overflows (CSOs) exist. An April 2004 Consent Order with NYSDEC requires implementation of the City's 2002 Combined Sewer Overflow Long Term Control Plan. The Long Term Control Plan consists of a number of phased improvements to enable the City's wastewater conveyance and treatment facilities to handle the increased volume of combined sewage that would result from eliminating the existing overflows of combined sewage. The Phase I work includes various improvements to the East Side Wastewater Treatment Facility to increase the volume of combined sewage that can be treated by the facility. Phase II of the LTCP includes components which are necessary to capture and convey more flow to the plant and eliminate sewage overflows. (DEC/DOW, Region 7, 2006)

In July of 2006 Oswego Harbor was officially removed from the list of Great Lakes Areas of Concern. The harbor is the first and only one of 31 Areas of Concern in the US to be delisted. Pollution reduction activities in the Oswego Remedial Action Plan (RAP) to date that led to the delisting include remediation of State Superfund hazardous waste sites, upgrade of the Oswego WWTP and collection system, control of point and nonpoint water discharges, reduction of nutrients and stormwater runoff, implementation of river corridor enhancement projects and the Federal Energy Regulatory Commission's (FERC) re-licensing of the Oswego River power dam license to increase and better support the suitable fish habitat in the AOC. These actions have resulted in improved water quality, a more productive fishery, expanded recreational uses and a revitalized the river shoreline and downtown area. (DEC/DOW and USEPA, July 2006)

This segment includes the portion of the river from the mouth to the Lock 6 dam in Oswego. This portion of the river is Class C.

# Oswego River, Lower, Main Stem (0701-0006)

Impaired Seg

## Waterbody Location Information

Revised: / /

**Water Index No:** Ont 66 (portion 2)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140203/010      **Str Class:** B      Oswego River  
**Waterbody Type:** River      **Reg/County:** 7/Oswego Co. (38)  
**Waterbody Size:** 12.1 Miles      **Quad Map:** OSWEGO EAST (H-15-1)  
**Seg Description:** portion from Oswego to Fulton

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

| Use(s) Impacted  | Severity   | Problem Documentation |
|------------------|------------|-----------------------|
| Public Bathing   | Threatened | Suspected             |
| FISH CONSUMPTION | Impaired   | Known                 |
| Aquatic Life     | Stressed   | Suspected             |
| Aesthetics       | Threatened | Suspected             |

### Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBs)  
Suspected: ---  
Possible: Metals, Nutrients, Pathogens, Silt/Sediment

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

Known: ---  
Suspected: TOX/CONTAM. SEDIMENT  
Possible: Agriculture, Hydro Modification, Streambank Erosion, 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:** 2b (Multiple Segment/Categorical Water, Fish Consumption)

## Further Details

Fish consumption in this reach of the Oswego River is impaired by PCBs in river sediments assumed to be from past industrial discharges. Aquatic life support and recreational uses in the Oneida River are also known to experience minor impacts due to nutrient enrichment and periodic eutrophic conditions. Outflow of nutrients from Oneida Lake and from other nonpoint sources throughout the watershed are the likely source of the nutrients.

Fish consumption in the Oswego River from the Oswego Power Dam at Lock 6 to the upper dam at Fulton is impaired due to a NYSDOH health advisory that recommends eating no more than one meal per month of channel catfish because of elevated PCB levels. The original source of PCBs is considered to be past industrial discharges to the river. The advisory for the river was first issued prior to 1998-99. (2006-07 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2006).

The lower portion of the Oswego River has long been identified as a International Joint Commission Great Lakes Area of Concern. In addition to fish consumption, hydromodification and other impacts to the Oswego River had been noted

as restricting uses of the river. However, the fish habitat and population recovery impacts are being addressed by the new United States Federal Energy Regulatory Commission's (FERC) Oswego River power dam license that commits to providing enhanced run-of-river flow throughout the year, thereby increasing the amount of suitable habitat for spawning and rearing within the river. Concurrently, management practices, stream flow, and water quality improvements have significantly reduced eutrophication and algae blooms in the river. As a result of these improvements, in July 2006 the USEPA in conjunction with other local, state, federal and Canadian partners removed the Lower Oswego River from among the 43 Great Lakes list of Areas of Concern. Though minor impacts from nutrient and other pollutants from nonpoint sources persist, the progress that led to delisting the Lower River as an AOC are also resulting in improvements along this reach as well. (DEC/DOW, BWAM and Great Lakes Program, July 2006)

Bathing opportunities on the river are somewhat limited by river access and hydrology (current). However the river supports a productive fishery and fishing and boating on the river are popular recreational uses. Local and state agencies are continuing to identify opportunities and develop approaches to better manage the resource to its full potential. (DEC/DOW, Region 7, 2000)

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring (water chemistry) of the Oswego River in Minetto, Oswego County, is conducted annually at the Route 25 bridge. In addition, when RIBS Intensive Network monitoring is conducted in a targeted basin every five years, additional sampling methods are employed to gain an overall assessment of water quality. This Intensive Network sampling typically includes macroinvertebrate community analysis, sediment assessment, macroinvertebrate tissue analysis and toxicity testing, in addition to water chemistry. The most recent Intensive Network monitoring was conducted during 2001 (multiplates) and 2002. Biological (macroinvertebrate) sampling using multiplates revealed indicated slightly impacted water quality in 2001. This assessment represents no significant change from previous assessments. However zebra mussels were noted and are likely responsible for an increase in water clarity compared to previous years. Water column chemistry indicates mercury and phenol are present in concentrations that constitute parameters of concern; slightly exceeding assessment criteria in 2 of 6 samples in 2002. These results that are not unusual for a large river but conditions should continue to be monitored. Toxicity testing using water from this location detected no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site has minor impacts, but is supportive of the water's aquatic life support and recreational use.

This portion of Oswego River is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a Fish Consumption Water due to PCB contamination.

This segment includes the portion of the river from the Lock 6 dam in Oswego to the foot of Nestle Avenue about 0.6 miles above the Lock 2 dam in Fulton. This portion of the river is Class B.

# Oswego River, Upper, Main Stem (0701-0021)

Need Verific

## Waterbody Location Information

Revised: 05/21/2007

**Water Index No:** Ont 66 (portion 3)  
**Hydro Unit Code:** 04140203/010      **Str Class:** B  
**Waterbody Type:** River  
**Waterbody Size:** 16.4 Miles  
**Seg Description:** portion from Fulton to Three Rivers

**Drain Basin:** Oswego-Seneca-Oneida  
Oswego River  
**Reg/County:** 7/Oswego Co. (38)  
**Quad Map:** FULTON (H-15-4)

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

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

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: AGRICULTURE, Urban/Storm Runoff  
Possible: ---

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational uses in this portion of the Oswego River are thought to experience minor threats due to nutrient enrichment that results in periodic eutrophic conditions. Agricultural and other nonpoint sources throughout the watershed are the likely source of the nutrients.

A biological (macroinvertebrate) assessment of this portion of the Oswego River below Phoenix (at Bouy 30) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. The assessment is based on three months of multiplate sampling. Zebra mussels were noted and are likely responsible for an increase in water clarity compared to previous sampling. Otherwise, the assessment represents no significant change from previous results for 1990 and 1995 sampling. Although these effects on the fauna are minor and aquatic life support is considered to be fully supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the river from the foot of Nestle Avenue about 0.6 miles above the Lock 2 dam in Fulton to the confluence of the Seneca and Oneida Rivers in Three Rivers. This portion of the river is Class B.

# Black Creek and tribs (0701-0024)

NoKnownImpet

## Waterbody Location Information

Revised: 05/21/2007

|                         |                         |                     |                      |
|-------------------------|-------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66- 2               | <b>Drain Basin:</b> | Owsego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140203/010            | <b>Str Class:</b>   | C                    |
| <b>Waterbody Type:</b>  | River                   |                     | Oswego River         |
| <b>Waterbody Size:</b>  | 47.5 Miles              | <b>Reg/County:</b>  | 7/Oswego Co. (38)    |
| <b>Seg Description:</b> | entire stream and tribs | <b>Quad Map:</b>    | OSWEGO EAST (H-15-1) |

## 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

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

## Further Details

A biological (macroinvertebrate) assessment of Black Creek in Bundy Crossing (at Route 57) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was identified as the primary cause of the impacts to the stream. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(T). Tribs to this reach/segment are Class C,C(T),C(TS).

# Lake Neatahwanta (0701-0018)

# Impaired Seg

## Waterbody Location Information

Revised: 05/21/2007

|                                      |  |
|--------------------------------------|--|
| <b>Water Index No:</b> Ont 66- 3-P9  | <b>Drain Basin:</b> Owsego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> 04140203/010 | <b>Str Class:</b> B                      |
| <b>Waterbody Type:</b> Lake          | <b>Reg/County:</b> 7/Oswego Co. (38)     |
| <b>Waterbody Size:</b> 748.7 Acres   | <b>Quad Map:</b> FULTON (H-15-4)         |
| <b>Seg Description:</b> entire lake  |  |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| PUBLIC BATHING  | Impaired | Known                 |
| Aquatic Life    | Stressed | Known                 |
| RECREATION      | Impaired | Known                 |
| Aesthetics      | Stressed | Known                 |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus), PATHOGENS  
 Suspected: D.O./Oxygen Demand, Salts, Silt/Sediment  
 Possible: - - -

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

Known: AGRICULTURE, URBAN/STORM RUNOFF  
 Suspected: Deicing (stor/appl)  
 Possible: On-Site/Septic Syst

## Resolution/Management Information

|  |                                     |
|--|-------------------------------------|
| <b>Issue Resolvability:</b> 3 (Strategy Being Implemented)             |                                     |
| <b>Verification Status:</b> 5 (Management Strategy has been Developed) |                                     |
| <b>Lead Agency/Office:</b> ext/WQCC                                    | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b> 3a->1   |                                     |

## Further Details

Public bathing and other recreational uses in Lake Neatahwanta are impaired by nutrients, pathogens, excessive aquatic weed/algae growth and other pollutants attributed to agricultural and other nonpoint sources in the watershed. Aquatic life support and aesthetics also experience impacts as well.

Bathing beach closures on Lake Neatahwanta are the result of elevated coliform levels from contaminated urban/stormwater runoff. Other recreational uses (boating, fishing) are limited at times due to dense weed growth (extends 50-100 feet shore). The lake is shallow and typically eutrophic. As a consequence, the occurrence of toxic algae has increased and the diversity of aquatic vegetation has decreased.

Lake Neatahwanta is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 3a of the List as a Water Requiring Verification of Impairment, however this updated assessment suggests that the suspected impairments are confirmed and the lake be moved to Part 1 of the List as Waterbody Requiring TMDL Development (or other strategy to attain water quality standards).

Lake Neatahwanta is also designated as the number one local priority in Oswego County's Water Quality Strategy report. The Lake Neatahwanta Reclamation Committee recently announced that the City of Fulton was awarded a Lake Neatahwanta project grant from the USEPA in the amount of \$433,700. Local agency matching funds bring the total available for the project to \$788,500. The objective of this project is to reduce the amount of sediment and nutrient pollutants entering Lake Neatahwanta and its tributaries. The majority of the grant funds will be made available to agricultural producers for the purpose of implementing resource conservation practices on their farms. The necessary planning will continue through the fall and winter with construction to begin in the spring. Under the guidance of the Committee, the project is being coordinated by the Central New York Regional Planning and Development Board (CNYRPDB) on behalf of the City of Fulton and Town of Granby. The CNYRPDB is also working closely with Cornell Cooperative Extension of Oswego County, the Oswego County Soil and Water Conservation District, and the U.S. Department of Agriculture Natural Resources Conservation Service. Local matching funds will be used for the construction of a road salt storage shed by the Town of Granby, the purchase of lakeshore property by the City of Fulton, ongoing water quality monitoring in the lake, and other means. (Oswego County WQCC, August 2005)

# Waterhouse Creek and tribs (0701-0026)

# MinorImpacts

## Waterbody Location Information

Revised: 05/21/2007

**Water Index No:** Ont 66-4  
**Hydro Unit Code:** 04140203/010      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 16.2 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Oswego River  
**Reg/County:** 7/Oswego Co. (38)  
**Quad Map:** FULTON (H-15-4)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Suspected             |

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: URBAN/STORM RUNOFF, Agriculture  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support and recreation uses in Waterhouse Creek are known to experience minor impacts due to nutrient enrichment from urban runoff and other nonpoint sources.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Waterhouse Creek in Fulton, Oswego County, (at Fremont Street) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. Urban runoff and siltation were the likely cause of the impacts to the fauna. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. Water column sampling revealed dissolved solids to be a parameter of concern. Mercury and iron exceeded assessment criteria in only one of 9 samples collected. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Waterhouse Creek in Fulton (at Fremont Road) was also conducted in 2001 as part of the RIBS Biological Screening effort. Sampling results also indicated slightly impacted water quality.

(DEC/DOW, BWAM/SBU, January 2005)

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.

# Waterbody Inventory for Oneida River Watershed

| Water Index Number                            | Waterbody Segment                                   | Category            |
|---|---|---------------------|
| <b>Oneida River Watershed and Oneida Lake</b> |   |                     |
| Ont 66-11                                     | Oneida River, Main Stem (0703-0020)                 | <b>MinorImpacts</b> |
| Ont 66-11- 1                                  | Six Mile Creek and tribs (0703-0042)                | UnAssessed          |
| Ont 66-11- 1 thru 23 (selected)               | Minor Tribs to Oneida River (0703-0043)             | UnAssessed          |
| Ont 66-11- 2                                  | Fish Creek and tribs (0703-0018)                    | UnAssessed          |
| Ont 66-11- 2-P17                              | Lake Temalo (0703-0044)                             | UnAssessed          |
| Ont 66-11- 2-P18,P18a                         | Stewarts, Goodfellow Ponds (0703-0045)              | UnAssessed          |
| Ont 66-11-11                                  | Mud Creek and tribs (0703-0046)                     | UnAssessed          |
| Ont 66-11-14a-P19                             | Pleasant Lake (0703-0047)                           | <b>NoKnownImpct</b> |
| Ont 66-11-21                                  | Caughdenoy Creek and tribs (0703-0048)              | UnAssessed          |
| Ont 66-11-P26                                 | Oneida Lake (0703-0001)                             | <b>MinorImpacts</b> |
| <b>Oneida Lake Tribs, North Shore</b>         |   |                     |
| Ont 66-11-P26- 1 thru 14 (select)             | Minor Tribs to Oneida Lake, Northwest (0703-0035)   | UnAssessed          |
| Ont 66-11-P26- 4                              | Big Bay Creek and tribs (0703-0049)                 | UnAssessed          |
| Ont 66-11-P26- 9                              | Scriba Creek and tribs (0703-0050)                  | <b>NoKnownImpct</b> |
| Ont 66-11-P26- 9- 5-P34a,P35                  | Dutcher, Francis Ponds (0703-0051)                  | UnAssessed          |
| Ont 66-11-P26- 9-17-P38a,P39                  | Chase, South Ponds (0703-0052)                      | UnAssessed          |
| Ont 66-11-P26- 9-18-1-P40                     | North Pond (0703-0053)                              | UnAssessed          |
| Ont 66-11-P26-10-P42                          | Kibbie Lake (0703-0054)                             | UnAssessed          |
| Ont 66-11-P26-12-P44                          | Vandercamp Lake (0703-0055)                         | UnAssessed          |
| Ont 66-11-P26-15                              | Black Creek and tribs (0703-0056)                   | UnAssessed          |
| Ont 66-11-P26-16 thru 23 (select)             | Minor Tribs to Oneida Lake, Northeast (0703-0057)   | <b>NoKnownImpct</b> |
| Ont 66-11-P26-22,23a                          | Upper Murray Brook, Oneida Lake Trib (0703-0058)    | <b>NoKnownImpct</b> |
| <b>Fish Creek/Wood Creek Watershed</b>        |   |                     |
| Ont 66-11-P26-24                              | Fish Creek and minor tribs (0703-0059)              | <b>NoKnownImpct</b> |
| Ont 66-11-P26-24                              | West Br Fish Creek, Lower and tribs (0703-0060)     | <b>NoKnownImpct</b> |
| Ont 66-11-P26-24                              | West Br Fish Creek, Middle, minor tribs (0703-0061) | UnAssessed          |
| Ont 66-11-P26-24                              | West Br Fish Creek, Upper, and tribs (0703-0062)    | UnAssessed          |
| Ont 66-11-P26-24- 1                           | Wood Creek and minor tribs (0703-0012)              | <b>MinorImpacts</b> |
| Ont 66-11-P26-24- 1 (Barge Canal)             | NYS Barge Canal (portion 6) (0703-0063)             | UnAssessed          |
| Ont 66-11-P26-24- 1- 4-P57                    | Teelins Pond (0703-0064)                            | UnAssessed          |
| Ont 66-11-P26-24- 1- 8                        | Stony Creek and tribs (0703-0065)                   | <b>MinorImpacts</b> |
| Ont 66-11-P26-24- 1-10                        | Canada Creek and tribs (0703-0010)                  | <b>Need Verific</b> |
| Ont 66-11-P26-24-14                           | East Br Fish Creek, Lower, minor tribs (0703-0066)  | UnAssessed          |
| Ont 66-11-P26-24-14                           | East Br Fish Creek, Upper, minor tribs (0703-0067)  | UnAssessed          |
| Ont 66-11-P26-24-14- 2                        | Furnace Creek and tribs (0703-0068)                 | UnAssessed          |
| Ont 66-11-P26-24-14- 4                        | Florence Creek, Lower, and tribs (0703-0069)        | UnAssessed          |
| Ont 66-11-P26-24-14- 4                        | Florence Creek, Upper, and tribs (0703-0070)        | UnAssessed          |

# ...Oneida River Watershed

| Water Index Number                             | Waterbody Segment                                    | Category      |
|--|--|---------------|
| <b>Fish Creek/Wood Creek Watershed (con't)</b> |  |               |
| Ont 66-11-P26-24-14- 4-P73                     | Oneida City Reservoir (0703-0071)                    | UnAssessed    |
| Ont 66-11-P26-24-14- 5                         | Fall Brook and tribs (0703-0072)                     | UnAssessed    |
| Ont 66-11-P26-24-14- 9                         | Point Rock Creek and tribs (0703-0073)               | UnAssessed    |
| Ont 66-11-P26-24-14- 9- 8-P77                  | Mud Lake (0703-0074)                                 | UnAssessed    |
| Ont 66-11-P26-24-14- 9-P76                     | Bullhead Lake (0703-0075)                            | UnAssessed    |
| Ont 66-11-P26-24-14-14- 1-P79                  | Bloodsucker Lake (0703-0076)                         | UnAssessed    |
| Ont 66-11-P26-24-18..P86                       | Mack Pond (0703-0077)                                | UnAssessed    |
| Ont 66-11-P26-24-22                            | Little River and tribs (0703-0078)                   | UnAssessed    |
| Ont 66-11-P26-24-22- 2c-P88                    | Starkweather Pond (0703-0079)                        | UnAssessed    |
| Ont 66-11-P26-24-22- 7- 2-P90                  | Gorton Pond (0703-0080)                              | UnAssessed    |
| Ont 66-11-P26-24-22-15- 1-P93a                 | Cody Pond (0703-0081)                                | UnAssessed    |
| Ont 66-11-P26-24-22-15-P94                     | Panther Lake (0703-0082)                             | UnAssessed    |
| Ont 66-11-P26-24-22-P95                        | Carterville Pond (0703-0083)                         | UnAssessed    |
| Ont 66-11-P26-24-27                            | Emmons Brook, Upper, and tribs (0703-0084)           | UnAssessed    |
| Ont 66-11-P26-24-28                            | Mad River and tribs (0703-0085)                      | NoKnownImpact |
| Ont 66-11-P26-24-38a-P104                      | Gifford Lake (0703-0086)                             | UnAssessed    |
| Ont 66-11-P26-24-P109                          | Kasoag Lake (0703-0087)                              | MinorImpacts  |
| Ont 66-11-P26-24-P109-                         | Tribs to Kasoag Lake (0703-0088)                     | UnAssessed    |
| Ont 66-11-P26-24..P110 thru 11                 | Black, Bass, Sisley and Green Ponds (0703-0089)      | UnAssessed    |
| <b>Onieda Lake Tribs, Southeastern Shore</b>   |  |               |
| Ont 66-11-P26-25                               | Oneida Creek, Lower, and tribs (0703-0032)           | MinorImpacts  |
| Ont 66-11-P26-25                               | Oneida Creek, Upper, and tribs (0703-0090)           | MinorImpacts  |
| Ont 66-11-P26-25- 6                            | Sconondoa Creek and tribs (0703-0003)                | MinorImpacts  |
| Ont 66-11-P26-25-P120                          | Sunset Lake (0703-0091)                              | UnAssessed    |
| Ont 66-11-P26-26 thru 32                       | Minor Tribs to Oneida Lake, Southeast (0703-0092)    | UnAssessed    |
| Ont 66-11-P26-33                               | Canaseraga/Cowaselon Cr, Low, and tribs (0703-0034)  | Need Verific  |
| Ont 66-11-P26-33                               | Cowaselon Creek, Middle, and minor tribs (0703-0093) | MinorImpacts  |
| Ont 66-11-P26-33                               | Cowaselon Creek, Upper, and tribs (0703-0094)        | UnAssessed    |
| Ont 66-11-P26-33- 2                            | Canaseraga Creek, Upper, and tribs (0703-0095)       | MinorImpacts  |
| Ont 66-11-P26-33- 5                            | Canastota Creek, Lower, and tribs (0703-0002)        | Impaired Seg  |
| Ont 66-11-P26-33- 5                            | Canastota Creek, Upper, and tribs (0703-0096)        | UnAssessed    |
| Ont 66-11-P26-33-13                            | Clockville Creek and tribs (0703-0097)               | UnAssessed    |
| <b>Oneida Lake Tribs, Southwestern Shore</b>   |  |               |
| Ont 66-11-P26-35 thru 43                       | Minor Tribs to Oneida Lake, Southwest (0703-0098)    | UnAssessed    |
| Ont 66-11-P26-37                               | Chittenango Creek, Lower, and tribs (0703-0005)      | MinorImpacts  |
| Ont 66-11-P26-37                               | Chittenango Creek, Middle, and tribs (0703-0025)     | NoKnownImpact |
| Ont 66-11-P26-37                               | Chittenango Creek, Upper, and tribs (0703-0099)      | UnAssessed    |
| Ont 66-11-P26-37- 6                            | Butternut Creek, Lower, and minor tribs (0703-0039)  | Need Verific  |
| Ont 66-11-P26-37- 6                            | Butternut Creek, Upper, and minor tribs (0703-0100)  | NoKnownImpact |
| Ont 66-11-P26-37- 6- 2                         | Limestone Creek, Lower, and minor tribs (0703-0008)  | Impaired Seg  |
| Ont 66-11-P26-37- 6- 2                         | Limestone Creek, Middle, and tribs (0703-0101)       | UnAssessed    |

# ...Oneida River Watershed

| Water Index Number                                   | Waterbody Segment                                 | Category      |
|--|---|---------------|
| <b>Oneida Lake Tribs, Southwestern Shore (con't)</b> |   |               |
| Ont 66-11-P26-37- 6- 2- 6-P134,P13                   | Snooks Pond, White Lake (0703-0102)               | UnAssessed    |
| Ont 66-11-P26-37- 6- 2- 8                            | Pratt Falls Creek, Upper, and tribs (0703-0103)   | UnAssessed    |
| Ont 66-11-P26-37- 6- 2- 8                            | West Branch Limestone Creek and tribs (0703-0104) | UnAssessed    |
| Ont 66-11-P26-37- 6- 2-(East Br)                     | East Branch Limestone Creek and tribs (0703-0105) | MinorImpacts  |
| Ont 66-11-P26-37- 6- 2-37                            | Limestone Creek, Upper, and tribs (0703-0106)     | UnAssessed    |
| Ont 66-11-P26-37- 6-13                               | Butternut Creek Trib, Upper (0703-0107)           | UnAssessed    |
| Ont 66-11-P26-37- 6-14-P143                          | Green Lake (0703-0108)                            | UnAssessed    |
| Ont 66-11-P26-37- 6-15                               | Rush Creek, Upper, and tribs (0703-0109)          | UnAssessed    |
| Ont 66-11-P26-37- 6-15- 1-P143a                      | East Syracuse Reservoir (0703-0110)               | UnAssessed    |
| Ont 66-11-P26-37- 6-P144                             | Jamesville Reservoir (0703-0015)                  | UnAssessed    |
| Ont 66-11-P26-37- 8-P147                             | Green Lake (0703-0111)                            | UnAssessed    |
| Ont 66-11-P26-37- 8-P147-1-P148                      | Round Lake (0703-0112)                            | UnAssessed    |
| Ont 66-11-P26-37-(Old Erie Canal)                    | Old Erie Barge Canal (0703-0115)                  | UnAssessed    |
| Ont 66-11-P26-37-35                                  | Cazenovia Lake Outlet (0703-0113)                 | UnAssessed    |
| Ont 66-11-P26-37-35-P153                             | Cazenovia Lake (0703-0021)                        | MinorImpacts  |
| Ont 66-11-P26-37-35-P153-                            | Tribs to Cazenovia Lake (0703-0114)               | UnAssessed    |
| Ont 66-11-P26-37-47-P164                             | Tuscarora Lake (0703-0022)                        | NoKnownImpact |

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# Oneida River, Main Stem (0703-0020)

# Minor Impacts

## Waterbody Location Information

Revised: 05/21/2007

**Water Index No:** Ont 66-11  
**Hydro Unit Code:** 04140202/150      **Str Class:** B  
**Waterbody Type:** River  
**Waterbody Size:** 24.2 Miles  
**Seg Description:** portion from mouth to Oneida Lake

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Oswego Co. (38)  
**Quad Map:** BALDWINSVILLE (I-15-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Suspected             |

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: OTHER SOURCE, Agriculture, Urban/Storm Runoff  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support and recreational uses in the Oneida River are known to experience minor impacts due to nutrient enrichment and periodic eutrophic conditions. Outflow of nutrients from Oneida Lake and from other nonpoint sources throughout the watershed are the likely source of the nutrients.

A biological (macroinvertebrate) assessment of the Oneida River above Three Rivers (at Bouy 209) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. The assessment is based on three months of artificial substrate (multiplate) sampling. Several species of mayflies and caddisflies were found at the site, as well as numerous zebra mussels. The assessment represents no significant change from previous results for 1990 and 1995 sampling. Although these effects on the fauna are minor and aquatic life support is considered to be fully supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Rotating Integrated Basin Studies (RIBS) sampling of the Oneida River in Brewerton was conducted in 1989-1990. Water quality at this site was rated as good based on chemical and biological sampling. Tissue analysis of amphipods (scuds) from the site found chromium, iron and aluminum at levels exceeding background, although background levels for this

organism are not well established. Iron levels in the water column were at the border of being considered a parameter of concern. Copper, lead and zinc were present at levels greater than their assessment criteria values in bottom sediments. PCBs were also found in the bottom sediment at a value just above its reporting limit.

This segment includes the entire river from the mouth to Oneida Lake, including Big Ben Cut and Anthony Cut. The river is Class B.

# Pleasant Lake (0703-0047)

NoKnownImpct

## Waterbody Location Information

Revised: 05/24/2007

|                         |                   |                     |                      |
|-------------------------|-------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-11-14a-P19 | <b>Drain Basin:</b> | Oswego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140202/150      | <b>Str Class:</b>   | B                    |
| <b>Waterbody Type:</b>  | Lake              | <b>Reg/County:</b>  | 7/Oswego Co. (38)    |
| <b>Waterbody Size:</b>  | 38.3 Acres        | <b>Quad Map:</b>    | BREWERTON (I-16-1)   |
| <b>Seg Description:</b> | entire lake       |                     |                      |

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

|                        |                 |                              |
|------------------------|-----------------|------------------------------|
| <b>Use(s) Impacted</b> | <b>Severity</b> | <b>Problem Documentation</b> |
| NO USE IMPAIRMNT       |                 |                              |

### Type of Pollutant(s)

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

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

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

## Resolution/Management Information

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

## Further Details

Pleasant Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 2000 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. These data indicate that the lake continues to be best characterized as mesoligotrophic, or moderately to highly unproductive. The lake was slightly less productive in 2005 than most CSLAP sampling seasons, based on slightly higher water clarity and lower algae levels. However, phosphorus readings were essentially unchanged, and these small changes in each of these indicators were probably within the normal variability for this lake. Lake productivity does not change much over the course of a typical sampling season, indicating that deepwater nutrient levels that are not significantly higher than those at the lake surface (and thus do not "enrich" the surface waters during destratification). Phosphorus levels in the lake fall well below the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements consistently meet what is recommended for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5; occasionally low pH is noted. The lake water is moderately colored, but color is not assumed to impact transparency in the lake. (DEC/DOW, BWAM/CSLAP, April 2006)

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 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" to "excellent." The lake itself is most often described as "not quite crystal clear," an assessment that is consistent with the perceived water quality conditions in the lake and its measured water quality characteristics. Assessments have noted that aquatic plants typically grow to the lake surface. Aquatic plants are dominated by native species typical of lakes in the region and have not been cited as impacting recreational uses. (DEC/DOW, BWAM/CSLAP, April 2006)

This lake waterbody is designated class B, suitable for use as a public bathing beach, general recreation and aquatic life support, but not as a public water supply. 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.

# Oneida Lake (0703-0001)

# Minor Impacts

## Waterbody Location Information

Revised: 09/24/2007

|                         |               |                     |                       |
|-------------------------|---------------|---------------------|-----------------------|
| <b>Water Index No:</b>  | Ont 66-11-P26 | <b>Drain Basin:</b> | Oswego-Seneca-Oneida  |
| <b>Hydro Unit Code:</b> | 04140202/     | <b>Str Class:</b>   | B                     |
| <b>Waterbody Type:</b>  | Lake          | <b>Reg/County:</b>  | 7/Oswego Co. (38) ... |
| <b>Waterbody Size:</b>  | 51090.9 Acres | <b>Quad Map:</b>    | CICERO (I-16-2) ...   |
| <b>Seg Description:</b> | entire lake   |                     |                       |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Public Bathing  | Stressed | Possible              |
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, SILT/SEDIMENT, PROBLEM SPECIES, Species Alteration  
Suspected: NUTRIENTS (phosphorus), Pathogens  
Possible: Water Level/Flow

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

Known: AGRICULTURE, HABITAT MODIFICATION, URBAN/STORM RUNOFF, On-Site/Septic Syst  
Suspected: Deicing (stor/appl), Streambank Erosion  
Possible: Municipal

## Resolution/Management Information

|                             |  |                                     |
|-----------------------------|--|-------------------------------------|
| <b>Issue Resolvability:</b> | 3 (Strategy Being Implemented)             |                                     |
| <b>Verification Status:</b> | 5 (Management Strategy has been Developed) |                                     |
| <b>Lead Agency/Office:</b>  | ext/WQCC                                   | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | 3a->n/a                                    |                                     |

## Further Details

Aquatic life support and recreational uses in Oneida Lake are known to experience impacts and threats due to a range of pollutants. Sources of these impacts include invasive aquatic weeds and other species (zebra mussels), silt/sedimentation and nutrient loads from nonpoint sources, municipal and household septic waste discharges. Flooding and water level regulation are also a concern.

In 2004 a Watershed Management Strategy for Oneida Lake was prepared by the Central New York Regional Planning and Development Board in cooperation with the Oneida Lake Watershed Advisory Council and with participation and input from a wide range of local municipalities, agencies and organizations. The report provided an opportunity for local stakeholders to identify important issues of concern for the lake and its watershed. Given the size of the watershed, the specific issues identified varied among the 6 regions around the lake. However a number of issues were identified in multiple regions. These include: the decline of fish populations, the presence and threat of exotic non-native species such as water chestnut and zebra mussels, the need for cormorant (predatory bird) control, and various boating and recreational use issues. Regarding issues within the watershed that impact the lake, common concerns included erosion and sedimentation from urban and agricultural sources, surface and groundwater contamination (from road salt

application and storage), and impacts from inadequate and/or poorly maintained onsite septic systems.

Oneida Lake has long supported an excellent warmwater fishery. However a recent decline in walleye and yellow perch has been a concern and the focus of current study. The decline is believed to be associated with increased predation by cormorants and fish predators that may be the result of greater water clarity caused by zebra mussels. Cormorants consume about one pound of fish per day per bird. The peak cormorant population on the lake was estimated at 1,750 birds in 1998. Efforts to reduce the impact of cormorants are the focus of a Cormorant Task Force and a US Fish and Wildlife Service cormorant control program is currently underway. In the past few years, fish populations have improved, but study of the issue is continuing.

Exotic Species also impact the lake. Zebra mussels first appeared in the lake in 1991. Since then they have dramatically changed water clarity of the lake and have crowded out other native clams. The greater water clarity allows greater penetration of sunlight which has resulted in aquatic plant growth extending into deeper water and increase algal growth. These changes also impact the native fishery of the lake. Water chestnut, first detected in 1999, is another invasive species of concern. Dense growths of this plant on the lake surface crowds out native plants, reduces fish habitat and restrict boating and other recreational uses of the lake.

In the upland watershed of the lake, erosion/sedimentation is a concern. Activities associated with agriculture, forestry, highway maintenance and construction all contribute to loss of soil into Oneida Lake. This sediment loading introduces nutrients and other pollutants to the lake and negatively impacts aquatic biota, fish and fish habitat. Increased sedimentation to and erosion into the lake can also impact boating and other recreational activities. Increased sedimentation also reduces hydrologic capacity of tributaries and exacerbates flooding in the watershed.

Phosphorus levels and nutrient enrichment have declined in Oneida Lake over the past 20 years. However monitoring data collected by the Cornell University Oneida Lake Biological Field Station over the past five years have shown total phosphorus levels in the lake to be consistently between 20 and 30 ug/l, at or slightly above state guidance value of 20 ug/l indicating impacted/stressed recreational use. The most recent chlorophyll and water clarity data suggest a mesotrophic lake. (Cornell University Biological Field Station, unpublished data). Nutrients, pathogens and other pollutants from agricultural and urban runoff and inadequate and/or poorly maintained septic systems remain a concern. In particular, on-site septic systems that serve homes in close proximity to the lake and its tributaries pose water quality threats. Many of these systems were installed to serve seasonal residences and camps that have since been converted to year-round use. Inadequate residential wastewater treatment has been identified as a concern in most regions of the watershed. Runoff associated with the considerable agricultural activity in southern and eastern watersheds is also a source of pollutants to the lake and its tributaries. Improper storage and application of salt for maintaining roads in the winter was also identified as a concern in much of the watershed. (DEC/DOW, BWAM, January 2007)

Oneida Lake is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 3a of the List as a Water Requiring Verification of Impairment. However the assessment on which this decision to list is based goes back to the early 1990s, prior to the more recent improvements to lake water quality noted above and prior to the development of the NYS Consolidated Assessment and Listing Methodology (CALM) which more specifically defines thresholds for impaired waters. This updated assessment suggests that previous impacts due to phosphorus concentrations have been greatly reduced and the current impacts to water quality are a result of invasive species and other considerations that are not amenable to a TMDL approach. Because the phosphorus concentrations and other water quality indicators in the lake do not reach the threshold of impaired uses as outlined in the CALM continued listing is not warranted.

The Oneida Lake Watershed Management Plan coordinated by CNYRPDB and the Oneida Lake Watershed Advisory Council can be found at: <http://www.cnyrpd.org/oneidalake/>

Though the WI/PWL database lists Oswego County as the primary county location of this waterbody, this large lake also lies in other multiple counties including Oneida, Madison and Onondaga Counties.

# Scriba Creek and tribs (0703-0050)

NoKnownImpet

## Waterbody Location Information

Revised: 05/24/2007

**Water Index No:** Ont 66-11-P26-9  
**Hydro Unit Code:** 04140202/130      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 64.2 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Oswego Co. (38)  
**Quad Map:** MALLORY (H-16-3)

## 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

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Scriba Creek in Constantia, Oswego County, (at Route 23) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions. Water column sampling revealed mercury to be a parameter of concern; mercury was found to be above levels of detection in 2 of 10 samples. These findings are typical of waters in this region which are impacted by atmospheric deposition of pollutants. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Scriba Creek in Constantia was also conducted in 2001 as part of the RIBS Biological Screening effort. Sampling results at that time indicated slightly impacted water quality conditions. However in both samples nutrient biotic evaluation determined any effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

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 Frederick Creek (-1), Spring Brook (-5) and Potter Creek (-9), are also Class C,C(T).

# Minor Tribs to Oneida Lake, Northeast (0703-0057)

NoKnownImpct

## Waterbody Location Information

Revised: 05/24/2007

**Water Index No:** Ont 66-11-P26-16 thru 23 (select)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140202/130      **Str Class:** C(T)      Oneida River  
**Waterbody Type:** River      **Reg/County:** 6/Oneida Co. (33)  
**Waterbody Size:** 24.7 Miles      **Quad Map:** JEWELL (I-17-2)  
**Seg Description:** total length of selected tribs to Oneida 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

A biological (macroinvertebrate) assessment of Murray Brook in North Bay (at East Lake Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was determined to be present, however the sample contained a high diversity of organisms. Nutrient biotic evaluation determined these effects on the fauna to be minor and aquatic life support is considered to be fully supported in the stream and there are no other apparent impacts to uses. (DEC/DOW, BWAM/SBU, June 2005)

Murray Creek is just one of several streams that make up this waterbody segment, but it is considered representative of water quality in the segment as a whole. This segment is listed as being evaluated rather than monitored.

This segment includes the total length of selected/smaller tribs to Oneida Lake, northeast shore between Black Creek (-15) and Fish Creek (-24). Tribs within this segment, including Cold Spring Brook (-16), Godfrey Creek (-17), Hall Brook (-19) and Lower Murray Brook (-22), are primarily Class C,C(T),C(TS). Black Creek (-15), Upper Murray Brook (-22) and Fish Creek (-24) are listed separately.

# Upper Murray Brook, Oneida Lake Trib (0703-0058) NoKnownImpct

## Waterbody Location Information

Revised: 05/24/2007

**Water Index No:** Ont 66-11-P26-22,23a  
**Hydro Unit Code:** 04140202/130      **Str Class:** AA  
**Waterbody Type:** River  
**Waterbody Size:** 5.1 Miles  
**Seg Description:** stream and tribs, above North Bay

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 6/Oneida Co. (33)  
**Quad Map:** SYLVAN BEACH (I-18-1)

## 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

A biological (macroinvertebrate) assessment of Murray Brook in North Bay (at East Lake Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was determined to be present, however the sample contained a high diversity of organisms. Nutrient biotic evaluation determined these effects on the fauna to be minor and aquatic life support is considered to be fully supported in the stream and there are no other apparent impacts to uses. (DEC/DOW, BWAM/SBU, June 2005)

This actual sampling point is just downstream of this segment, but the results of the sampling are considered to be representative of water quality and use support in this waterbody.

This segment includes the total length of to portions of Murray Brook (-22) and unnamed tribs (-23a) above Route 49 near North Bay. These tribs are Class AA,AA(T),AA(TS). Lower Murray Brook (-22) is listed separately.

# Fish Creek and minor tribs (0703-0059)

NoKnownImpct

## Waterbody Location Information

Revised: 05/24/2007

**Water Index No:** Ont 66-11-P26-24  
**Hydro Unit Code:** 04140202/030      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 50.7 Miles  
**Seg Description:** entire stream and selected tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 6/Oneida Co. (33)  
**Quad Map:** SYLVAN BEACH (I-18-1)

## 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

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Fish Creek in Fish Creek Landing, Oneida County, (at Route 50A) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions. The fauna included a number of intolerant mayflies, stoneflies and caddisflies. Water column sampling found mercury and iron have exceeded assessment criteria in only 1 of 10 samples. The presence of mercury is typical of waters in this region which are impacted by atmospheric deposition of pollutants. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Fish Creek in Becks Grove (at New Oswego Road) was also conducted in 2001. Sampling results were assessed using sandy stream criteria to account for the low-gradient habitat and fine-sediment substrate and the site was determined to be slightly impacted. Based on the upstream assessment and the consideration of the habitat conditions at the downstream site, this segment is assessed as having no known impacts. However nutrient biotic evaluation suggests stresses to aquatic life at lower reach and further monitoring of the site is recommended. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the entire stream and selected/smaller tribs. The waters of the stream (from the mouth to the confluence of the East and West Branches) are Class C,C(T). Tribs to this reach/segment, including Lower Vienna Brook (-3) and Sash Factory Brook (-9), are Class C,C(T),C(TS). NYS Barge Canal, Wood Creek (-1), Upper Vienna Brook (-3), East Branch (-14) and West Branch are listed separately.

# West Br Fish Creek, Lower and tribs (0703-0060)

NoKnownImpct

## Waterbody Location Information

Revised: 05/24/2007

**Water Index No:** Ont 66-11-P26-24  
**Hydro Unit Code:** 04140202/020      **Str Class:** B(T)  
**Waterbody Type:** River  
**Waterbody Size:** 18.3 Miles  
**Seg Description:** stream and tribs, from Blossvale to Cold Brook

**Drain Basin:** Oswego-Seneca-Oneida  
**Reg/County:** Oneida River  
6/Oneida Co. (33)  
**Quad Map:** CAMDEN EAST (H-18-4)

## 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

A biological (macroinvertebrate) assessment of West Branch Fish Creek in Blossvale (at McConnellsville Road) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. The fauna included a high number of intolerant mayflies, stoneflies and caddisflies.

This segment includes the portion of the stream and all tribs from East Branch Fish Creek (-14) to/including Cold Brook (-18). The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Cold Brook, are also/primarily Class C,C(T). East Branch Fish Creek and Middle/Upper West Branch Fish Creek are listed separately.

# Wood Creek and minor tribs (0703-0012)

# MinorImpacts

## Waterbody Location Information

Revised: 05/24/2007

**Water Index No:** Ont 66-11-P26-24- 1  
**Hydro Unit Code:** 04140202/040      **Str Class:** D  
**Waterbody Type:** River  
**Waterbody Size:** 151.1 Miles  
**Seg Description:** entire stream and selected tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 6/Oneida Co. (33)  
**Quad Map:** SYLVAN BEACH (I-18-1)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: - - -  
Suspected: NUTRIENTS, SILT/SEDIMENT  
Possible: Pathogens

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

Known: - - -  
Suspected: AGRICULTURE, URBAN/STORM RUNOFF  
Possible: Construction, Streambank Erosion, Other Sanitary Disch

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 3 (Cause Identified, Source Unknown)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support and recreation in Wood Creek are known to experience minor impacts due to nutrient and silt/sediment loadings and other inputs from wide range (urban, agricultural, other) nonpoint sources in the watershed.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Wood Creek in Rome, Oneida County, (at Route 69/Erie Boulevard) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. The impacts were attributed to urban runoff sources. Water column sampling revealed mercury to be a parameter of concern. The presence of mercury is not unusual in waters of this region which are impacted by atmospheric deposition of pollutants. Very limited bacteriological sampling (3 samples) also revealed some elevated levels. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Black Creek were conducted in Seifert Corners in 2001 (at Seifert Road). Sampling results also sites indicated slightly impacted water quality conditions at this downstream site. Nonpoint source

nutrient enrichment and organic decomposable wastes were identified as primary causes of impact in the stream. Habitat conditions influence sampling results at this site which consists of runs with few riffles and upstream wetlands. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Wood Creek drain a diverse watershed that includes urban fringes of Rome, suburban development and significant agricultural activity. This stream is believed to be a significant source of nutrients to Oneida Lake.

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are primarily Class D, with portions designated Class C(T). Tribs to this reach/segment, including Drum Creek (-3) and Beaver Brook (-4), are Class C,C(T),C(TS). Stony Creek (-8), Canada Creek (-10) and the portion of the Barge Canal are listed separately.

# Stony Creek and tribs (0703-0065)

# MinorImpacts

## Waterbody Location Information

Revised: 05/24/2007

**Water Index No:** Ont 66-11-P26-24- 1- 8  
**Hydro Unit Code:** 04140202/040      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 46.9 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 6/Oneida Co. (33)  
**Quad Map:** VERONA (I-18-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: D.O./Oxygen Demand  
Possible: ---

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

Known: ---  
Suspected: AGRICULTURE, Urban/Storm Runoff  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 3 (Cause Identified, Source Unknown)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support and recreational uses in Stony Creek are known to experience minor impacts due to nutrient enrichment from agricultural nonpoint sources.

A biological (macroinvertebrate) assessment of Stony Creek in Verona Mills (at Wehling Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nutrient enrichment was indicated in the sampling of this sluggish stream. Algae was abundant and the macroinvertebrate community was dominated by filter-feeding caddisflies and midges. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

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.

# Canada Creek and tribs (0703-0010)

Need Verific

## Waterbody Location Information

Revised: 05/21/2007

**Water Index No:** Ont 66-11-P26-24- 1-10  
**Hydro Unit Code:** 04140202/040      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 77.6 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 6/Oneida Co. (33)  
**Quad Map:** VERONA (I-18-2)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| Fish Consumption | Stressed | Possible              |
| Recreation       | Stressed | Possible              |

### Type of Pollutant(s)

Known: ---  
Suspected: PRIORITY ORGANICS (volatile organics)  
Possible: Metals

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

Known: ---  
Suspected: LANDFILL/LAND DISP. (Rome Landfill)  
Possible: Tox/Contam. Sediment

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Recreational uses, including fish consumption, in Canada Creek may experience impacts from priority organics related to a nearby landfill.

Previous assessments had noted water quality concerns related to an area landfill, agricultural runoff, changing land use and junkyards in the watershed. The landfill of concern is the Rome Landfill (6-33-012), an inactive municipal landfill where industrial/hazardous wastes from various companies in the city were disposed. The landfill is located in a wetland adjacent to the stream. A Remedial Investigation/Feasibility Study (RI/FS) was completed in early 1995, and a Record of Decision (ROD) was signed in March of 1995. The ROD called for considerable remediation of the site and the extension of the drinking water main to residences with well contamination along Tannery Road. Extension of the water line was completed in 1996 and all residences are now connected to it. Construction of the landfill cap and the leachate collection system was completed in September of 1997, although other work is continuing. A site inspection in June of 2001 revealed that there is still a serious leachate concern here. Leachate flow from the landfill passed underneath an adjacent ash fill and eventually migrated across an old railroad bed and then to a roadside ditch. Additional investigation is needed to evaluate the potential impact of the leachate to health and the environment, and also the effectiveness of the remedy. (DEC/DER, Hazardous Waste Site database, 2006).

A biological (macroinvertebrate) assessment of Canada Creek in Seifert Corners (at Tannery Road) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. The fauna was dominated by clean-water mayflies. (DEC/DOW, BWAM/SBU, June 2005)

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 Brandy Brook (-a), Beaver Creek (-2) and Burk Creek (-6), are Class C,C(T),C(TS).

# Mad River and tribs (0703-0085)

NoKnownImpet

## Waterbody Location Information

Revised: 05/24/2007

**Water Index No:** Ont 66-11-P26-24-28  
**Hydro Unit Code:** 04140202/020      **Str Class:** C(T)\*  
**Waterbody Type:** River  
**Waterbody Size:** 86.9 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 6/Oneida Co. (33)  
**Quad Map:** WESTDALE (H-17-2)

## 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

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Mad River in Camden, Oneida County, (at Route 68) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions. An exemplary macroinvertebrate fauna was present with very good habitat conditions as well. Water column sampling revealed mercury to be above the level of detection in one of ten samples collected. The presence of mercury is not unusual in waters of this region which are impacted by atmospheric deposition of pollutants. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Mad River in Camden was also conducted in 2001. Sampling results indicated similar non-impacted water quality conditions with very good diversity of clean-water organisms. (DEC/DOW, BWAM/SBU, January 2005)

This segment includes the entire stream and all tribs. The waters of the stream are primarily Class C(T), with a small reach designated Class B(T). Tribs to this reach/segment, including Little River (-11), are Class C(T),C(TS).

# Kasoag Lake (0703-0087)

# Minor Impacts

## Waterbody Location Information

Revised: 05/24/2007

|                         |                       |                     |                       |
|-------------------------|-----------------------|---------------------|-----------------------|
| <b>Water Index No:</b>  | Ont 66-11-P26-24-P109 | <b>Drain Basin:</b> | Oswego-Seneca-Oneida  |
| <b>Hydro Unit Code:</b> | 04140202/020          | <b>Str Class:</b>   | B                     |
| <b>Waterbody Type:</b>  | Lake                  | <b>Reg/County:</b>  | 7/Oswego Co. (38)     |
| <b>Waterbody Size:</b>  | 57.6 Acres            | <b>Quad Map:</b>    | WILLIAMSTOWN (H-17-1) |
| <b>Seg Description:</b> | entire lake           |                     |                       |

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

|                        |                 |                              |
|------------------------|-----------------|------------------------------|
| <b>Use(s) Impacted</b> | <b>Severity</b> | <b>Problem Documentation</b> |
| Recreation             | Stressed        | Suspected                    |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH  
Suspected: ---  
Possible: ---

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

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

## Resolution/Management Information

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS)) |                                     |
| <b>Verification Status:</b> | 4 (Source Identified, Strategy Needed)    |                                     |
| <b>Lead Agency/Office:</b>  | ext/WQCC                                  | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | n/a                                       |                                     |

## Further Details

Recreational uses in Kasoag Lake are thought to experience minor impacts due to excessive aquatic weed growth.

Kasoag Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1991 and continuing through 1995 and again from 2001 through 2005. An Interpretive Summary report of the findings of this sampling was published in 2006. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive. More recently, lower phosphorus and algae levels suggest a move toward mesoligotrophic state, but this trend may not be statistically significant. Phosphorus levels in the lake do not exceed the state guidance values for impacted recreational uses. Corresponding transparency measurements consistently exceed what is recommended for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is moderately colored, a condition which is assumed to be natural. (DEC/DOW, BWAM/CSLAP, May 2006)

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 somewhat unfavorable, an assessment that has been consistent over the previous recent assessments. The recreational suitability of the lake is described most frequently as "slightly impaired" for most uses. The lake itself is most often described as "not quite crystal clear" to "having definite algal greenness." These

assessments are consistent with the perceived water quality conditions in the lake and its measured water quality characteristics. The assessment appear to be influenced by aquatic plants that grow o the lake surface and are often dense, though less so in recent years. (DEC/DOW, BWAM/CSLAP, May 2006)

This lake waterbody is designated class B, suitable for use as a public bathing beach, general recreation and aquatic life support, but not for a public water supply. 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.

# Oneida Creek, Lower, and tribs ( 0703-0032)

# MinorImpacts

## Waterbody Location Information

Revised: 09/28/2009

**Water Index No:** Ont 66-11-P26-25      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140202/080      **Str Class:** C      Oneida River  
**Waterbody Type:** River      **Reg/County:** 6/Oneida Co. (33)  
**Waterbody Size:** 58.6 Miles      **Quad Map:** SYLVAN BEACH (I-18-1)  
**Seg Description:** stream and tribs, from mouth to Oneida

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Suspected             |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), SILT/SEDIMENT  
Suspected: Pathogens, Unknown Toxicity  
Possible: - - -

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

Known: AGRICULTURE, MUNICIPAL (Sherrill WWTP), STREAMBANK EROSION, URBAN/STORM RUNOFF, OTHER SANITARY DISCH, On-Site/Septic Syst  
Suspected: - - -  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/Reg6      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support and recreational uses in Oneida Creek are known to experience minor impacts due to nutrient and silt/sediment loadings and other pollutants from municipal inputs and agricultural and other nonpoint sources. Failing and/or inadequate on-site wastewater systems also contribute to impacts in some of these waters.

A biological (macroinvertebrate) assessment of Oneida Creek in Durhamville (at Foster Street) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment and possible toxicity were indicated by the sample. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

The sanitary sewer collection system in the City of Sherrill just above this reach experiences sanitary sewer overflows (SSOs) during high flow events such as rain storms and snow melt. Violations of the city wastewater treatment plant (WWTP) discharge permit also occur during wet weather events. During severe weather excessive infiltration and inflow into the collection systems results in flows to the WWTP that are 3.5 times greater than the design flow of the plant. In

the spring of 2009, DEC Regional staff reported that about 1.1 million gallons of untreated SSO discharge entered the creek. (DEC/DOW, Region 6, September 2009)

Both urban runoff (from City of Oneida) and agricultural nonpoint sources from the surrounding lands contribute nutrients and silt/sediments to the stream. The Central New York RPDB has conducted monitoring and issued reports characterizing the sediment loads from the creek to Oneida Lake as excessive. The creek is a spawning trib for warmwater fishery of Oneida Lake.

Raw sewage discharges from homes in the Durhamsville area to the storm sewer system and the river have been observed and documented. Soil conditions for on-site septic systems are generally less than ideal and past surveys have found that only about one-third of systems operate properly. (DEC/DOW, Region 6, May 2007)

This segment includes the portion of the stream and tribs from the mouth to Sconondoa Creek (-6) in Oneida. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Brandy Brook (-4), are also Class C. Sconondoa Creek (-6) and Upper Oneida Creek are listed separately.

# Oneida Creek, Upper, and tribs ( 0703-0090)

# MinorImpacts

## Waterbody Location Information

Revised: 09/28/2009

**Water Index No:** Ont 66-11-P26-25  
**Hydro Unit Code:** 04140202/070      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 153.9 Miles  
**Seg Description:** stream and tribs, above Oneida

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Madison Co. (27)  
**Quad Map:** VERNON (I-18-3)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Suspected             |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), SILT/SEDIMENT  
Suspected: ---  
Possible: ---

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

Known: AGRICULTURE, MUNICIPAL (Sherrill WWTP), STREAMBANK EROSION, OTHER  
SANITARY DISCH  
Suspected: Urban/Storm Runoff  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/Reg6      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support and recreational uses in Oneida Creek are known to experience minor impacts due to nutrient and silt/sediment loadings and other pollutants from municipal inputs and agricultural and other nonpoint sources.

A biological (macroinvertebrate) assessment of Oneida Creek in Durhamville (at Foster Street) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment and possible toxicity were indicated by the sample. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. This actual sampling point is just downstream of this segment, but the results of the sampling are considered to be representative of water quality and use support in this waterbody. (DEC/DOW, BWAM/SBU, June 2005)

The sanitary sewer collection system in the City of Sherrill experiences sanitary sewer overflows (SSOs) during high flow events such as rain storms and snow melt. Violations of the city wastewater treatment plant (WWTP) discharge permit also occur during wet weather events. During severe weather excessive infiltration and inflow into the collection

systems results in flows to the WWTP that are 3.5 times greater than the design flow of the plant. In the spring of 2009, DEC Regional staff reported that about 1.1 million gallons of untreated SSO discharge entered the creek. (DEC/DOW, Region 6, September 2009)

Both urban runoff (from City of Oneida) and agricultural nonpoint sources from the surrounding lands contribute nutrients and silt/sediments to the stream. The Central New York RPDB has conducted monitoring and issued reports characterizing the sediment loads from the creek to Oneida Lake as excessive. The creek is a spawning trib for warmwater fishery of Oneida Lake.

This segment includes the portion of the stream and tribs above Sconondoa Creek (-6) in Oneida. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Taylor Creek (-9), Mud Creek (-13) and Blue Creek (-28), are also Class C,C(T). Sconondoa Creek (-6) and Lower Oneida Creek are listed separately.

# Sconondoa Creek and tribs (0703-0003)

# MinorImpacts

## Waterbody Location Information

Revised: 05/24/2007

|                         |                         |                     |                      |
|-------------------------|-------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-11-P26-25- 6     | <b>Drain Basin:</b> | Oswego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140202/070            | <b>Str Class:</b>   | C(T)                 |
| <b>Waterbody Type:</b>  | River                   | <b>Reg/County:</b>  | 6/Oneida Co. (33)    |
| <b>Waterbody Size:</b>  | 74.2 Miles              | <b>Quad Map:</b>    | VERNON (I-18-3)      |
| <b>Seg Description:</b> | entire stream and tribs |                     |                      |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Suspected             |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), SILT/SEDIMENT  
 Suspected: - - -  
 Possible: D.O./Oxygen Demand, Pathogens

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

Known: AGRICULTURE  
 Suspected: STREAMBANK EROSION, URBAN/STORM RUNOFF  
 Possible: Municipal (unknown)

## Resolution/Management Information

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS)) |                                     |
| <b>Verification Status:</b> | 4 (Source Identified, Strategy Needed)    |                                     |
| <b>Lead Agency/Office:</b>  | ext/WQCC                                  | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | n/a                                       |                                     |

## Further Details

Aquatic life support and recreational uses in Sconondoa Creek are known to experience minor impacts due to nutrient and silt/sediment load from nonpoint sources in the watershed.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Sconondoa Creek in Sherrill, Oneida County, (at Route 48A) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. Nonpoint sources were identified as the primary cause of impacts to the stream. Siltation was also indicated. These results are consistent with results found in 1986 and 1995. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. Water column sampling revealed dissolved solids to be consistently above assessment criteria. Toxicity testing of the water column showed severe reproductive and significant mortality in one of three tests. The other two tests showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Sconondoa Creek in Oneida Castle (at Route 365) and in Sherrill (at

Williams Street) were conducted in 2001 and 2002, respectively. Sampling results at both sites indicated slightly impacted water quality conditions. Nonpoint sources were identified as the primary cause of impacts to the stream. Siltation was also indicated. These results are consistent with results found in 1986 and 1995. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Nutrients and sediment from agricultural activity throughout the watershed and from urban runoff in Vernon are the primary concerns. Failing and/or inadequate on-site septic systems have been documented in the Hamlet of Oneida Castle in the Town of Vernon. Poor/inappropriate soils and high water table are cited as reasons for these problems. Previous issues regarding impacts from the Village of Vernon WWTP have been addressed through a plant expansion. The WWTP is presently in full compliance with the effluent limits contained in the SPDES permit. (DEC/DOW, Region 6, August 2007)

This segment includes the entire stream and all tribs. The waters of the stream are Class C(T). Tribs to this reach/segment, including Beaver Meadow Creek (-3) and Dix Brook (-12), are Class C,C(T).

# Canaseraga/Cowaselon Cr, Low, and tribs (0703-0034)

Need Verific

## Waterbody Location Information

Revised: 05/25/2007

**Water Index No:** Ont 66-11-P26-33  
**Hydro Unit Code:** 04140202/090      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 9.8 Miles  
**Seg Description:** stream and tribs, from mouth to Oniontown

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Madison Co. (27)  
**Quad Map:** JEWELL (I-17-2)

## 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: NUTRIENTS, SILT/SEDIMENT  
Possible: Pesticides

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

Known: ---  
Suspected: AGRICULTURE, Habitat Modification, Hydro Modification  
Possible: ---

## 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

Aquatic life support in this portion of Canaseraga/Cowaselon Creek may continue to experience minor impacts due to nutrient and silt/sediment loads from agricultural activities in the watershed.

A biological (macroinvertebrate) assessment of Vly Creek in Lakeport (at Lakeport Road) was last conducted in 1990. Sampling results at that time indicated moderately impacted water quality conditions. However poor sampling habitat was thought to influence the assessment. Additional and more recent sampling is recommended to determine water quality condition of the stream. (DEC/DOW, BWAM/SBU, June 2005)

Warm water fish species from Oneida Lake have access to the lowland segments of Canaseraga and Cowaselon Creeks. Above this segment, much of the stream has been significantly altered by wetland drainage projects designed to promote agricultural activities and control water runoff patterns. These activities result in nutrient and silt/sediment loadings. Pesticide runoff may also impact water quality in the stream.

This segment includes the portion of the stream and all tribs from the mouth at Oneida Lake to the confluence of the Upper Canaseraga Creek (-2) near Oniontown. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Vly Creek (-1), are also Class C. The remainder of Canaseraga and Cowaselon Creek are listed

separately.

# Cowaselon Creek, Middle, and minor tribs (0703-0093) MinorImpacts

## Waterbody Location Information

Revised: 05/25/2007

**Water Index No:** Ont 66-11-P26-33  
**Hydro Unit Code:** 04140202/090      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 55.2 Miles  
**Seg Description:** stream and selected tribs, from Oniontown to Lenox

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Madison Co. (27)  
**Quad Map:** CANASTOTA (I-17-3)

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

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| Aquatic Life      | Stressed | Suspected             |
| Recreation        | Stressed | Suspected             |
| Habitat/Hydrology | Stressed | Known                 |

### Type of Pollutant(s)

Known: SILT/SEDIMENT  
Suspected: Nutrients, Thermal Changes  
Possible: - - -

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

Known: HABITAT MODIFICATION, HYDRO MODIFICATION, Agriculture  
Suspected: - - -  
Possible: Municipal

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Habitat/hydrology, aquatic life support and recreational uses in this reach of Cowaselon Creek are known to experience impacts due to extensive habitat and hydrologic modification of the stream channel through a muckland farming area. Increased nutrient and silt/sediment loading result from these agricultural activities as well. Municipal discharges may also be contributing to the impacts.

A biological (macroinvertebrate) assessment of Cowaselon Creek in Canastota (at Route 13) was last conducted in 1996. Sampling results indicated moderately impacted water quality conditions. Poor habitat is thought to be an influence on this assessment. Similar results were found on the creek in 1990. More recent monitoring is recommended to verify the degree of water quality impact. (DEC/DOW, BWAM/SBU, June 2005)

Warm water fish species from Oneida Lake have access to the lowland segments of Canaseraga and Cowaselon Creeks. However, many of the stream segments have been significantly altered by wetland drainage projects designed to promote agricultural activities and control water runoff patterns. These modifications have severely altered aquatic habitat conditions. Maintenance activities, such as the removal of vegetation from along the ditch banks, continue to affect these

habitats through the loss of woody debris inputs and the loss of shade producing canopies. Efforts to return some of the abandoned muckland farming areas back to wetlands are underway. (USFWS, 2004)

Downstream of the City of Canastota (City), and in the vicinity of the City's waste water treatment plant, Cowaselon Creek becomes a well defined dug channel known as the Douglas Ditch. Near the downstream end of this ditch, Canaseraga Creek enters this channelized segment. From that point on, the waterway takes on the name of Canaseraga Creek and flows into Oneida Lake at Lakeport, New York.

This segment includes the portion of the stream and selected/smaller tribs from the confluence of the Upper Canaseraga Creek (-2) near Oniontown to Clockville Creek (-13) in Lenox. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Owlville Creek (-4a) and Dutch Settlement Creek (-7), are also Class C,C(T). Canaseraga Creek (-2), Canastota Creek (-5) and Clockville Creek (-13) are listed separately.

# Canaseraga Creek, Upper, and tribs (0703-0095)

# MinorImpacts

## Waterbody Location Information

Revised: 05/25/2007

**Water Index No:** Ont 66-11-P26-33- 2  
**Hydro Unit Code:** 04140202/090      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 46.1 Miles  
**Seg Description:** stream and tribs, above Ontiontown

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Madison Co. (27)  
**Quad Map:** CANASTOTA (I-17-3)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Suspected             |

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: AGRICULTURE, URBAN/STORM RUNOFF  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 3 (Cause Identified, Source Unknown)  
**Lead Agency/Office:** ext/WQCC  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Aquatic life support in this portion of Canaseraga Creek is thought to experience minor impacts due to nutrient and silt/sediment loadings from agricultural and other nonpoint sources.

A biological (macroinvertebrate) assessment of Canaseraga Creek in Sullivan (at Route 5) was conducted in 1996. Sampling results indicated slightly impacted water quality conditions. Nutrient enrichment was identified as the primary cause of the impact. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to threaten aquatic life support. Because this sampling data is more than ten years old, additional follow-up monitoring is recommended to verify water quality conditions in the stream. (DEC/DOW, BWAM/SBU, December 2006)

This segment includes the portion of the stream and all tribs above the confluence with Cowaselon Creek near Ontiontown. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C,C(T). Cowaselon Creek is listed separately.

# Canastota Creek, Lower, and tribs ( 0703-0002)

Impaired Seg

## Waterbody Location Information

Revised: 04/22/2010

**Water Index No:** Ont 66-11-P26-33- 5      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140202/090      **Str Class:** C      Oneida River  
**Waterbody Type:** River      **Reg/County:** 7/Madison Co. (27)  
**Waterbody Size:** 10.3 Miles      **Quad Map:** CANASTOTA (I-17-3)  
**Seg Description:** stream and tribs, from mouth to Cottons

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| AQUATIC LIFE    | Impaired | Known                 |
| RECREATION      | Impaired | Suspected             |
| Aesthetics      | Stressed | Known                 |

### Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, PATHOGENS, Aesthetics, Nutrients  
Suspected: ---  
Possible: ---

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

Known: COMB. SEWER OVERFLOW, Agriculture, Streambank Erosion  
Suspected: ---  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DOW/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 1 (Individual Waterbody Impairment Requiring a TMDL)

## Further Details

### Overview

Aquatic life support, recreational uses and aesthetics in this portion of Canastota Creek are impaired by pathogens, nutrients and other pollutants from combined sewer overflows. Agricultural activities and other sources may also contribute nonpoint source pollutants.

### Water Quality Sampling

A biological (macroinvertebrate) assessment of Canastota Creek in (at North Main Street) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. Toxicity and sewage inputs were the primary cause of the impacts. (DEC/DOW, BWAM/SBU, June 2005)

### Source Assessment

A combined sewer overflow at the North Main Street pump station bypasses wastewater from the Village of Canastota combined collection system into Canastota Creek during wet-weather. Discharges from this overflow impair aquatic life

and recreation of the stream. In addition to municipal wastewater, the CSO discharge includes wastewater from a milk processing facility that enters the system upstream of the pump station. The discharge from this facility is monitored through a mini-pretreatment program.

#### Water Quality Management

Several projects conducted in the 1980s redirected stormwater from the combined sewer system allowing the village to close 10 or 11 permitted CSO outfalls. In 2005 the village entered into a consent order that required the submission of an approvable Wastewater Facilities Plan that evaluated ways of bringing the remaining CSO into compliance with USEPA CSO policy and proposes a plan to achieve such compliance. The Village CSO LTCP has since been received and approved by NYSDEC and construction contracts have been issued. (DEC/DOW, Region 7 and Village of Canastota, March 2010)

#### Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Canastota Reservoir (P130) near Cottons. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment are Class C. Upper Canastota Creek is listed separately.

# Chittenango Creek, Lower, and tribs (0703-0005)

MinorImpacts

## Waterbody Location Information

Revised: 05/25/2007

**Water Index No:** Ont 66-11-P26-37  
**Hydro Unit Code:** 04140202/120      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 121.8 Miles  
**Seg Description:** stream and tribs, from mouth to North Manilius

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Madison Co. (27)  
**Quad Map:** CLEVELAND (I-17-1)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Suspected             |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), SILT/SEDIMENT  
Suspected: ---  
Possible: ---

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

Known: AGRICULTURE  
Suspected: URBAN/STORM RUNOFF, Streambank Erosion  
Possible: Municipal

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational use in this portion of Chittenango Creek are known to experience minor impacts due to nutrients and silt/sediment loadings from agricultural and other nonpoint sources.

A biological (macroinvertebrate) assessment of Chittenango Creek in Bridgeport (at Route 31) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Species richness was very low in samples collected at this site in 1990, 1995 and 1996 as well. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Restricted transparency and algae growth, the result of excessive turbidity and nutrient loading into Chittenango Creek, limits the growth of food supply to support juvenile fish. Runoff from tributaries such as Limestone and Butternut Creeks may also contribute to water quality issues in this reach. (DEC/DFWMR, Region 7, 2000)

Chittenango Creek is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 3a of the List as a Water Requiring Verification of Impairment, however this updated assessment suggests that

the suspected impacts to water quality and uses are not sufficient to warrant continued listing.

This segment includes the portion of the stream and all tribs from the mouth to Butternut Creek (-6) in North Manlius. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Black Creek (-4), are also Class C. Butternut Creek (-6) is listed separately.

# Chittenango Creek, Middle, and tribs (0703-0025)

NoKnownImpct

## Waterbody Location Information

Revised: 05/25/2007

**Water Index No:** Ont 66-11-P26-37  
**Hydro Unit Code:** 04140202/110      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 98.6 Miles  
**Seg Description:** stream and tribs, from North Manilius to Cazenovia

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Madison Co. (27)  
**Quad Map:** MANLIUS (I-17-4)

## 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

A biological (macroinvertebrate) assessment of Chittenango Creek in Chittenango (at Route 5) was last conducted in 1990. Sampling results indicated slightly impacted water quality conditions. The fauna was generally good and nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. Because this sampling is more than ten years old, additional follow-up sampling is recommended to verify conditions in the stream. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and all tribs from Butternut Creek (-6) in North Manilius to Cazenovia Lake Outlet (-35) in Cazenovia. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Lake Brook (-8), Pools Brook (-9) and Munger Brook (-29), are also Class C,C(T). Butternut Creek (-6) and Cazenovia Lake Outlet (-35) are listed separately.

# Butternut Creek, Lower, and minor tribs (0703-0039)

Need Verific

## Waterbody Location Information

Revised: 05/25/2007

**Water Index No:** Ont 66-11-P26-37- 6  
**Hydro Unit Code:** 04140202/100      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 27.1 Miles  
**Seg Description:** stream and selected tribs, from mouth to Jamesville

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SYRACUSE EAST (I-16-3)

## 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: NUTRIENTS  
Possible: D.O./Oxygen Demand, Pathogens

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

Known: ---  
Suspected: AGRICULTURE, URBAN/STORM RUNOFF  
Possible: ---

## 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

Aquatic life support in this portion of Butternut Creek may experience minor impacts due to nutrients and other pollutants from urban/stormwater runoff and agricultural activities.

Previously, concerns regarding the impacts of runoff from manure spreading and milk house waste were raised. Another portion of this watershed drains a highly developed urban area in Syracuse before flowing into Butternut Creek. Meadow Brook originates as part of the city storm sewer system then travels through 1/2 mile of culvert through Syracuse University property. From here the stream flows between the lanes of Meadowbrook Drive to the City line. Its trib has little or no flow during dry spells but floods during heavy rains. A ponding basin and control structure was built south of Broad Street in the 1970's which has alleviated some of the flooding. Some of the fill used at this site contains PCB's but the material is supposed to be removed. The stream also receives much urban runoff from salted city streets. (Onondaga County WQCC, 2000)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to the Jamesville Reservoir (P144) dam in Jamesville. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Meadow Brook (-8), and Lower Rush Creek (-15), are also/primarily Class C,C(T), with a short reach of Green Lake Outlet (-14) designated Class B. Upper unnamed trib (-13) and Upper Rush Creek (-15) are listed separately.

# Butternut Creek, Upper, and minor tribs (0703-0100) NoKnownImpct

## Waterbody Location Information

Revised: 05/21/2007

**Water Index No:** Ont 66-11-P26-37- 6  
**Hydro Unit Code:** 04140202/100      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 77.6 Miles  
**Seg Description:** stream and tribs, above Jamesville

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** JAMESVILLE (J-16-2)

## 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

A biological (macroinvertebrate) assessment of Butternut Creek near Jamesville (at Appulla Road) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. The fauna contained a diversity of clean-water mayflies, stoneflies and caddisflies. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and selected/smaller tribs above the Jamesville Reservoir (P144) dam in Jamesville. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Cascades Creek (-33a), are primarily Class C,C(T),C(TS), with a one trib designated Class D.

# Limestone Creek, Lower, and minor tribs (0703-0008)

Impaired Seg

## Waterbody Location Information

Revised: 05/25/2007

**Water Index No:** Ont 66-11-P26-37- 6- 2  
**Hydro Unit Code:** 04140202/100      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 50.2 Miles  
**Seg Description:** stream and selected tribs, from mouth to Buellville

**Drain Basin:** Oswego-Seneca-Oneida  
Oneida River  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SYRACUSE EAST (I-16-3)

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

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| AQUATIC LIFE      | Impaired | Suspected             |
| RECREATION        | Impaired | Suspected             |
| Habitat/Hydrology | Stressed | Known                 |

### Type of Pollutant(s)

Known: Silt/Sediment  
Suspected: AESTHETICS (odors), D.O./OXYGEN DEMAND, PATHOGENS, Nutrients  
Possible: - - -

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

Known: STREAMBANK EROSION  
Suspected: MUNICIPAL, Agriculture  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/REg7  
**TMDL/303d Status:** 1\*      **Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational use in this portion of Limestone Creek are thought to be impaired by pollutants from municipal wastewater impacts. Agricultural and other nonpoint sources also contribute to nutrient enrichment in the stream. Turbidity from streambank erosion is also a concern.

A biological (macroinvertebrate) assessment of Limestone Creek in Minoa (at Kirkville Road) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. Sewage wastes were identified as the primary cause of the impacts. This sampling site is downstream of wastewater treatment plant discharges, which are thought to be the source of the impacts. (DEC/DOW, BWAM/SBU, June 2005)

The larger of the wastewater treatment plant discharges is the Onondaga County Meadowbrook-Limestone WWTF which has a history of permit violations, many the result of wet-weather flows, and is the likely source of water quality impacts. The plant is currently undergoing an upgrade. Sewer collection system improvements to address infiltration and inflow issues is also underway. (DEC/DOW, Region 7, November 2007)

Sediment loads and elevated turbidity from channelization and other activities in the watershed also impacts the cold water fishery habitat by covering fish eggs and filling the spawning grounds with silt. Evaluations by DEC Fisheries staff notes that there are older fish but not the young of the year; which also suggests impacts to fish propagation. This turbidity is considered to be largely a natural occurrence due to the unstable clay streambanks.

This segment includes the portion of the stream and selected/smaller tribs from the mouth to unnamed pond (P138a) near Buellville. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Bishop Brook (-4), are primarily Class C,C(T),C(TS), one unnamed trib (-6) is designated Class B. West Branch Limestone Creek (-8) and Middle/Upper Limestone Creek are listed separately.

# East Branch Limestone Creek and tribs (0703-0105)

MinorImpacts

## Waterbody Location Information

Revised: 05/25/2007

**Water Index No:** Ont 66-11-P26-37- 6- 2-(East Br)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140202/100      **Str Class:** B(T)      Oneida River  
**Waterbody Type:** River      **Reg/County:** 7/Onondaga Co. (34)  
**Waterbody Size:** 20.8 Miles      **Quad Map:** DE RUYTER (J-17-4)  
**Seg Description:** entire stream and tribs

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

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| Habitat/Hydrology | Stressed | Known                 |

### Type of Pollutant(s)

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

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

Known: HABITAT MODIFICATION, STREAMBANK EROSION  
Suspected: ---  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Habitat/hydrology in East Branch Limestone Creek is known to experience impacts due to silt/sediment from eroding streambanks.

A significant and ongoing stream bank failure is occurring on the lower portion of the stream below New Woodstock. The slide was first noted in summer of 2002. Sloughing continues during periods of heavy rain and runoff. The slide covers seven acres with elevation change of over 400 feet. Impacts to the fishery are likely. Efforts to study the effects and implement measures to reduce the impacts of the erosion are ongoing. (Madison County WQCC, April 2003)

This segment includes the entire stream and all tribs. The waters of this portion of the stream are Class B(T). Tribs to this reach/segment are Class C.

# Cazenovia Lake (0703-0021)

# MinorImpacts

## Waterbody Location Information

Revised: 05/25/2007

|                         |                          |                     |                      |
|-------------------------|--------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-11-P26-37-35-P153 | <b>Drain Basin:</b> | Oswego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140202/110             | <b>Str Class:</b>   | A                    |
| <b>Waterbody Type:</b>  | Lake                     | <b>Reg/County:</b>  | 7/Madison Co. (27)   |
| <b>Waterbody Size:</b>  | 1184.1 Acres             | <b>Quad Map:</b>    | CAZENOVIA (J-17-2)   |
| <b>Seg Description:</b> | entire lake              |                     |                      |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Public Bathing  | Stressed | Suspected             |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, PROBLEM SPECIES (Eurasian milfoil), Silt/Sediment  
 Suspected: NUTRIENTS  
 Possible: Pathogens

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

Known: HABITAT MODIFICATION  
 Suspected: On-Site/Septic Syst, Urban/Storm Runoff  
 Possible: - - -

## Resolution/Management Information

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS)) |                                     |
| <b>Verification Status:</b> | 4 (Source Identified, Strategy Needed)    |                                     |
| <b>Lead Agency/Office:</b>  | ext/WQCC                                  | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | n/a                                       |                                     |

## Further Details

Cazenovia Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1988 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. These data indicate that the lake continues to be best characterized as mesoliotrophic, or moderately unproductive. Cazenovia Lake has been slightly more productive (lower water clarity, higher nutrient and algae levels) in the north basin than in the south basin (primary sampling site), although the north basin was not sampled in 2005. Phosphorus levels in the lake are consistently below the state guidance values for impacted/stressed recreational uses. Corresponding transparency measurements consistently exceed what is recommended for swimming beaches. With a maximum depth of 15 m (49 ft), Cazenovia Lake undergoes thermal stratification and its deep waters become anoxic during summer. Total phosphorus (TP) concentrations are elevated in the deep waters during the summer, indicating that the lake sediments contribute to the annual phosphorus budget. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is weakly to moderately colored. Zebra mussels have been found in the lake. (DEC/DOW, BWAM/CSLAP, March 2006)

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 have been lower in the most recent sampling year. The recreational suitability of

the lake is described most frequently as "slightly impaired." The lake itself is most often described as "not quite crystal clear," an assessment that is consistent with the perceived water quality conditions in the lake and its measured water quality characteristics. Assessments have noted that aquatic plants regularly grow to the lake surface. Plant growth at the lake surface is not reported to be significantly dense, however it is reported that "excessive weed growth" impacts uses on the lake. Aquatic plants are dominated by non-native species, namely Eurasian water milfoil. (DEC/DOW, BWAM/CSLAP, March 2006)

This lake waterbody is designated class A, 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.

Several watershed and in-lake management efforts are underway to curtail the sources and symptoms of excessive phosphorus and sediment loading. External (watershed) phosphorus sources include runoff from developed areas (the lake is surrounded by residential land use) and roadways, and groundwater seepage including effluent from individual on-site wastewater disposal systems. Storm related events create major sediment plumes where roadway culverts enter the lake, most noticeably at the south end of the lake (where Routes 20 and 92 intersect) as well as along East Lake Road. (Cazenovia Lake Association, 2005)

The Cazenovia Lake Association has conducted an aggressive weed harvesting program since the 1980's. Lakeshore residents utilize benthic barriers, hand harvesting, and mechanical raking to suppress weeds in nearshore areas. In addition, watershed management strategies were outlined as part of a collaborative, community-based planning effort completed in 2002 (The Cazenovia Area Planning Project, CAPP). Recommendations of CAPP are being implemented; local laws regarding impervious surfaces and on-site wastewater disposal systems have been updated. The Town and Village Boards are initiating a task force to re-examine the environmental benefits and costs associated with extending the sewer area surrounding the lake. Public education and outreach continue to inform residents of effective measures to protect this valuable resource. (Cazenovia Lake Association, 2005)

# Tuscarora Lake (0703-0022)

NoKnownImpet

## Waterbody Location Information

Revised: 08/13/2007

|                         |                          |                     |                      |
|-------------------------|--------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-11-P26-37-47-P164 | <b>Drain Basin:</b> | Oswego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140202/110             | <b>Str Class:</b>   | B                    |
| <b>Waterbody Type:</b>  | Lake                     | <b>Reg/County:</b>  | 7/Madison Co. (27)   |
| <b>Waterbody Size:</b>  | 307.1 Acres              | <b>Quad Map:</b>    | ERIEVILLE (J-17-3)   |
| <b>Seg Description:</b> | 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

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

## Further Details

Tuscarora Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1986 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive. Phosphorus levels in the lake rarely exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements typically meet what is recommended for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is weakly colored, and these conditions are likely natural. Deepwater nutrient levels are somewhat higher than surface levels, resulting in increased productivity during the growing season. (DEC/DOW, BWAM/CSLAP, February 2006)

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 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 "excellent." The lake itself is most often described as "not quite crystal clear," an assessment that is slightly higher but consistent with the perceived water quality conditions in the lake and its measured water quality characteristics. Assessments have noted that aquatic plants typically grow to the lake surface. Aquatic plants are dominated by a diverse mix of native and non-native species. Weed growth has only rarely been cited as impacting recreational uses, but it is recommended that monitoring of aquatic

weeds continue. (DEC/DOW, BWAM/CSLAP, February 2006)

This lake waterbody is designated class B, suitable for use as a public bathing beach, general recreation and aquatic life support, but not as a public water supply. 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.

# Waterbody Inventory for Seneca River (Lower) Watershed

| Water Index Number  | Waterbody Segment                                  | Category             |
|---|--|----------------------|
| <b>Lower Seneca River Watershed, Three Rivers to Onondaga Outlet</b>  |  |                      |
| Ont 66-12 (portion 1)   | Seneca River, Lower, Main Stem (0701-0001)         | <b>Impaired Seg</b>  |
| Ont 66-12- 2 thru 11  | Minor Tribs to Lower Seneca River (0701-0030)      | UnAssessed           |
| Ont 66-12-12  | Onondaga Lake Outlet (0702-0020)                   | <b>Impaired Seg</b>  |
| <b>Onondaga Lake Watershed</b>  |  |                      |
| Ont 66-12-12-P154 (portion 1)   | Onondaga Lake, northern end (0702-0003)            | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154 (portion 2)   | Onondaga Lake, southern end (0702-0021)            | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154-  | Minor Tribs to Onondaga Lake (0702-0022)           | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154- 2  | Bloody Brook and tribs (0702-0006)                 | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154- 3  | Ley Creek and tribs (0702-0001)                    | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154- 4  | Onondaga Creek, Lower (0702-0023)                  | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154- 4  | Onondaga Creek, Middle, and tribs (0702-0004)      | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154- 4  | Onondaga Creek, Upper, and minor tribs (0702-0024) | <b>MinorImpacts</b>  |
| Ont 66-12-12-P154- 4-11   | West Branch Onondaga Creek and tribs (0702-0025)   | <b>Need Verific</b>  |
| Ont 66-12-12-P154- 4-P156,P158  | Hiawatha Lake, Woodland Reservoir (0702-0026)      | UnAssessed           |
| Ont 66-12-12-P154- 5  | Harbor Brook, Lower, and tribs (0702-0002)         | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154- 5  | Harbor Brook, Upper, and tribs (0702-0012)         | UnAssessed           |
| Ont 66-12-12-P154- 5-P158a  | Westcott Reservoir (0702-0027)                     | UnAssessed           |
| Ont 66-12-12-P154- 6  | Ninemile Creek, Lower, and tribs (0702-0005)       | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154- 6  | Ninemile Creek, Upper, and tribs (0702-0028)       | UnAssessed           |
| Ont 66-12-12-P154- 6- 2   | Geddes Brook and tribs (0702-0007)                 | <b>Impaired Seg</b>  |
| Ont 66-12-12-P154- 6- 5-P165  | Mud Pond (0702-0029)                               | UnAssessed           |
| Ont 66-12-12-P154- 6-P175   | Otisco Lake (0702-0011)                            | <b>MinorImpacts</b>  |
| Ont 66-12-12-P154- 6-P175-  | Minor Tribs to Otisco Lake (0702-0030)             | UnAssessed           |
| Ont 66-12-12-P154- 6-P175- 3-P176                                     | Smith Hollow Pond (0702-0031)                      | UnAssessed           |
| Ont 66-12-12-P154- 6-P175-16  | Spafford Creek and tribs (0702-0032)               | UnAssessed           |
| <b>Lower Seneca River Watershed, Onondaga Outlet to Owasco Outlet</b> |  |                      |
| Ont 66-12 (portion 2)   | Seneca River, Lower, Main Stem (0701-0008)         | <b>Impaired Seg</b>  |
| Ont 66-12 (portion 3)/P185  | Cross Lake (0701-0002)                             | <b>MinorImpacts</b>  |
| Ont 66-12 (portion 4)   | Seneca River, Lower, Main Stem (0701-0003)         | UnAssessed           |
| Ont 66-12-13 thru 28  | Minor Tribs to Lower Seneca River (0701-0031)      | UnAssessed           |
| Ont 66-12-19  | Dead Creek and tribs (0701-0032)                   | <b>MinorImpacts</b>  |
| Ont 66-12-28  | Carpenters Brook and tribs (0701-0033)             | <b>MinorImpacts</b>  |
| Ont 66-12 ..P185-   | Tribs to Cross Lake (0701-0029)                    | UnAssessed           |
| Ont 66-12-29  | Skaneateles Creek and tribs (0707-0003)            | <b>Impaired Seg</b>  |
| Ont 66-12-29-P193   | Skaneateles Lake (0707-0004)                       | <b>Threat(Poss)</b>  |
| Ont 66-12-29-P193-  | Minor Tribs to Skaneateles Lake (0707-0005)        | UnAssessed           |
| Ont 66-12-29-P193-55  | Grout Brook and tribs (0707-0001)                  | <b>NoKnownImpact</b> |

# ...Seneca River (Lower) Watershed

| Water Index Number  | Waterbody Segment                                   | Category      |
|---|---|---------------|
| <b>Lower Seneca River Watershed, Onondaga Outlet to Owasco Outlet (con't)</b> |   |               |
| Ont 66-12-30 thru 42 (selected)   | Minor Tribs to Lower Seneca River (0701-0034)       | UnAssessed    |
| Ont 66-12-35  | Muskrat Creek and tribs (0701-0035)                 | UnAssessed    |
| Ont 66-12-35-P197   | Parker Pond (0701-0036)                             | Need Verific  |
| Ont 66-12-35-P197-  | Tribs to Parker Pond (0701-0037)                    | UnAssessed    |
| Ont 66-12-35-P197- 3-P198   | Otter Lake (0701-0004)                              | MinorImpacts  |
| Ont 66-12-36  | Cold Spring/North Brook and minor tribs (0701-0038) | MinorImpacts  |
| Ont 66-12-36- 1   | Putnam Brook and tribs (0701-0039)                  | NoKnownImpact |
| Ont 66-12-36-10- 1  | Trib to North Brook, Upper (0701-0040)              | UnAssessed    |
| Ont 66-12-37-P206   | Stark Pond (0701-0041)                              | UnAssessed    |
| Ont 66-12-40- 3-P207  | Slayton Pond (0701-0042)                            | UnAssessed    |
| Ont 66-12-43  | Owasco Outlet, Lower, and tribs (0706-0008)         | MinorImpacts  |
| Ont 66-12-43  | Owasco Outlet, Upper, and tribs (0706-0001)         | MinorImpacts  |
| <b>Owasco Lake Watershed</b>  |   |               |
| Ont 66-12-43-P212   | Owasco Lake (0706-0009)                             | Impaired Seg  |
| Ont 66-12-43-P212-  | Minor Tribs to Owasco Lake (0706-0010)              | MinorImpacts  |
| Ont 66-12-43-P212- 3  | Dutch Hollow Brook and tribs (0706-0003)            | MinorImpacts  |
| Ont 66-12-43-P212-28  | Owasco Inlet, Lower, and minor tribs (0706-0002)    | MinorImpacts  |
| Ont 66-12-43-P212-28  | Owasco Inlet, Upper, and tribs (0706-0014)          | Impaired Seg  |
| Ont 66-12-43-P212-28-17   | Mill/Dresserville Creek and minor tribs (0706-0015) | NoKnownImpact |
| Ont 66-12-43-P212-28-17- 1  | Decker Creek, Upper, and tribs (0706-0016)          | NoKnownImpact |
| Ont 66-12-43-P212-28-28   | Unnamed Trib, Upper, and tribs (0706-0017)          | UnAssessed    |
| Ont 66-12-43-P212-28-29   | Hemlock Creek and tribs (0706-0018)                 | UnAssessed    |
| <b>Lower Seneca River Watershed, Owasco Outlet to Montezuma Refuge</b>        |   |               |
| Ont 66-12 (portion 5)   | Seneca River, Lower, Main Stem (0701-0051)          | UnAssessed    |
| Ont 66-12 (portion 5a)/P293   | Montezuma National Wildlife Refuge (0705-0045)      | UnAssessed    |
| Ont 66-12-44 thru 57 (selected)   | Minor Tribs to Lower Senca River (0701-0043)        | UnAssessed    |
| Ont 66-12-44-P221   | Mud Pond (0701-0044)                                | Need Verific  |
| Ont 66-12-45-P222a thru i   | Howland Island Game Refuge Ponds (0701-0045)        | UnAssessed    |
| Ont 66-12-46-P222   | Duck Lake (0704-0025)                               | MinorImpacts  |
| Ont 66-12-46-P222-  | Tribs to Duck Lake (0701-0046)                      | UnAssessed    |
| Ont 66-12-50  | Crusoe Creek and tribs (0705-0028)                  | UnAssessed    |
| Ont 66-12-50- 8   | Black Creek and tribs (0701-0047)                   | UnAssessed    |
| Ont 66-12-50-P225   | Crusoe Lake (0701-0048)                             | UnAssessed    |
| Ont 66-12-50-P225-  | Tribs to Crusoe Lake/Butler Creek (0701-0049)       | UnAssessed    |
| Ont 66-12-51  | Crane Brook and tribs (0704-0024)                   | Impaired Seg  |

# Seneca River, Lower, Main Stem (0701-0001)

# Impaired Seg

## Waterbody Location Information

Revised: 11/01/2007

**Water Index No:** Ont 66-12 (portion 1)      **Drain Basin:** Owsego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/350      **Str Class:** C      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 7/Onondaga Co. (34)  
**Waterbody Size:** 6.9 Miles      **Quad Map:** BALDWINVILLE (I-15-2)  
**Seg Description:** portion from Three Rivers to Onondaga Lake Outlet

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| AQUATIC LIFE    | Impaired | Known                 |
| RECREATION      | Impaired | Known                 |

### Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, Nutrients  
Suspected: Ammonia, Priority Organics (phenol)  
Possible: Pathogens

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

Known: HABITAT MODIFICATION (zebra mussels), HYDRO MODIFICATION, Agriculture, Other Source (Onondaga Lake inflow)  
Suspected: Municipal, Urban/Storm Runoff  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 1->3b

## Further Details

Aquatic life support and recreational uses in this portion of the Seneca River are impaired due to low dissolved oxygen. Extensive zebra mussel infestation of the river is the primary cause of the dissolved oxygen depletion. Hydrology influences (stratification) caused by Onondaga Lake exacerbate these problems.

The Seneca River is a large river that drains much of central New York. The Seneca River joins with the Oneida River to form the Oswego River, creating what is referred to as the Three Rivers System. These rivers have multiple uses including navigation, hydroelectric power generation, fishing, contact recreation, and waste disposal. The natural flow and other characteristics of the river system have been greatly altered by dams and locks to support navigation and hydroelectric power generation. This has reduced the river's capacity to compensate for oxygen depletion through natural aeration with the atmosphere and has contributed to the unusual bi-directional stratified flow that occurs between the Seneca River and Onondaga Lake. The lake both receives inflow from the river as well as discharges to the river. Due to the lack of hydrologic gradient, during periods of low flow, more dense higher salinity lake water exits along the bottom of the outlet while less dense river water flows into the lake in the top of the outlet. The salinity stratification also exacerbates dissolved oxygen depletion that occurs at lower depths of the river by preventing mixing and natural aeration.

The extension of other water quality issues common to the lake, such as ammonia toxicity, into the lower river layer has also been documented. (DEC/DOW, BWAM, June 2007)

In addition to the hydrologic conditions, the establishment of dense zebra mussel populations in the river has also profoundly changed and complicated water quality concerns. The population density of zebra mussels in The Cut, a rock channel located just downstream of Cross Lake, is perhaps the highest sustained in any river in North America. Conditions are ideal at this location, as large amounts of appropriate food (phytoplankton) are supplied by the lake, and the rock bottom represents suitable substrate for the zebra mussel colonization. As a result of the zebra mussel infestation, the Seneca River downstream of Cross Lake has experienced significant increases in water clarity and decreases in dissolved oxygen. (DEC/DOW, BWAM, June 2007)

The water quality of the Seneca river upstream of Onondaga Lake is also an important concern because a leading remediation alternative for the domestic waste problems of the lake - diversion of an upgraded (Metro) effluent now received by the lake to the river - depends critically on the water quality and assimilative capacity of the river. The loss of assimilative capacity for oxygen demanding waste in the river from the zebra mussel infestation, exacerbated by river stratification, compromises the management alternative of diversion of the Metro effluent to the river to rehabilitate Onondaga Lake. (DEC/DOW, Region 7, June 2007)

Seneca River is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as a waterbody segment requiring the development of a TMDL or other strategy to attain water quality standards for dissolved oxygen. As noted above, the dissolved oxygen depletion in the river is largely due to zebra mussel infestation which may require non-treatment options in addition to a TMDL in order to meet water quality targets. Because this impairment may not be appropriate to be addressed by a TMDL, it is recommended that this listing be moved to Part 3b (Waterbodies for which TMDL Development May be Deferred) of the 2008 Section 303(d) List, pending determination of the appropriateness of a TMDL. (DEC/DOW, BWAM, June 2007)

This segment includes the portion of the river from the confluence of the Oneida and Seneca Rivers at Three Rivers to the confluence of the Onondaga Lake Outlet in Cold Springs. The waters of this portion of the river are Class C. Tribs to this reach/segment are listed separately.

# Onondaga Lake Outlet (0702-0020)

Impaired Seg

## Waterbody Location Information

Revised: 08/13/2007

**Water Index No:** Ont 66-12-12  
**Hydro Unit Code:** 04140201/380      **Str Class:** B  
**Waterbody Type:** River  
**Waterbody Size:** 0.7 Miles  
**Seg Description:** entire stream from mouth to Onondaga Lake

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** BALDWINSVILLE (I-15-2)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| PUBLIC BATHING   | Impaired | Suspected             |
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Suspected             |
| RECREATION       | Impaired | Suspected             |

### Type of Pollutant(s)

Known: Metals (mercury), Priority Organics (PCBs, dioxin)  
Suspected: D.O./OXYGEN DEMAND, AMMONIA, NUTRIENTS (phosphorus), Unknown Toxicity  
Possible: ---

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

Known: LANDFILL/LAND DISP., OTHER SOURCE (Onondaga Lake outflow), Industrial, Municipal  
Suspected: ---  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** ext/OLP  
**TMDL/303d Status:** 3c\*      **Resolution Potential:** Medium

## Further Details

Public bathing, recreational uses, aquatic life support and fish consumption in Onondaga Lake Outlet are thought to be impaired by impacts from Onondaga Lake. These impacts include a variety of pollutants from municipal wastewater discharges, CSOs, urban runoff, and past industrial operations and uses. Though water quality in the lake is improving, considerable additional actions - many of which are underway - are necessary to restore these uses of the lake. This range of efforts are being addressed through the activities of the Onondaga Lake Partnership.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Onondaga Lake Outlet in Lakeland, Onondaga County, (at Long Branch Road) was last conducted in 1989-90. During this sampling the biological (macroinvertebrate) sampling results indicated moderately to severely impacted water quality conditions. Although these results are heavily influenced by lake habitat conditions. Water column sampling revealed ammonia, dissolved solids, and organics (methylene chloride) to be parameters of concern. Elevated levels of various other organics and metals were also noted. Toxicity testing of the water column showed significant reproductive impacts in one sample. (DEC/DOW, BWAM/RIBS, January 2001)

Fish consumption advisories for Onondaga Lake also applies to this connected water. The NYSDOH health advisory for the lake recommends eating no walleye, and no more than one meal per month of carp, channel catfish, white perch or other species because of elevated levels of mercury, PCBs and dioxin. The source of these contaminants is past industrial operations and discharges to the lake. The advisory for this lake was first issued prior to 1997-98. (2006-07 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2006).

Onondaga Lake Outlet not is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. However this updated assessment suggests it is appropriate to include this waterbody on the 2008 List. Due to the multiple and ongoing CSO remediation efforts, it is recommended that the waterbody be added to Part 3c of the List as a waterbody for which TDML development is deferred pending the implementation and evaluation of other restoration measures.

This segment includes the entire stream. The waters of the stream are Class B. Onondaga Lake is listed separately.

# Onondaga Lake, Northern End (0702-0003)

# Impaired

## Waterbody Location Information

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Revised: 10/20/2014

**Water Index No:** Ont 66-12-12-P15  
**Hydro Unit Code:** 0414020115      **Class:** B  
**Waterbody Type:** Lake      1710.7 Acres  
**Seg Description:** northwestern portion

**Drain Basin:** Oswego River (Finger Lakes)  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co (34)

## Water Quality Problem/Issue Information

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| Uses Evaluated   | Severity        | Problem Documentation |
|------------------|-----------------|-----------------------|
| Water Supply     | N/A             | -                     |
| Public Bathing   | Fully Supported | Known                 |
| Recreation       | Fully Supported | Known                 |
| Aquatic Life     | Fully Supported | Suspected             |
| Fish Consumption | Impaired        | Known                 |

**Conditions Evaluated**

|                   |      |
|-------------------|------|
| Habitat/Hydrology | Fair |
| Aesthetics        | Fair |

**Type of Pollutant(s)** (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Known: METALS (Mercury), PRIORITY ORGANICS (PCBs), PRIORITY ORGANICS (Dioxin)  
Suspected: Low D.O./Oxygen Demand  
Unconfirmed: - - -

**Source(s) of Pollutant(s)**

Known: TOXIC/CONTAMINATED SEDIMENT Combined Sewer Overflow (CSOs), Urban/Storm Runoff  
Suspected: - - -  
Unconfirmed: - - -

## Management Information

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**Management Status:** Strategy Implementation Scheduled or Underway  
**Lead Agency/Office:** DEC/DER  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)

## Further Details

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### Overview

This portion of Onondaga Lake is assessed as an impaired waterbody due to fish consumption that is known to be impaired by mercury and PCBs from contaminated sediments, the result of past industrial activities. Long considered one of the most polluted lakes in nation, Onondaga Lake water quality has greatly improved over the past 10 years and now supports most uses.

### Use Assessment

Northern Onondaga Lake is a Class B waterbody, suitable for use as a public bathing beach, general recreation and support of aquatic life, but not as a water supply.

Public bathing and other recreation use are fully supported although currently there are no designated public beaches on the lake. Previous assessments had indicated these uses to be impaired; however data for the period from 2002-2012 show pathogen (coliform) standards for protection of contact recreation to be consistently met. (DEC/DOW, BWAM and Region 7, October 2014)

Aquatic life is also considered to be fully supported in the lake, based on the number and variety of fish species. Since 2000 over 50 species have been documented in the lake. These include both warm and cool water species, though it should also be noted that several of the species, including alewife and round goby, are invasive. Some cold water species have also been found in the lake although these species are not supported year-round due to higher temperatures and lower levels of dissolved oxygen in the summer. Because the lake is designated a warmwater rather than cold water fishery, the lack of cold water fish year-round does not influence the evaluation of fully supported aquatic life. There remains some concern regarding reduced summer dissolved oxygen levels at lower depths of the lake; this results in the designation of full support as being suspected. (DEC/DOW and DFWMR, BWAM and Region 7, October 2014)

Fish consumption in Onondaga Lake is restricted and considered to be impaired due to contamination resulting in a NYS DOH health advisory that recommends eating no walleye, carp, channel catfish, white perch, or larger (greater than 15 inches) largemouth or smallmouth bass due to elevated mercury, PCB and dioxin levels. Consumption of smaller bass and most other species is limited to no more than one meal per month. The source of this contamination is c contaminated sediment, the result of past industrial activity and discharges. The advisory for this lake was first issued prior to 1998-99. (2013-14 NYS DOH Health Advisories and DEC/FWMR, Habitat, January 2014).

Lake habitat has greatly improved in conjunction with the water quality improvements. Overall habitat is considered to be fair due to the presence of invasive fish species that could impact the lake ecosystem. Aesthetics in the lake have also improved, but are still considered to be fair due to the ongoing remedial activity on the lake and tribs, and urban runoff and wet-weather impacts. (DEC/DOW, BWAM and Region 7, October 2014)

#### Water Quality Information

Routine monitoring of Onondaga Lake is conducted by the Onondaga County Department of Water Environment Protection (WEP) through its Ambient Monitoring Program (AMP). The AMP was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for wastewater collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The County issues annual water quality reports that are available on their website (<http://www.ongov.net/wep/we1503.html>). The AMP sampling confirms significant water quality improvement in the lake over the past decade. Specific findings include: ammonia concentrations in the lake have declined and since 2007 have met standards for protection of aquatic life; total phosphorus levels have declined from over 100 ug/l in the 1990s to an average of just above 20 ug/l – the NYS guidance value for recreational use – for the period 2007-12; bacteria levels that meet standards in most of the lake 100% of the time, with a single location along the southwestern shoreline where standards are met 80% of the time; dissolved oxygen levels have remained above 4 mg/l in the upper lake waters since 1999; increases in fishery habitat and the number of fish species; the disappearance of algal blooms in the lake since 2007. (Onondaga County WEP/AMP, July 2013)

#### Source Assessment

Historically, pollutants of concern in Onondaga Lake have been generally the result of two broad categories of sources: those related to wastewater collection, treatment and discharge; and those related to past industrial operations and uses. Impacts related to wastewater include high levels of phosphorus, ammonia and nitrite and bacterial contamination. However these impacts have been substantially reduced due to improved treatment at the Metropolitan Syracuse Wastewater Treatment Plant (Metro) and ongoing progress to abate combined sewer

overflows (CSOs), and nonpoint source pollution from the watershed's urban and agricultural areas.

Past industrial activity and discharges have also resulted in a number of impairments to the lake. The most significant of these is mercury contamination. Approximately 7 million cubic yards of Onondaga Lake sediments were contaminated with mercury, resulting in mercury levels in the flesh of lake fish that exceed federal food standards. Other toxic substances such as PCBs and chlorinated benzenes have also been detected in the lake ecosystem. Mercury, however, remains the contaminant of most concern because of its persistence in the fish found in the lake. Between 1946 and 1970, about 165,000 pounds of mercury were discharged to the lake from the Allied-Signal facility. The Onondaga Lake federal Superfund National Priorities List (NPL) includes a number of hazardous waste sites owned by Allied-Signal (now Honeywell International) and other potentially responsible parties (PRP).

#### Management Action

Agreement to address wastewater issues in the Lake was reached in 1998 with the signing of the Onondaga Lake Amended Consent Judgment which specifies projects to be undertaken to improve the water quality of Onondaga Lake and achieve full compliance with state and federal water quality regulations. The ACJ outlined a list of more than thirty specific projects to be undertaken over a 15-year timeframe. The ACJ projects include improvements and upgrades to the Onondaga County Metro sewage treatment plant, the elimination and/or reduction of the impacts of the CSOs on the lake and its tributaries, and a lake and tributary monitoring program (the AMP) designed to evaluate the impacts of the improvement projects on the water quality of the lake and tributary streams. At this point, most of these projects have been completed and water quality has been significantly improved. Additional information regarding the implementation and results of these efforts can be found at the Onondaga Lake Watershed Partnership website (<http://www.olwp.org>). (Onondaga Lake Watershed Partnership and DEC/DOW, Region 7, October 2014)

In 2007 the Federal Court approved an agreement requiring Honeywell International Inc. (the successor to Allied-Signal Inc.) to remediate the contaminated sediments in the bottom of the lake. The \$451 million remediation plan involves dredging contaminated sediments, capping approximately 580 acres of lake bottom sediments, and restoring habitat. Under the direction of NYSDEC, Honeywell is currently working with a team of scientists, engineers and federal, state and municipal leaders on implementation of a restoration strategy for the Lake that includes dredging, sediment containment and capping, and wastewater treatment. The dredging effort is expected to be completed in 2014. (DEC/DER and Region 7, October 2014)

In addition to Onondaga Lake being designated a Superfund site, other associated subsites around the lake and along the tributaries that are sources of contamination have also been determined to be part of the Superfund site. They are: Geddes Brook/Ninemile Creek, Willis Avenue, LCP Bridge Street, Wastebed B/Harbor Brook, Semet Tar Beds, Town of Salina Landfill, Lower Ley Creek, Ley Creek PCB Dredging, General Motors/Inland Fisher Guide, National Grid/Hiawatha Boulevard, and Wastebeds 1-8. The cleanup of each of these sites is being addressed through separate remediation plans. Investigations and long-term remedial actions at the various subsites are being performed by potentially responsible parties pursuant to enforcement agreements between these parties and the State. In addition, EPA has contributed over \$16.5 million to the state for various activities at the site including investigations, coordination and management at subsites, implementation of a citizen involvement plan, creation of a site-wide database, and establishment of a comprehensive enforcement program. (DEC/DER and Region 7, October 2014)

#### Section 303(d) Listing

Onondaga Lake, Northern End, is included on the current (2014) 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 for mercury, PCBs and dioxin. The waterbody is also included on Appendix B of the List as a waterbody not meeting dissolved oxygen standards, which may largely be the result of natural morphology of the lake. This waterbody was first listed on the 1998 List. (DEC/DOW, BWAM, October 2014)

### Segment Description

This segment includes the area of the lake northwest of a line from a point on the west shore 0.25 mile northwest of unnamed trib (5a) to a point on the east shore 0.6 miles southeast of Bloody Brook (-2).

# Onondaga Lake, Southern End (0702-0021)

**Impaired**

## Waterbody Location Information

Revised: 10/20/2014

**Water Index No:** Ont 66-12-12-P15  
**Hydro Unit Code:** 0414020115      **Class:** C  
**Waterbody Type:** Lake      1277.4 Acres  
**Seg Description:** southeastern portion

**Drain Basin:** Oswego River (Finger Lakes)  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co (34)

## Water Quality Problem/Issue Information

| Uses Evaluated   | Severity        | Problem Documentation |
|------------------|-----------------|-----------------------|
| Water Supply     | N/A             | -                     |
| Public Bathing   | N/A             | -                     |
| Recreation       | Stressed        | Known                 |
| Aquatic Life     | Fully Supported | Suspected             |
| Fish Consumption | Impaired        | Known                 |

**Conditions Evaluated**

|                   |      |
|-------------------|------|
| Habitat/Hydrology | Fair |
| Aesthetics        | Fair |

**Type of Pollutant(s)** (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)  
Known: METALS (Mercury), PRIORITY ORGANICS (PCBs), PRIORITY ORGANICS (Dioxin)  
Suspected: Pathogens, Low D.O./Oxygen Demand  
Unconfirmed: - - -

**Source(s) of Pollutant(s)**  
Known: TOXIC/CONTAMINATED SEDIMENT, Combined Sewer Overflow (CSOs), Urban/Storm Runoff  
Suspected: - - -  
Unconfirmed: - - -

## Management Information

**Management Status:** Strategy Implementation Scheduled or Underway  
**Lead Agency/Office:** DEC/DER  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)

## Further Details

### Overview

This portion of Onondaga Lake is assessed as an impaired waterbody due to fish consumption that is known to be impaired by mercury and PCBs from contaminated sediments, the result of past industrial activities. Recreational uses are considered to be stressed due to periodic pathogens from combined sewer overflows and urban/storm/rural runoff. Long considered one of the most polluted lakes in nation, Onondaga Lake water quality has greatly improved over the past 10 years and now supports most uses.

### Use Assessment

Southern Onondaga Lake is a Class C waterbody, suitable for general recreation use and support of aquatic life,

but not as a water supply, or public bathing beach.

Recreation use is considered to be stressed due to occasionally high pathogen levels and other pollutants from combined sewer overflows and urban runoff during wet-weather events. Previous assessments had indicated recreational use to be impaired, but conditions have generally improved to the point that uses are frequently supported. There is so concerns regarding new point and nonpoint sources in lake tribs that impact the Lake primarily during wet-weather. (DEC/DOW, BWAM and Region 7, October 2014)

Aquatic life is also considered to be fully supported in the lake, based on the number and variety of fish species. Since 2000 over 50 species have been documented in the lake. These include both warm and cool water species, though it should also be noted that several of the species, including alewife and round goby, are invasive. Some cold water species have also been found in the lake although these species are not supported year-round due to higher temperatures and lower levels of dissolved oxygen in the summer. Because the lake is designated a warmwater rather than cold water fishery, the lack of cold water fish year-round does not influence the evaluation of fully supported aquatic life. There remains some concern regarding reduced summer dissolved oxygen levels at lower depths of the lake; this results in the designation of full support as being suspected. (DEC/DOW and DFWMR, BWAM and Region 7, October 2014)

Fish consumption in Onondaga Lake is restricted and considered to be impaired due to contamination resulting in a NYS DOH health advisory that recommends eating no walleye, carp, channel catfish, white perch, or larger (greater than 15 inches) largemouth or smallmouth bass due to elevated mercury, PCB and dioxin levels. Consumption of smaller bass and most other species is limited to no more than one meal per month. The source of this contamination is contaminated sediment, the result of past industrial activity and discharges. The advisory for this lake was first issued prior to 1998-99. (2013-14 NYS DOH Health Advisories and DEC/FWMR, Habitat, January 2014).

Lake habitat has greatly improved in conjunction with the water quality improvements. Overall habitat is considered to be fair due to the presence of invasive fish species that could impact the lake ecosystem. Aesthetics in the lake have also improved, but are still considered to be fair due to the ongoing remedial activity on the lake and tribs, and urban runoff and wet-weather impacts. (DEC/DOW, BWAM and Region 7, October 2014)

#### Water Quality Information

Routine monitoring of Onondaga Lake is conducted by the Onondaga County Department of Water Environment Protection (WEP) through its Ambient Monitoring Program (AMP). The AMP was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for wastewater collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The County issues annual water quality reports that are available on their website (<http://www.ongov.net/wep/we1503.html>). AMP sampling confirms significant water quality improvement in the lake over the past decade. Specific findings include: ammonia concentrations in the lake have declined and since 2007 have met standards for protection of aquatic life; total phosphorus levels have declined from over 100 ug/l in the 1990s to an average of just over 20 ug/l – the NYS guidance value for recreational use – for the period 2007-12; bacteria levels that meet standards in most of the lake most of the time, with only occasional exceedances of the standard along the southern shoreline; dissolved oxygen levels have remained above 4 mg/l in the upper lake waters since 1999; increases in fishery habitat and the number of fish species; the disappearance of algal blooms during the summer recreation period in the lake since 2007. (Onondaga County WEP/AMP, July 2013)

### Source Assessment

Historically, pollutants of concern in Onondaga Lake have been generally the result of two broad categories of sources: those related to wastewater collection, treatment and discharge; and those related to past industrial operations and uses. Impacts related to wastewater include high levels of phosphorus, ammonia, nitrite and bacterial contamination. However these impacts have been substantially reduced due to improved treatment at the Metropolitan Syracuse Wastewater Treatment Plant (Metro) and ongoing progress to abate combined sewer overflows (CSOs), and nonpoint source pollution from the watershed's urban and agricultural areas.

Past industrial activity and discharges have also resulted in a number of impairments to the lake. The most significant of these is mercury contamination. Approximately 7 million cubic yards of Onondaga Lake sediments were contaminated with mercury, resulting in mercury levels in the flesh of lake fish that exceed federal food standards. Other toxic substances such as PCBs and chlorinated benzenes have also been detected in the lake ecosystem. Mercury, however, remains the contaminant of most concern because of its persistence in the fish found in the lake. Between 1946 and 1970, about 165,000 pounds of mercury were discharged to the lake from the Allied-Signal facility. The Onondaga Lake federal Superfund National Priorities List (NPL) includes a number of hazardous waste sites owned by Allied-Signal (now Honeywell International) and other potentially responsible parties (PRP).

### Management Action

Agreement to address wastewater issues in the Lake was reached in 1998 with the signing of the Onondaga Lake Amended Consent Judgment which specifies projects to be undertaken to improve the water quality of Onondaga Lake and achieve full compliance with state and federal water quality regulations. The ACJ outlined a list of more than thirty specific projects to be undertaken over a 15-year timeframe. The ACJ projects include improvements and upgrades to the Onondaga County Metro sewage treatment plant, the elimination and/or reduction of the impacts of the CSOs on the lake and its tributaries, and a lake and tributary monitoring program (the AMP), designed to evaluate the impacts of the improvement projects on the water quality of the lake and tributary streams. At this point, most of these projects have been completed and water quality has been significantly improved. Additional information regarding the implementation and results of these efforts can be found at the Onondaga Lake Watershed Partnership website (<http://www.olwp.org>). (Onondaga Lake Watershed Partnership and DEC/DOW, Region 7, October 2014)

In 2007 the Federal Court approved an agreement requiring Honeywell International Inc. (the successor to Allied-Signal Inc.) to remediate the contaminated sediments in the bottom of the lake. The \$451 million remediation plan involves dredging contaminated sediments, capping approximately 580 acres of lake bottom sediments, and restoring habitat. Under the direction of NYSDEC, Honeywell is currently working with a team of scientists, engineers and federal, state and municipal leaders on implementation of a restoration strategy for the Lake that includes dredging, sediment containment and capping, and wastewater treatment. The dredging effort is expected to be completed in 2014. (DEC/DER and Region 7, October 2014)

In addition to Onondaga Lake being designated a Superfund site, other associated subsites around the lake and along the tributaries that are sources of contamination have also been determined to be part of the Superfund site. They are: Geddes Brook/Ninemile Creek, Willis Avenue, LCP Bridge Street, Wastebed B/Harbor Brook, Semet Tar Beds, Town of Salina Landfill, Lower Ley Creek, Ley Creek PCB Dredging, General Motors/Inland Fisher Guide, National Grid/Hiawatha Boulevard, and Wastebeds 1-8. The cleanup of each of these sites is being addressed through separate remediation plans. Investigations and long-term remedial actions at the various subsites are being performed by potentially responsible parties pursuant to enforcement agreements between these parties and the State. In addition, EPA has contributed over \$16.5 million to the state for various activities at the site including investigations, coordination and management at subsites, implementation of a citizen involvement plan, creation of a site-wide database, and establishment of a comprehensive enforcement program. (DEC/DER and Region 7, October 2014)

#### Section 303(d) Listing

Onondaga Lake, Southern End, is included on the current (2014) 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 for mercury, PCBs and dioxin, and is included on Part 3b as an impaired water for which TMDL development is deferred pending evaluation of other restoration measures. However this updated assessment, based on the most recent monitoring data, suggests that the suspected impacts to water quality and uses are not sufficient to warrant continued listing. This water should be considered for delisting for pathogens during the next update of the List. The waterbody is also included on Appendix B of the List as a waterbody not meeting dissolved oxygen standards, which may largely be the result of natural morphology of the lake. This waterbody was first listed on the 1998 List. (DEC/DOW, BWAM, October 2014)

#### Segment Description

This segment includes the area of the lake southeast of a line from a point on the west shore 0.25 mile northwest of unnamed trib (5a) to a point on the east shore 0.6 miles southeast of Bloody Brook (-2).

# Minor Tribs to Onondaga Lake (0702-0022)

Impaired Seg

## Waterbody Location Information

Revised: 07/13/2007

**Water Index No:** Ont 66-12-12-P154-  
**Hydro Unit Code:** 04140201/380      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 8.9 Miles  
**Seg Description:** total length of selected tribs to Onondaga Lake

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SYRACUSE WEST (I-16-4)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Known                 |
| RECREATION       | Impaired | Known                 |
| Aesthetics       | Stressed | Known                 |

### Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, OTHER INORGANICS (cyanide), AMMONIA, NUTRIENTS (nitrite), PATHOGENS, Aesthetics (floatables), Metals, Priority Organics (PCBs, other)  
Suspected: ---  
Possible: ---

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

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP. (multiple), OTHER SANITARY DISCH, URBAN/STORM RUNOFF, Industrial  
Suspected: ---  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 3c\*

## Further Details

Recreational uses and aquatic life support in these minor tribs to Onondaga Lake are impaired by pathogens, low dissolved oxygen, nutrients (ammonia, nitrite) and a variety of other pollutants from CSOs and other sewer collection system discharge, urban runoff, and past industrial operations and uses. Fish consumption is also restricted as a result of a health advisory for Onondaga Lake that extends to tribs up to the first impassable barrier.

Sawmill Creek, East Flume and Trib -5a are impacted by a number of pollutant sources including CSO discharges, other sewer system discharges, urban runoff and industrial activities. Efforts to address the water quality impacts to the stream are ongoing. These include enforceable control requirements of Amended Consent Judgement (ACJ), other consent orders with Onondaga County and other municipalities to address sanitary sewer overflows, active remediation of identified hazardous waste sites and other rehabilitation activities and projects. (DEC/DOW, Region 7, January 2007)

A biological (macroinvertebrate) assessment of Sawmill Creek in Liverpool (at Route 370) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. Toxic discharges were indicated as the primary cause of the impacts. These results are consistent with sampling results from 1995 and 1989. (DEC/DOW, BWAM/SBU, June 2005)

Fish consumption advisories for Onondaga Lake (and all tribs to the first barrier) also applies to these tributary waters. A NYS DOH health advisory that recommends eating no walleye, and no more than one meal per month of carp, channel catfish, white perch or other species because of elevated levels of mercury, PCBs and dioxin. The source of these contaminants is past industrial operations and discharges to the lake. The advisory for this lake was first issued prior to 1997-98. (2006-07 NYS DOH Health Advisories and DEC/FWMR, Habitat, December 2006).

The Onondaga County Department of Water Environment Protection (OCDWEP) Ambient Monitoring Program (AMP) was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The OCDWEP publishes an Annual Onondaga Lake Report that evaluates and summarizes the findings of the AMP. (Onondaga County DWEP, 2006)

These tribs are not currently included on the NYS 2006 Section 303(d) List of Impaired Waters. However this updated assessment indicates that uses are impaired by pathogens, nutrients (ammonia, nitrite), cyanide and low dissolved oxygen and inclusion of the lake on the 2008 list for these pollutants is recommended. Due to the ongoing sewer system upgrades, site remediation and other efforts, it is recommended that the lake be included on Part 3c of the list as a waterbody segment for which TMDL Development may be Deferred Due to Other Restoration Measures. (DEC/DOW, BWAM, July 2007)

Additional information regarding activities to address pollution and restore uses in the waters and tributaries of Onondaga Lake can be found at the Onondaga Lake Partnership website (<http://www.onlakepartners.org>)

This segment includes the total length of selected/smaller tribs to Otisco Lake. Tribs within this segment, including Sawmill Creek (-1), East Flume, and unnamed trib (-5a), are Class C. Bloody Brook (-2), Ley Creek (-3), Onondaga Creek (-4), Harbor Brook (-5) and Ninemile Creek (-6) are listed separately.

# Bloody Brook and tribs (0702-0006)

# Impaired Seg

## Waterbody Location Information

Revised: 07/13/2007

|                         |                         |                     |                        |
|-------------------------|-------------------------|---------------------|------------------------|
| <b>Water Index No:</b>  | Ont 66-12-12-P154- 2    | <b>Drain Basin:</b> | Oswego-Seneca-Oneida   |
| <b>Hydro Unit Code:</b> | 04140201/380            | <b>Str Class:</b>   | C*                     |
| <b>Waterbody Type:</b>  | River                   | <b>Reg/County:</b>  | 7/Onondaga Co. (34)    |
| <b>Waterbody Size:</b>  | 1.0 Miles               | <b>Quad Map:</b>    | SYRACUSE WEST (I-16-4) |
| <b>Seg Description:</b> | entire stream and tribs |                     |                        |

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| PUBLIC BATHING   | Impaired | Known                 |
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Known                 |
| RECREATION       | Impaired | Known                 |
| Aesthetics       | Stressed | Known                 |

### Type of Pollutant(s)

Known: PATHOGENS, Aesthetics (floatables), Metals, Priority Organics  
 Suspected: D.O./Oxygen Demand  
 Possible: - - -

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

Known: LANDFILL/LAND DISP. (Martin Marietta), OTHER SANITARY DISCH, URBAN/STORM RUNOFF, Industrial (Martin Marietta)  
 Suspected: - - -  
 Possible: - - -

## Resolution/Management Information

|                             |  |                                     |
|-----------------------------|--|-------------------------------------|
| <b>Issue Resolvability:</b> | 3 (Strategy Being Implemented)             |                                     |
| <b>Verification Status:</b> | 5 (Management Strategy has been Developed) |                                     |
| <b>Lead Agency/Office:</b>  | DEC/Reg7                                   | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | 4a->3c*                                    |                                     |

## Further Details

Public bathing, recreational uses and aquatic life support in Bloody Brook are impaired by pathogens and a variety of other pollutants from municipal collection system bypasses, urban runoff, and past industrial operations and uses. Fish consumption is also restricted as a result of a health advisory for Onondaga Lake that extends to tribs up to the first impassable barrier.

Efforts to address the water quality impacts to the stream are ongoing. These include enforceable control requirements of Amended Consent Judgement (ACJ), other consent orders with Onondaga County and other municipalities to address sanitary sewer overflows, active remediation of identified hazardous waste sites and other rehabilitation activities and projects. Since the most recent sampling raw sewage bypasses at the Liverpool pump station have been minimized and now occur only during the most severe or extensive wet-weather events. (DEC/DOW, Region 7, January 2006)

The Lockheed Martin (formerly, Martin Marietta) facility is a significant source of impacts to the stream. A CERCLA investigation of the Bloody Brook site is being conducted. NYS-DEC is monitoring the project and evaluating the investigative documents. The project is currently in the Remedial Investigation/Feasibility Study (RI/FS) phase. (DEC/DER, January 2007)

A biological (macroinvertebrate) assessment of Bloody Brook in Liverpool (at Route 370) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. The fauna was dominated by tolerant worms, midges, and scuds, with no EPT species present. A previous biological survey at multiple sites along the stream and its tribs was conducted in 1994. That survey found moderately or severely impacted conditions at all sites. The goal of the survey was to characterize impacts from the Martin Marietta facility but because the upstream sites were impacted (by sewage and/or urban runoff) the impacts below the facility could not be attributed to this specific discharge. Poor habitat limited the assessment at most sites. Higher than expected heavy metals and PCB concentrations were found in crayfish tissue at some sites. (DEC/DOW, BWAM/SBU, June 2005)

Fish consumption advisories for Onondaga Lake (and all tribs to the first barrier) also applies to this tributary water. A NYS DOH health advisory that recommends eating no walleye, and no more than one meal per month of carp, channel catfish, white perch or other species because of elevated levels of mercury, PCBs and dioxin. The source of these contaminants is past industrial operations and discharges to the lake. The advisory for this lake was first issued prior to 1997-98. (2006-07 NYS DOH Health Advisories and DEC/FWMR, Habitat, December 2006).

The Onondaga County Department of Water Environment Protection (OCDWEP) Ambient Monitoring Program (AMP) was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The OCDWEP publishes an Annual Onondaga Lake Report that evaluates and summarizes the findings of the AMP. (Onondaga County DWEP, 2006)

Bloody Brook is not currently included on the NYS 2006 Section 303(d) List of Impaired Waters. However this updated assessment indicates that uses are impaired by pathogens and inclusion of the lake on the 2008 list for this pollutant is recommended. Due to the ongoing sewer system upgrades, site remediation and other efforts, it is recommended that the lake be included on Part 3c of the list as a waterbody segment for which TMDL Development may be Deferred Due to Other Restoration Measures. (DEC/DOW, BWAM, July 2007)

Additional information regarding activities to address pollution and restore uses in the waters and tributaries of Onondaga Lake can be found at the Onondaga Lake Partnership website (<http://www.onlakepartners.org>).

This segment includes the entire stream and all tribs. The waters of the stream are Class B from the mouth to unnamed trib (-1) and Class C for the remainder of the reach. Tribs to this reach/segment are Class C. Although the lower portion of this stream is designated a Class B water, the present character of the waterway may support of this use unlikely.

# Ley Creek and tribs (0702-0001)

# Impaired Seg

## Waterbody Location Information

Revised: 07/13/2007

|                         |                         |                     |                        |
|-------------------------|-------------------------|---------------------|------------------------|
| <b>Water Index No:</b>  | Ont 66-12-12-P154- 3    | <b>Drain Basin:</b> | Oswego-Seneca-Oneida   |
| <b>Hydro Unit Code:</b> | 04140201/380            | <b>Str Class:</b>   | C*                     |
| <b>Waterbody Type:</b>  | River                   | <b>Reg/County:</b>  | 7/Onondaga Co. (34)    |
| <b>Waterbody Size:</b>  | 26.1 Miles              | <b>Quad Map:</b>    | SYRACUSE WEST (I-16-4) |
| <b>Seg Description:</b> | entire stream and tribs |                     |                        |

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| PUBLIC BATHING   | Impaired | Known                 |
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Known                 |
| RECREATION       | Impaired | Known                 |
| Aesthetics       | Stressed | Known                 |

### Type of Pollutant(s)

Known: OTHER INORGANICS (cyanide), AMMONIA, Aesthetics (floatables), Priority Organics  
 Suspected: D.O./Oxygen Demand, Nutrients (phosphorus), Unknown Toxicity  
 Possible: - - -

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

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP. (Salina Landfill, other), URBAN/STORM RUNOFF, Industrial  
 Suspected: - - -  
 Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/Reg7 **Resolution Potential:** Medium  
**TMDL/303d Status:** 3c,3c\* (Waterbody Being Addressed by Other Means, more)

## Further Details

Public bathing, recreational uses and aquatic life support in Ley Creek are impaired by pathogens and a variety of other pollutants from urban runoff, and past industrial operations and uses. Cyanide has been found in samples collected by Onondaga County and is impacting water quality. This and other tribs to Onondaga Lake are also sources of nutrient loading to Onondaga Lake; these loadings are being addressed through implementation of TMDL plans for Onondaga Lake. Fish consumption is also restricted as a result of a health advisory for Onondaga Lake that extends to tribs up to the first impassable barrier.

Ley Creek is impacted by a number of pollutant sources including CSO discharges urban runoff, industrial activities, airport runoff and a municipal landfill. Efforts to address the water quality impacts to the stream are ongoing. These include enforceable control requirements of Amended Consent Judgement (ACJ), other consent orders with Onondaga County and other municipalities to address sanitary sewer overflows, active remediation of identified hazardous waste

sites and other rehabilitation activities and projects. The completion of the Hiawata Blvd Regional Treatment Facility (RTF) has addressed much of the impact from previously identified raw sewage discharges and has reduced CSOs discharges in the watershed. The (RTF) provides overflow storage, removes solids, and disinfects combined sewer overflow (CSO) discharge for the Syracuse North Side area and serves as a demonstration project for other effort being undertaken by Onondaga County. (DEC/DOW, Region 7, January 2006)

Impacts from the Salina Town Landfill site (7-34-036) have also been documented. The site was a municipally operated landfill which during the time it was in operation received domestic, commercial and industrial wastes, including hazardous waste from the General Motors Fisher Guide Division. A Remedial Investigation/Feasibility Study (RI/FS) identified VOCs and PCBs in the soil at the site which contribute to the known groundwater contamination as well as leachate outbreaks to Ley Creek, documenting that the existing cover was not adequate. A full 6NYCRR Part 360 closure is required. The Department and EPA issued a Proposed Remedial Action Plan calling for on-site treatment of the leachate and a Record of Decision was signed in March 2007. An RI/FS is also underway at the former General Motors Fisher Guide site (7-34-057) located at the upstream portion of the creek. (DEC/DER, Region 7, Jul 2007)

A biological (macroinvertebrate) assessment of Bloody Brook in Mattydale (at LeMoyné Avenue) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. No mayflies were present in the sample and aquatic toxicity was apparent. The assessment is similar to results from 1995, and represents an improvement from 1989-90 when the site was identified as severely impacted. (DEC/DOW, BWAM/SBU, June 2005)

Fish consumption advisories for Onondaga Lake (and all tribs to the first barrier) also applies to this tributary water. A NYS DOH health advisory that recommends eating no walleye, and no more than one meal per month of carp, channel catfish, white perch or other species because of elevated levels of mercury, PCBs and dioxin. The source of these contaminants is past industrial operations and discharges to the lake. The advisory for this lake was first issued prior to 1997-98. (2006-07 NYS DOH Health Advisories and DEC/FWMR, Habitat, December 2006).

The Onondaga County Department of Water Environment Protection (OCDWEP) Ambient Monitoring Program (AMP) was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The OCDWEP publishes an Annual Onondaga Lake Report that evaluates and summarizes the findings of the AMP. (Onondaga County DWEP, 2006)

Ley Creek is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The creek is listed for the pollutants phosphorus, ammonia and unknown toxicity and is included on Part 3c of the list as a waterbody segment for which TMDL Development may be Deferred Due to Other Restoration Measures. This updated assessment indicates that uses are impaired by pathogens and cyanide as well and the inclusion of the lake on the 2008 list for these pollutants is recommended. Due to the multiple and ongoing remediation efforts, it is recommended that the listings for pathogens and cyanide also be added to Part 3c. (DEC/DOW, BWAM, July 2007)

Additional information regarding activities to address pollution and restore uses in the waters and tributaries of Onondaga Lake can be found at the Onondaga Lake Partnership website (<http://www.onlakepartners.org>)

This segment includes the entire stream and all tribs. The waters of the stream are Class C from the mouth to the sewage treatment plant outfall near Beartrap Creek (-1), Class B from there to the confluence of North and South Branches, and Class C for the remainder of the reach, which is considered to be North Branch. Tribs to this reach/segment, including Beartrap Creek (-1), South Branch (-2) and Sanders Creek (-3), are primarily Class C,C(T), with a portion designated Class B.

# Onondaga Creek, Lower (0702-0023)

Impaired Seg

## Waterbody Location Information

Revised: 07/16/2007

**Water Index No:** Ont 66-12-12-P154- 4  
**Hydro Unit Code:** 04140201/380      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 2.8 Miles  
**Seg Description:** stream and tribs, from mouth to Syracuse

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SYRACUSE WEST (I-16-4)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Known                 |
| RECREATION       | Impaired | Known                 |
| Aesthetics       | Stressed | Known                 |

### Type of Pollutant(s)

Known: AESTHETICS (floatables), PATHOGENS, Metals (mercury), Nutrients, Priority Organics, Silt/Sediment  
Suspected: ---  
Possible: ---

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

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP., URBAN/STORM RUNOFF, Industrial, Streambank Erosion  
Suspected: Other Sanitary Disch  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 3c (Waterbody Being Addressed by Other Means)

## Further Details

Recreational uses and aquatic life support in this portion of Onondaga Creek are impaired by pathogens and a variety of other pollutants from CSOs, urban runoff, and past industrial operations and uses. This and other tribs to Onondaga Lake are also sources of nutrient loading to Onondaga Lake; these loadings are being addressed through implementation of TMDL plans for Onondaga Lake. Other sewer collection system discharges are also possible sources of impact. Fish consumption is also restricted as a result of a health advisory for Onondaga Lake that extends to tribs up to the first impassable barrier. Silt and sediment from upstream sources are also a concern.

Onondaga Creek is impacted by a number of pollutant sources including CSO discharges, urban runoff and industrial activities. Efforts to address the water quality impacts to the stream are ongoing. These include enforceable control requirements of Amended Consent Judgement (ACJ), other consent orders with Onondaga County and other municipalities to address sanitary sewer overflows, active remediation of identified hazardous waste sites and other rehabilitation activities and projects. There are currently 13 combined sewer basins along Onondaga Creek that are scheduled to be

separated into independent stormwater and sanitary conveyance systems as part of the CSO Abatement Program. The U.S. Army Corps of Engineers is supervising the design of most these sewer separation projects. Construction will proceed over the period of the Court Order based on coordination with the County and the City of Syracuse. An exact schedule for this program detailing which areas would be separated first has yet to be determined. The projects will most probably involve the construction of new sanitary sewers and the relining of existing combined sewers to convey stormwater only. (DEC/DOW, Region 7, January 2007)

A biological (macroinvertebrate) assessment of Onondaga Creek in Syracuse (at Spencer Street) was conducted in 2001. Sampling results indicated severely impacted water quality conditions. The fauna consisted almost entirely of tolerant worms and midges. The previous sampling in 1995 revealed condition to be in the moderately impacted range, but 1989-90 sampling showed severe impacts as well. Municipal/industrial discharges and decomposable organic wastes were identified as the primary cause of the impacts. CSOs are considered the likely cause of the impairment. (DEC/DOW, BWAM/SBU, June 2005)

There are various present and former industrial sources that impact the creek in Syracuse. Former Niagara Mohawk manufactured gas plants (7-34-059, 7-34-060) have been identified as possible contributors of pollutants to the creek. The contaminants of concern include volatile organic compounds, PAHs, heavy metals.

Fish consumption advisories for Onondaga Lake (and all tribs to the first barrier) also applies to this tributary water. A NYS DOH health advisory that recommends eating no walleye, and no more than one meal per month of carp, channel catfish, white perch or other species because of elevated levels of mercury, PCBs and dioxin. The source of these contaminants is past industrial operations and discharges to the lake. The advisory for this lake was first issued prior to 1997-98. (2006-07 NYS DOH Health Advisories and DEC/FWMR, Habitat, December 2006).

The Onondaga County Department of Water Environment Protection (OCDWEP) Ambient Monitoring Program (AMP) was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The OCDWEP publishes an Annual Onondaga Lake Report that evaluates and summarizes the findings of the AMP. (Onondaga County DWEP, 2006)

Onondaga Creek is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The creek is listed for the pollutants phosphorus, ammonia and unknown toxicity and is included on Part 3c of the list as a waterbody segment for which TMDL Development may be Deferred Due to Other Restoration Measures. This updated assessment indicates that uses are impaired by pathogens and the inclusion of the lake on the 2008 list for this pollutant is recommended. Due to the multiple and ongoing CSO remediation efforts, it is recommended that the listing for pathogens also be added to Part 3c. (DEC/DOW, BWAM, July 2007)

Additional information regarding activities to address pollution and restore uses in the waters and tributaries of Onondaga Lake can be found at the Onondaga Lake Partnership website (<http://www.onlakepartners.org>)

This segment includes the portion of the stream and all tribs from the mouth to Temple Street in Syracuse. The waters of this portion of the stream are Class C. Middle/Upper Onondaga Creek is listed separately.

# Onondaga Creek, Middle, and tribs (0702-0004)

# Impaired Seg

## Waterbody Location Information

Revised: 07/16/2007

**Water Index No:** Ont 66-12-12-P154- 4  
**Hydro Unit Code:** 04140201/380      **Str Class:** B  
**Waterbody Type:** River  
**Waterbody Size:** 17.5 Miles  
**Seg Description:** stream and tribs, from Syracuse to Nedrow

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SYRACUSE WEST (I-16-4)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| PUBLIC BATHING   | Impaired | Known                 |
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Known                 |
| RECREATION       | Impaired | Known                 |
| Aesthetics       | Stressed | Known                 |

### Type of Pollutant(s)

Known: AESTHETICS (floatables), PATHOGENS, Nutrients, Silt/Sediment  
Suspected: Salts  
Possible: - - -

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

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP., OTHER SOURCE (Tully mudboils), URBAN/STORM RUNOFF, Agriculture  
Suspected: Other Sanitary Disch  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 4a->3c\*

## Further Details

Public bathing, recreational uses and aquatic life support in this portion of Onondaga Creek are impaired by pathogens and a variety of other pollutants from CSOs, urban runoff, and past industrial operations and uses. Other sewer collection system discharges are also possible sources of impact. Silt and sediment from upstream mudboils and stream erosion also impact uses.

Onondaga Creek is impacted by a number of pollutant sources including CSO discharges, urban runoff and industrial activities. Efforts to address the water quality impacts to the stream are ongoing. These include enforceable control requirements of Amended Consent Judgement (ACJ), other consent orders with Onondaga County and other municipalities to address sanitary sewer overflows, active remediation of identified hazardous waste sites and other rehabilitation activities and projects. There are currently 13 combined sewer basins along Onondaga Creek that are scheduled to be separated into independent stormwater and sanitary conveyance systems as part of the CSO Abatement Program. The U.S.

Army Corps of Engineers is supervising the design of most these sewer separation projects. Construction will proceed over the period of the Court Order based on coordination with the County and the City of Syracuse. An exact schedule for this program detailing which areas would be separated first has yet to be determined. The projects will most probably involve the construction of new sanitary sewers and the relining of existing combined sewers to convey stormwater only. (DEC/DOW, Region 7, January 2007)

A biological (macroinvertebrate) assessment of Onondaga Creek downstream of this segment in Syracuse (at Spencer Street) was conducted in 2001. Sampling results indicated severely impacted water quality conditions. The fauna consisted almost entirely of tolerant worms and midges. The previous sampling in 1995 revealed condition to be in the moderately impacted range, but 1989-90 sampling showed severe impacts as well. Municipal/industrial discharges and decomposable organic wastes were identified as the primary cause of the impacts. CSOs are considered the likely cause of the impairment. Though this sampling point is just below the described segment, it is considered representative of water quality in the upper reach. (DEC/DOW, BWAM/SBU, June 2005)

[Allied Chemical (mud boils and brine wells)... impacts due to LCP Chemical brine discharge, line leakage and mud boils related to LCP mining operations. The Attorney General is negotiating a closure action for the brine wells. Federal Court action under CERCLA is being considered against Allied Chemical (former owner) for the mud boils and brine wells.

Onondaga Creek has a murky, muddy-brown appearance especially during periods of high water flow. This is a result of high concentrations of clay and silt in the creek. Most of these materials come from the Tully Valley mudboils. Much of the Onondaga Creek stream bed downstream from the mudboil area is covered with sediments discharged from the mudboils. The muddy sediments reduce habitat suitable for aquatic insects and other life, reduce fish spawning and plant growth and significantly contribute to the sediment loading to Onondaga Lake. Onondaga Creek contributes more than 50% of the annual tributary sediment load to the lake due in large part to the mudboils.

Since 1992, the Onondaga Lake Partnership has supported, through the efforts of the United States Geologic Survey (USGS), a number of remedial activities to address impacts from the mudboils, including the diversion of surface water away from the mud boils, installation of a dam on the stream that flows from the mud boil area and drilling of wells to reduce pressure around the mud-boils. These efforts have been successful in reducing the amount of sediment flowing into the Onondaga Creek from 30 tons per day to less than 1 ton per day. See also Onondaga Creek, Upper, and trib (segment 0702-0024). (Onondaga Lake Partnership, 2006)

Onondaga Creek is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The creek is listed for the pollutants phosphorus, ammonia and unknown toxicity and is included on Part 3c of the list as a waterbody segment for which TMDL Development may be Deferred Due to Other Restoration Measures. This updated assessment indicates that uses are impaired by pathogens and the inclusion of the lake on the 2008 list for this pollutant is recommended. Due to the multiple and ongoing CSO remediation efforts, it is recommended that the listing for pathogens also be added to Part 3c. (DEC/DOW, BWAM, July 2007)

Additional information regarding activities to address pollution and restore uses in the waters and tributaries of Onondaga Lake can be found at the Onondaga Lake Partnership website (<http://www.onlakepartners.org>)

This segment includes the portion of the stream and all tribs from Temple Street in Syracuse to unnamed trib (-5b) in Nedrow. The waters of this portion of the stream are Class B. Tribs to this reach/segment, including Furnace Brook (-1), Kimber Brook (-5) and Cold Brook (-5a), are Class B and C,C(T),C(TS). Lower/Upper Onondaga Creek is listed separately.

# Onondaga Creek, Upper, and minor tribs (0702-0024)

# MinorImpacts

## Waterbody Location Information

Revised: 07/16/2007

**Water Index No:** Ont 66-12-12-P154- 4  
**Hydro Unit Code:** 04140201/370      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 110.4 Miles  
**Seg Description:** stream and selected tribs, above Nedrow

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SOUTH ONONDAGA (J-16-1)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| Aquatic Life      | Stressed | Known                 |
| Recreation        | Stressed | Known                 |
| Habitat/Hydrology | Stressed | Known                 |

### Type of Pollutant(s)

Known: SALTS, SILT/SEDIMENT  
Suspected: ---  
Possible: ---

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

Known: OTHER SOURCE (Tully mudboils), STREAMBANK EROSION, Agriculture  
Suspected: ---  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/Reg7  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational uses in this portion of Onondaga Creek are known to experience impacts due to silt/sediment loads and high conductivity from mud boils and salt brine mining in the Tully Valley.

Onondaga Creek has a murky, muddy-brown appearance especially during periods of high water flow. This is a result of high concentrations of clay and silt in the creek. Most of these materials come from the Tully Valley mudboils. Much of the Onondaga Creek stream bed downstream from the mudboil area is covered with sediments discharged from the mudboils. The muddy sediments reduce habitat suitable for aquatic insects and other life, reduce fish spawning and plant growth and significantly contribute to the sediment loading to Onondaga Lake. Onondaga Creek contributes more than 50% of the annual tributary sediment load to the lake due in large part to the mudboils.

Although impacts from the mud boils go back to 1900, anecdotal information suggests the amount of sediments discharged to Onondaga Creek from the mudboils has increased over the years. It has been suggested that solution brine mining activities by Allied-Signal in the past exacerbated the problem, although there is some disagreement over this contention. The brine mining activities was discontinued in the 1980s. Since 1992, the Onondaga Lake Partnership has supported,

through the efforts of the United States Geologic Survey (USGS), a number of remedial activities to address impacts from the mudboils, including the diversion of surface water away from the mud boils, installation of a dam on the stream that flows from the mud boil area and drilling of wells to reduce pressure around the mud-boils. These efforts have been successful in reducing the amount of sediment flowing into the Onondaga Creek from 30 tons per day to less than 1 ton per day. (Onondaga Lake Partnership, 2006)

A biological (macroinvertebrate) assessment of Onondaga Creek in Cardiff (at Webster Road) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. This represents a change from previously consistent results indicating slightly impacted conditions in 1989, 1990 and 1995. High turbidity and high conductivity from the mudboils continue to be the dominant influence on the fauna. Continued monitoring of this site to verify the apparent water quality change. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and selected/smaller tribs above unnamed trib (-5b) in Nedrow. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Commissary Creek (-8), Kennedy Creek (-9), Fall Creek (-19) and Rainbow Creek (-20), are Class C,C(T),C(TS). Lower/Middle Onondaga Creek and West Branch Onondaga Creek (-11) are listed separately.

# West Branch Onondaga Creek and tribs (0702-0025)

Need Verific

## Waterbody Location Information

Revised: 07/16/2007

**Water Index No:** Ont 66-12-12-P154- 4-11  
**Hydro Unit Code:** 04140201/370      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 48.2 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SOUTH ONONDAGA (J-16-1)

## 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: NUTRIENTS (sdf)  
Possible: ---

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

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

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 3 (Cause Identified, Source Unknown)  
**Lead Agency/Office:** DOW/BWAM  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Aquatic life support in West Branch Onondaga Creek is thought to experience minor threats due to nutrient loadings from nonpoint sources.

A biological (macroinvertebrate) assessment of West Branch Onondaga Creek in South Onondaga (at Route 80) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Mayflies and stoneflies were present in the fauna, but filter-feeding caddisflies were overwhelmingly dominant. Nonpoint source nutrient enrichment was identified as the primary influence on the fauna. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the entire stream and all tribs. The waters of the stream are Class C(T). Tribs to this reach/segment are Class C,C(T),C(TS).

# Harbor Brook, Lower, and tribs (0702-0002)

Impaired Seg

## Waterbody Location Information

Revised: 07/13/2007

**Water Index No:** Ont 66-12-12-P154- 5  
**Hydro Unit Code:** 04140201/380      **Str Class:** B  
**Waterbody Type:** River  
**Waterbody Size:** 4.9 Miles  
**Seg Description:** stream and tribs, from mouth to Taunton

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SYRACUSE WEST (I-16-4)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| PUBLIC BATHING   | Impaired | Known                 |
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Known                 |
| RECREATION       | Impaired | Known                 |
| Aesthetics       | Stressed | Known                 |

### Type of Pollutant(s)

Known: AESTHETICS (floatables), AMMONIA, NUTRIENTS (phosphorus), PATHOGENS, Priority Organics (PCBs, other)  
Suspected: - - -  
Possible: D.O./Oxygen Demand

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

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP. (Waste Bed B), URBAN/STORM RUNOFF, Industrial  
Suspected: Other Sanitary Disch  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 3c,3c\* (Waterbody Being Addressed by Other Means, more)

## Further Details

Public bathing, recreational uses and aquatic life support in Harbor Brook are impaired by pathogens and a variety of other pollutants from CSOs, urban runoff, and past industrial operations and uses. This and other tribs to Onondaga Lake are also sources of nutrient loading to Onondaga Lake; these loadings are being addressed through implementation of TMDL plans for Onondaga Lake. Other sewer collection system discharges are also possible sources of impact. Fish consumption is also restricted as a result of a health advisory for Onondaga Lake that extends to tribs up to the first impassable barrier.

Harbor Brook is impacted by a number of pollutant sources including CSO discharges, urban runoff and industrial activities. Efforts to address the water quality impacts to the stream are ongoing. These include enforceable control requirements of Amended Consent Judgement (ACJ), other consent orders with Onondaga County and other municipalities

to address sanitary sewer overflows, active remediation of identified hazardous waste sites and other rehabilitation activities and projects. There are currently 14 active CSO discharge points to the stream. Measures to address these include the completed Harbor Brook Floatables Control Facility which uses an instream netting device to collect floatables in Harbor Brook prior to its discharge into Onondaga Lake. This project complements the proposed Harbor Brook In-Water System which is intended to reduce combined sewer overflows, urban stormwater, and non-point source pollutants from Harbor Brook entering Onondaga Lake by capturing, storing, and treating these loads. (DEC/DOW, Region 7, January 2007)

Impacts from the Harbor Brook/Waste Bed B site (7-34-075) have also been documented. The primary contaminants of concern at the site known at this time include benzene, toluene, xylene (BTX), naphthalene, and mercury. Harbor Brook sediments within the site are also contaminated and contaminants in these sediments may be accumulating in fish. The Preliminary Site Assessment has been completed and an RI/FS is underway. In addition, the design of two IRMs, for the East Flume and a barrier wall along Onondaga Lake and Harbor Brook, are also underway. (DEC/DER, Region 7, July 2007)

A biological (macroinvertebrate) assessment of Harbor Brook in Syracuse (at Hiawatha Blvd) was conducted in 2001. Sampling results indicated severely impacted water quality conditions. The fauna consisted almost entirely of tolerant worms and midges. The previous sampling in 1995 revealed condition to be in the moderately impacted range, but the actual difference between the two samples is small. Municipal/industrial discharges and decomposable organic wastes were identified as the primary cause of the impacts. (DEC/DOW, BWAM/SBU, June 2005)

Fish consumption advisories for Onondaga Lake (and all tribs to the first barrier) also applies to this tributary water. A NYS DOH health advisory that recommends eating no walleye, and no more than one meal per month of carp, channel catfish, white perch or other species because of elevated levels of mercury, PCBs and dioxin. The source of these contaminants is past industrial operations and discharges to the lake. The advisory for this lake was first issued prior to 1997-98. (2006-07 NYS DOH Health Advisories and DEC/FWMR, Habitat, December 2006).

The Onondaga County Department of Water Environment Protection (OCDWEP) Ambient Monitoring Program (AMP) was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The OCDWEP publishes an Annual Onondaga Lake Report that evaluates and summarizes the findings of the AMP. (Onondaga County DWEP, 2006)

Harbor Brook is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The creek is listed for the pollutants phosphorus and ammonia and is included on Part 3c of the list as a waterbody segment for which TMDL Development may be Deferred Due to Other Restoration Measures. This updated assessment indicates that uses are impaired by pathogens and the inclusion of the lake on the 2008 list for this pollutant is recommended. Due to the multiple and ongoing CSO remediation efforts, it is recommended that the listing for pathogens also be added to Part 3c. (DEC/DOW, BWAM, July 2007)

Additional information regarding activities to address pollution and restore uses in the waters and tributaries of Onondaga Lake can be found at the Onondaga Lake Partnership website (<http://www.onlakepartners.org>)

This segment includes the portion of the stream and all tribs from the mouth to the Syracuse City line near Taunton. The waters of this portion of the stream are Class C from the mouth to the upper end of the underground reach at Gifford Street and Class B for the remainder of the reach. Tribs to this reach/segment are Class C,C(T). Upper Harbor Brook is listed separately.

# Ninemile Creek, Lower, and tribs (0702-0005)

Impaired Seg

## Waterbody Location Information

Revised: 07/18/2007

**Water Index No:** Ont 66-12-12-P154- 6  
**Hydro Unit Code:** 04140201/360      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 32.3 Miles  
**Seg Description:** stream and selected tribs, from mouth to Camillus

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SYRACUSE WEST (I-16-4)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Known                 |
| RECREATION       | Impaired | Known                 |
| Aesthetics       | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), PATHOGENS, Aesthetics (floatables), Metals (mercury), Priority Organics (PCBs, dioxin)  
Suspected: Ammonia  
Possible: - - -

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

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP., URBAN/STORM RUNOFF, Industrial, Tox/Contam. Sediment  
Suspected: OTHER SANITARY DISCH  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 3c (Waterbody Being Addressed by Other Means)

## Further Details

Recreational uses and aquatic life support in this portion of Ninemile Creek are impaired by pathogens and a variety of other pollutants from CSOs, urban runoff, and past industrial operations and uses. This and other tribs to Onondaga Lake are also sources of nutrient loading to Onondaga Lake; these loadings are being addressed through implementation of TMDL plans for Onondaga Lake. Other sewer collection system discharges are also possible sources of impact. Fish consumption is also restricted as a result of a health advisory for Onondaga Lake that extends to tribs up to the first impassable barrier.

Ninemile Creek is impacted by a number of pollutant sources including CSO discharges, urban runoff and industrial activities. Efforts to address the water quality impacts to the stream are ongoing. These include enforceable control requirements of Amended Consent Judgement (ACJ), other consent orders with Onondaga County and other municipalities to address sanitary sewer overflows, active remediation of identified hazardous waste sites and other rehabilitation

activities and projects. (DEC/DOW, Region 7, January 2007)

Impacts from industrial hazardous waste sites along the lower portion of the creek have been documented in the Geddes Brook/Ninemile Creek Baseline Ecological Risk Assessment prepared for the Onondaga Lake Project in 2003. These sites include the Solvay Landfill site which is currently undergoing a Part 360 grant closure, the Pass and Seymour site which is undergoing Remedial Investigation through the Brownfields Cleanup Program, the Matthews Avenue Landfill (Honeywell) site which is being considered for inclusion in the Brownfields Cleanup Program, and a number of other sites (State Fair Landfill, Frazer and Jones Foundry, Stanton Foundry) where remediation activities are not currently underway. (DEC/DER, Region 7, July 2007)

A biological (macroinvertebrate) assessment of Ninemile Creek in Lakeland (at State Fair Blvd) was conducted in 2001. Sampling results indicated severely impacted water quality conditions. The fauna was heavily dominated by tolerant worms and midges. Sewage wastes were identified as the primary contributor to the impacts. The previous sampling in 1995 revealed conditions to be in the moderately impacted range, but 1989-90 sampling also reflected severely impacted conditions. Poor habitat influences the sampling results to some degree. (DEC/DOW, BWAM/SBU, June 2005)

Fish consumption advisories for Onondaga Lake (and all tribs to the first barrier) also apply to this tributary water. A NYS DOH health advisory that recommends eating no walleye, and no more than one meal per month of carp, channel catfish, white perch or other species because of elevated levels of mercury, PCBs and dioxin. The source of these contaminants is past industrial operations and discharges to the lake. The advisory for this lake was first issued prior to 1997-98. (2006-07 NYS DOH Health Advisories and DEC/FWMR, Habitat, December 2006).

The Onondaga County Department of Water Environment Protection (OCDWEP) Ambient Monitoring Program (AMP) was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The OCDWEP publishes an Annual Onondaga Lake Report that evaluates and summarizes the findings of the AMP. (Onondaga County DWEP, 2006)

Ninemile Creek is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The creek is listed for the pollutant phosphorus and is included on Part 3c of the list as a waterbody segment for which TMDL Development may be Deferred Due to Other Restoration Measures. This updated assessment indicates that uses are impaired by pathogens and the inclusion of the lake on the 2008 list for this pollutant is recommended. Due to the multiple and ongoing CSO remediation efforts, it is recommended that the listing for pathogens also be added to Part 3c. (DEC/DOW, BWAM, July 2007)

Additional information regarding activities to address pollution and restore uses in the waters and tributaries of Onondaga Lake can be found at the Onondaga Lake Partnership website (<http://www.onlakepartners.org>)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to/including unnamed tribs (-5) in Camillus. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Beaver Meadow Brook (-4), are Class C. Upper Ninemile Creek and Geddes Brook (-2) are listed separately.

# Geddes Brook and tribs (0702-0007)

# Impaired Seg

## Waterbody Location Information

Revised: 07/18/2007

**Water Index No:** Ont 66-12-12-P154- 6- 2  
**Hydro Unit Code:** 04140201/360      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 12.4 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SYRACUSE WEST (I-16-4)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| Fish Consumption | Stressed | Known                 |
| AQUATIC LIFE     | Impaired | Known                 |
| RECREATION       | Impaired | Known                 |
| Aesthetics       | Stressed | Known                 |

### Type of Pollutant(s)

Known: AMMONIA, PATHOGENS, Aesthetics (floatables), Metals (mercury), Priority Organics (PCBs, dioxin)  
Suspected: Nutrients  
Possible: - - -

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

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP., URBAN/STORM RUNOFF, Industrial, Tox/Contam. Sediment  
Suspected: OTHER SANITARY DISCH  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 3c (Waterbody Being Addressed by Other Means)

## Further Details

Aquatic life support and recreational uses in Geddes Brook are thought to be impaired due to ammonia and other pollutants from CSOs, urban runoff, and past industrial operations and uses.

Geddes Brook is impacted by a number of pollutant sources including CSO discharges, urban runoff and industrial activities. Efforts to address the water quality impacts to the stream are ongoing. These include enforceable control requirements of Amended Consent Judgement (ACJ), other consent orders with Onondaga County and other municipalities to address sanitary sewer overflows, active remediation of identified hazardous waste sites and other rehabilitation activities and projects. (DEC/DOW, Region 7, January 2007)

Impacts from industrial hazardous waste sites along the lower portion of the creek have been documented in the Geddes Brook/Ninemile Creek Baseline Ecological Risk Assessment prepared for the Onondaga Lake Project in 2003. These sites include the Solvay Landfill site which is currently undergoing a Part 360 grant closure, the Pass and Seymour site which

is undergoing Remedial Investigation through the Brownfields Cleanup Program, the Matthews Avenue Landfill (Honeywell) site which is being considered for inclusion in the Brownfields Cleanup Program, and a number of other sites (State Fair Landfill, Frazer and Jones Foundry, Stanton Foundry) where remediation activities are not currently underway. (DEC/DER, Region 7, July 2007)

A biological (macroinvertebrate) assessment of Geddes Brook in Camillus (at Horan Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Municipal/industrial sources were identified as the primary source of the impact. This assessment represents an improvement over sampling in 1989 which found moderately impacted conditions. No explanation for the apparent improvement has been noted. This site is above the portion of the creek more significantly impacted by industrial activities and may not be fully representative of the entire stream. (DEC/DOW, BWAM/SBU, June 2005)

The Onondaga County Department of Water Environment Protection (OCDWEP) Ambient Monitoring Program (AMP) was implemented in 1998 in accordance with the ACJ to measure the progress and effectiveness of the County's fifteen-year plan for collection system and treatment plant improvements. The AMP measures chemical, physical and biological data for Onondaga Lake, the lake tributaries, Onondaga Outlet and the Seneca River. The OCDWEP publishes an Annual Onondaga Lake Report that evaluates and summarizes the findings of the AMP. (Onondaga County DWEP, 2006)

Geddes Brook is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The creek is listed for the pollutant ammonia and is included on Part 3c of the list as a waterbody segment for which TMDL Development may be Deferred Due to Other Restoration Measures. This updated assessment indicates that uses are impaired by pathogens and the inclusion of the lake on the 2008 list for this pollutant is recommended. Due to the multiple and ongoing CSO remediation efforts, it is recommended that the listing for pathogens also be added to Part 3c. (DEC/DOW, BWAM, July 2007)

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

# Otisco Lake (0702-0011)

# MinorImpacts

## Waterbody Location Information

Revised: 07/10/2007

**Water Index No:** Ont 66-12-12-P154- 6-P175  
**Hydro Unit Code:** 04140201/360      **Str Class:** AA  
**Waterbody Type:** Lake  
**Waterbody Size:** 2214.3 Acres  
**Seg Description:** entire lake

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** MARCELLUS (J-15-2)

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Water Supply    | Threatened | Possible              |
| Aquatic Life    | Stressed   | Known                 |
| Recreation      | Stressed   | Known                 |

### Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, Silt/Sediment  
Suspected: Algal/Weed Growth, Nutrients  
Possible: ---

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

Known: ---  
Suspected: AGRICULTURE, STREAMBANK EROSION  
Possible: On-Site/Septic Syst

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 3 (Cause Identified, Source Unknown)  
**Lead Agency/Office:** ext/WQCC  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational uses in Otisco Lake are thought to experience minor impacts due to periodic low dissolved oxygen levels. Suspended sediment and other loads from various nonpoint sources also contribute to these impacts. Water supply uses in Otisco Lake may experience minor threats due to various activities in the watershed. The designation of this waterbody as a threatened water is reflective of a need to protect its particular resource value, rather than specifically identified threats.

Otisco Lake is best characterized as eutrophic due to its chlorophyll a, water clarity and hypolimnetic dissolved oxygen levels. Findings also suggest that trophic conditions within the lake have increased over the past several decades. Total phosphorus and chlorophyll a levels have increased since the 1970s. The hypolimnion of the lake become anoxic during the summer and early fall. Though it is unclear whether the anoxic conditions have human causes or are natural in origin. (Water Quality Study of the Finger Lakes, DEC/DOW, July 2001)

Otisco Lake is segmented by a causeway that stretches across the southern end of the lake. The two portions of the lake are connected by a narrow break in the causeway. The southern end of the lake is quite shallow and receives a large

percentage of the flow into the lake. Due to the limited mixing between the two portions of the lake, water quality in the two segments are significantly different with the southern end having higher concentrations of phosphorus and chlorophyll a and lower water clarity. The southern end of Otisco Lake is characterized by high turbidity and occasional algal blooms. (Water Quality Study of the Finger Lakes, DEC/DOW, July 2001)

In addition to the use impacts outlined above, the segment is considered a highly valued water resource due to its drinking water supply classification. Class A/AA surface waters of the state that serve as the source of potable water for significant populations are typically categorized as potentially threatened. The inclusion of this waterbody on the DEC/DOW Priority Waterbodies List as a Threatened water is a reflection of the particular resource value reflected in this designation and the need to provide additional protection, rather than any specifically identified threats. (DEC/DOW, BWAM, January 2006)

# Seneca River, Lower, Main Stem (0701-0008)

Impaired Seg

## Waterbody Location Information

Revised: 11/01/2007

**Water Index No:** Ont 66-12 (portion 2)      **Drain Basin:** Owsego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/350      **Str Class:** C      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 7/Onondaga Co. (34)  
**Waterbody Size:** 23.0 Miles      **Quad Map:** BALDWINSVILLE (I-15-2)  
**Seg Description:** portion from Onondaga Lake Outlet to Cross Lake

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| AQUATIC LIFE    | Impaired | Known                 |
| RECREATION      | Impaired | Known                 |

### Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, Nutrients  
Suspected: PATHOGENS, Ammonia, Priority Organics (phenol), Silt/Sediment  
Possible: ---

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

Known: HABITAT MODIFICATION (zebra mussels), HYDRO MODIFICATION, Agriculture, Other Source (Onondaga Lake inflow)  
Suspected: Municipal, Urban/Storm Runoff  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/Reg7      **Resolution Potential:** Medium  
**TMDL/303d Status:** 3a,3b\* (Waterbody Requiring Verification of Impairment, more)

## Further Details

Aquatic life support and recreational uses in this portion of the Seneca River are impaired due to low dissolved oxygen. Extensive zebra mussel infestation of the river is the primary cause of the dissolved oxygen depletion. Hydrology influences (stratification) caused by Onondaga Lake exacerbate these problems.

The Seneca River is a large river that drains much of central New York. The Seneca River joins with the Oneida River to form the Oswego River, creating what is referred to as the Three Rivers System. These rivers have multiple uses including navigation, hydroelectric power generation, fishing, contact recreation, and waste disposal. The natural flow and other characteristics of the river system have been greatly altered by dams and locks to support navigation and hydroelectric power generation. This has reduced the river's capacity to compensate for oxygen depletion through natural aeration with the atmosphere and has contributed to the unusual bi-directional stratified flow that occurs between the Seneca River and Onondaga Lake. The lake both receives inflow from the river as well as discharges to the river. Due to the lack of hydrologic gradient, during periods of low flow, more dense higher salinity lake water exits along the bottom of the outlet while less dense river water flows into the lake in the top of the outlet. The salinity stratification also exacerbates dissolved oxygen depletion that occurs at lower depths of the river by preventing mixing and natural aeration.

The extension of other water quality issues common to the lake, such as ammonia toxicity, into the lower river layer has also been documented. (DEC/DOW, BWAM, June 2007)

In addition to the hydrologic conditions, the establishment of dense zebra mussel populations in the river has also profoundly changed and complicated water quality concerns. The population density of zebra mussels in The Cut, a rock channel located just downstream of Cross Lake, is perhaps the highest sustained in any river in North America. Conditions are ideal at this location, as large amounts of appropriate food (phytoplankton) are supplied by the lake, and the rock bottom represents suitable substrate for the zebra mussel colonization. As a result of the zebra mussel infestation, the Seneca River downstream of Cross Lake has experienced significant increases in water clarity and decreases in dissolved oxygen. (DEC/DOW, BWAM, June 2007)

The water quality of the Seneca river upstream of Onondaga Lake is also an important concern because a leading remediation alternative for the domestic waste problems of the lake - diversion of an upgraded (Metro) effluent now received by the lake to the river - depends critically on the water quality and assimilative capacity of the river. The loss of assimilative capacity for oxygen demanding waste in the river from the zebra mussel infestation, exacerbated by river stratification, compromises the management alternative of diversion of the Metro effluent to the river to rehabilitate Onondaga Lake. (DEC/DOW, Region 7, June 2007)

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring (water chemistry) of the Seneca River in Jack Reef, Onondaga County, is conducted annually at the Route 32 bridge. In addition, when RIBS Intensive Network monitoring is conducted in a targeted basin every five years, additional sampling methods are employed to gain an overall assessment of water quality. This Intensive Network sampling typically includes macroinvertebrate community analysis, sediment assessment, macroinvertebrate tissue analysis and toxicity testing, in addition to water chemistry. The most recent Intensive Network monitoring was conducted during 2001 (multiplates) and 2002. Biological (macroinvertebrate) sampling revealed moderately impacted water quality. Species richness was low and mayflies and caddisflies were rare. These results are similar to 1995 sampling and represent a decline from conditions in 1989-90 and are thought to be a result of heavy zebra mussel infestation. Water column chemistry indicates phenol to be present in concentrations that constitute a parameter of concern. Toxicity testing using water from this location detected no significant mortality or reproductive effects on the test organism.

This portion of the Seneca River is currently included on the NYS 2006 Section 303(d) List of Impaired Waters due to pathogens. This segment is included on Part 3a as a waterbody for which TMDL development may be deferred pending verification of impairment. A reach of the Seneca River downstream of this segment is also included on the 2006 Section 303(d) List due to low dissolved oxygen, thought to be largely the result of zebra mussel infestation. This updated assessment indicates the same impairments occur in this segment and the inclusion of this segment as well on the 2008 Section 303(d) List due to low dissolved oxygen is recommended. As noted above, the dissolved oxygen depletion in the river is largely due to zebra mussel infestation which may require non-treatment options in addition to a TMDL in order to meet water quality targets. Because this impairment may not be appropriate to be addressed by a TMDL, it is recommended that this segment of the Seneca River be included on Part 3b (Waterbodies for which TMDL Development May be Deferred) of the 2008 Section 303(d) List for low dissolved oxygen, pending determination of the appropriateness of a TMDL. (DEC/DOW, BWAM, February 2008)

This segment includes the portion of the river from the confluence of the Onondaga Lake Outlet in Cold Springs to Cross Lake at Jones Point. The waters of this portion of the river are Class C. Tribs to this reach/segment are listed separately.

# Cross Lake (0701-0002)

# MinorImpacts

## Waterbody Location Information

Revised: 11/01/2007

|                         |                            |                     |                      |
|-------------------------|----------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-12 (portion 3)/P185 | <b>Drain Basin:</b> | Owsego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140201/390               | <b>Str Class:</b>   | B                    |
| <b>Waterbody Type:</b>  | Lake                       | <b>Reg/County:</b>  | 7/Onondaga Co. (34)  |
| <b>Waterbody Size:</b>  | 2086.3 Acres               | <b>Quad Map:</b>    | JORDAN (I-15-4)      |
| <b>Seg Description:</b> | entire lake                |                     |                      |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Public Bathing  | Stressed | Known                 |
| Aquatic Life    | Stressed | Possible              |
| Recreation      | Stressed | Suspected             |

### Type of Pollutant(s)

Known: SILT/SEDIMENT  
 Suspected: NUTRIENTS, PATHOGENS  
 Possible: D.O./Oxygen Demand

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

Known: ---  
 Suspected: AGRICULTURE, ON-SITE/SEPTIC SYST, OTHER SOURCE (waterfowl), Hydro Modification (periodic flooding), Streambank Erosion  
 Possible: ---

## Resolution/Management Information

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS)) |                                     |
| <b>Verification Status:</b> | 4 (Source Identified, Strategy Needed)    |                                     |
| <b>Lead Agency/Office:</b>  | ext/WQCC                                  | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | n/a                                       |                                     |

## Further Details

Public bathing and recreational uses in Cross Lake may experience impacts due to nutrient and sediment loads from various nonpoint sources in the watershed. On-site septic systems around the lake have also been identified as a source of nutrients. Pathogen levels are also a concern.

The lake is reported to be eutrophic during the summer. Algal blooms and suspended sediment reduce water clarity, which also impacts recreational uses. The primary source of nutrient and sediment loads to the lake are the Seneca River. A recreational beach on the lake has on occasion been closed by Cayuga County due to elevated coliform levels. Migratory waterfowl are one source of the pathogens. Inadequate and/or failing on-site septic systems serving residences around the lake are also contributing to the coliform as well as the nutrient loads to the lake. The impact of on-site septic systems is exacerbated by periodic flooding along the lake. (Cayuga County WQMA, January 2004)

The lake functions as a sink and settling basin for upstream loads that enter the lake via the Seneca River. Other natural characteristics of the lake, including stratification, the short-circuiting of the river flow through the southern end of the

lake and the resulting limited circulation, and the recycling of nutrients from bottom sediment deposits, are thought to contribute to water quality impacts. Because of the significant loadings from the Seneca River, a multi-county watershed plan is needed to address these problems. (Cayuga County WQMA, January 2004)

# Dead Creek and tribs (0701-0032)

# MinorImpacts

## Waterbody Location Information

Revised: 07/03/2007

**Water Index No:** Ont 66-12-19  
**Hydro Unit Code:** 04140201/350      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 19.7 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Owsego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** LYSANDER (I-15-1)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: ---  
Possible: ---

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

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

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/Reg7  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational uses in Dead Creek are known to experience impacts due to nutrients from agricultural and other nonpoint sources.

A biological (macroinvertebrate) assessment of Dead Creek near Baldwinsville (at Hoag Road) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions, however this assessment is thought to be influenced by habitat factors. The stream is small and sluggish and there are many ponded areas above the sampling location. Particularly high conductivity was noted in the stream and Impact Source Determination found nonpoint source nutrient enrichment to be the likely cause of the impacts. Additional sampling is recommended in order to determine the extent and magnitude of the impacts to this stream. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment, including White Bottom Creek (-5) and Gilly Brook (-6), are Class C,C(T).

# Carpenters Brook and tribs (0701-0033)

# MinorImpacts

## Waterbody Location Information

Revised: 07/02/2007

**Water Index No:** Ont 66-12-28  
**Hydro Unit Code:** 04140201/350      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 30.5 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Owsego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** JORDAN (I-15-4)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

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

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

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

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support in Carpenters Brook is known to experience minor impacts due to nutrient enrichment from various nonpoint sources. .

A biological (macroinvertebrate) assessment of Carpenters Brook in Peru (at Peru Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was identified as the primary source of the impacts. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

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

# Skaneateles Creek and tribs (0707-0003)

Impaired Seg

## Waterbody Location Information

Revised: 08/13/2007

**Water Index No:** Ont 66-12-29  
**Hydro Unit Code:** 04140201/340      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 36.5 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** JORDAN (I-15-4)

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

| Use(s) Impacted  | Severity | Problem Documentation |
|------------------|----------|-----------------------|
| FISH CONSUMPTION | Impaired | Known                 |
| Aquatic Life     | Stressed | Known                 |

### Type of Pollutant(s)

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

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

Known: LANDFILL/LAND DISP. (Stauffer Mgmt)  
Suspected: Agriculture, Industrial, Urban/Storm Runoff  
Possible: ---

## Resolution/Management Information

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

## Further Details

Fish consumption in Skaneateles Creek is impaired due to an health advisory due to PCBs. Aquatic life support in the stream is also known to experience minor impacts due to nutrient enrichment from nonpoint sources.

Fish consumption in Skaneateles Creek below the dam in Skaneateles is impaired due to a NYSDOH health advisory that recommends eating no more than one meal per month of larger brown trout (over 10 inches) because of elevated PCB levels. The source of PCBs is a hazardous waste site (Stauffer Management) that is currently being remediated. The advisory for this lake was first issued prior to 1998-99. The stream supports a significant brown and rainbow trout fishery and catch-and-release fishing is practiced. (2006-07 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2006).

A biological (macroinvertebrate) assessment of Skaneateles Creek in Jordan (at Route 31) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was indicated as the primary source of impacts. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to stress aquatic life support. A biological survey of crayfish tissue in 2000 was used to identify the apparent source of the PCB contamination in the stream. (DEC/DOW, BWAM/SBU, June 2005)

Remediation of the Stauffer Management site (7-34-010) is currently underway. The remediation includes the removal on contaminated sediments on the site and the sampling and excavation of contaminated sediments in Skaneateles Creek. In addition to the selective dredging in the creek, the remediation effort includes the permanent relocation of about 400 feet of the stream. (DEC/DOW, Region 7, September 2005)

Skaneateles Creek is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a Fish Consumption Water due to PCB contamination.

This segment includes the entire stream and all tribs from the mouth to Skaneateles Lake. The waters of the stream are Class C,C(T). Tribs to this reach/segment are also Class C,C(T).

# Skaneateles Lake (0707-0004)

Threat(Poss)

## Waterbody Location Information

Revised: 07/11/2007

**Water Index No:** Ont 66-12-29-P193  
**Hydro Unit Code:** 04140201/340      **Str Class:** AA  
**Waterbody Type:** Lake  
**Waterbody Size:** 8703.9 Acres  
**Seg Description:** entire lake  
**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Onondaga Co. (34)  
**Quad Map:** SKANEATELES (J-15-1)

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Water Supply    | Threatened | Possible              |

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Possible: OTHER POLLUTANTS

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

Known: ---  
Suspected: ---  
Possible: OTHER SOURCE (various)

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** ext/Muni  
**TMDL/303d Status:** n/a  
**Resolution Potential:** High

## Further Details

Water supply uses in Skaneateles Lake may experience minor threats due to various activities in the watershed. The designation of this waterbody as a threatened water is reflective of a need to protect its particular resource value, rather than specifically identified threats.

Although there are no known water quality impacts in Skaneateles Lake, the segment is considered a highly valued water resource due to its drinking water supply classification. The lake is a multi-use waterbody, but is also the primary source of water for the City of Syracuse. There are significant watershed protection measures in place to protect this water supply. The inclusion of this waterbody on the DEC/DOW Priority Waterbodies List as a Threatened water is a reflection of the particular resource value reflected in this designation and the need to provide additional protection, rather than any specifically identified threats.

Skaneateles Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1997 and continuing through 2001. An Interpretive Summary report of the findings of this sampling was published in 2002. These data indicate that the lake continues to be best characterized as oligotrophic, or highly unproductive. The very high water clarity of the lake are the result of very low nutrient and algae levels. Phosphorus levels in the lake are consistently below the state guidance values indicating impacted/stressed recreational uses.

Corresponding transparency measurements easily exceed what is recommended for swimming beaches. In fact a September 2001 clarity readings of 15 meters was among the highest ever recorded in a NYS lake. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is weakly colored, which is as expected given the character of the watershed. Oxygen levels do not appear to be significantly reduced at lower lake depths and internal nutrient cycling is not significant. (DEC/DOW, BWAM/CSLAP, October 2002)

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 highly 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." The lake itself is most often described as "crystal clear," an assessment that is consistent with the perceived water quality conditions in the lake and its measured water quality characteristics. Assessments have noted that aquatic plants rarely grows to the lake surface. Aquatic plants are dominated by a mix of native and non-native species and have not been cited as impacting recreational uses. (DEC/DOW, BWAM/CSLAP, October 2002)

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.

# Grout Brook and tribs (0707-0001)

NoKnownImpct

## Waterbody Location Information

Revised: 07/02/2007

**Water Index No:** Ont 66-12-29-P193-55  
**Hydro Unit Code:** 04140201/340      **Str Class:** AA(T)  
**Waterbody Type:** River  
**Waterbody Size:** 17.2 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cortland Co. (12)  
**Quad Map:** SPAFFORD (J-15-3)

## 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

A biological (macroinvertebrate) assessment of Grout Brook in Grout Mill (at Route 101) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was identified as the primary contributor to the conditions resulting in this assessment. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream. (DEC/DOW, BWAM/SBU, June 2005)

Previous assessments (1996) suggested CSO discharges caused some impacts to water quality, however more recent sampling found no evidence of such problems. (DEC/DOW, BWAM, January 2005)

This segment includes the entire stream and all tribs. The waters of the stream are Class AA(T). Tribs to this reach/segment are Class AA.

## Parker Pond (0701-0036)

Need Verific

### Waterbody Location Information

Revised: 08/13/2007

|                         |                   |                     |                      |
|-------------------------|-------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-12-35-P197 | <b>Drain Basin:</b> | Owsego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140201/390      | <b>Str Class:</b>   | C                    |
| <b>Waterbody Type:</b>  | Lake              | <b>Reg/County:</b>  | 7/Cayuga Co. ( 6)    |
| <b>Waterbody Size:</b>  | 185.6 Acres       | <b>Quad Map:</b>    | CATO (I-14-2)        |
| <b>Seg Description:</b> | entire pond       |                     |                      |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Recreation      | Stressed | Possible              |

#### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH  
Suspected: Nutrients  
Possible: - - -

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

Known: HABITAT MODIFICATION  
Suspected: Agriculture  
Possible: On-Site/Septic Syst

### Resolution/Management Information

|                             |   |                                  |
|-----------------------------|---|----------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS))     |                                  |
| <b>Verification Status:</b> | 1 (Waterbody Nominated, Problem Not Verified) |                                  |
| <b>Lead Agency/Office:</b>  | ext/WQCC                                      | <b>Resolution Potential:</b> n/a |
| <b>TMDL/303d Status:</b>    | n/a   |                                  |

### Further Details

Recreational uses in Parker Pond may experience minor impacts due to aquatic weed growth.

Local agencies have expressed concerns regarding the impact of aquatic weeds that restrict recreational uses. The lake is reported to be eutrophic and nutrient loadings from the surrounding watershed are thought to contribute to these impacts. Agricultural activities and possibly impacts from on-site septic systems are suspected sources. (Cayuga County WQMA, 2003)

# Otter Lake (0701-0004)

# MinorImpacts

## Waterbody Location Information

Revised: 07/11/2007

**Water Index No:** Ont 66-12-35-P197- 3-P198  
**Hydro Unit Code:** 04140201/390      **Str Class:** C  
**Waterbody Type:** Lake  
**Waterbody Size:** 281.7 Acres  
**Seg Description:** entire pond  
**Drain Basin:** Owsego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** CATO (I-14-2)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH  
Suspected: Nutrients, Silt/Sediment  
Possible: - - -

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

Known: OTHER SOURCE (naturally eutrophic)  
Suspected: Agriculture  
Possible: On-Site/Septic Syst, Streambank Erosion

## Resolution/Management Information

**Issue Resolvability:** 5 (Not Resolvable, natural/conflicting use)  
**Verification Status:** (Not Applicable for Selected RESOLVABILITY)  
**Lead Agency/Office:** ext/WQCC  
**TMDL/303d Status:** n/a

**Resolution Potential:** Low

## Further Details

Recreational uses of Otter Lake are known to experience minor impacts due to algal and aquatic weed growth. The shallow lake is situated in a low-lying, marshy area and is largely considered to be naturally eutrophic. However, elevated nutrient loadings from various nonpoint sources likely contribute to these impacts.

Rooted aquatic vegetation is reported to be heavy and a mechanical harvesting program is in place. While agriculture and on-site systems are suspected of contributing sediment and nutrients to the lake, it is unlikely that even significant reductions would alter the trophic state of the lake. NYSDEC stocks the lake with walleye. (DEC/DFWMR, Region 7, 2000)

# Cold Spring/North Brook and minor tribs (0701-0038)

MinorImpacts

## Waterbody Location Information

Revised: 08/13/2007

**Water Index No:** Ont 66-12-36  
**Hydro Unit Code:** 04140201/330      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 41.2 Miles  
**Seg Description:** entire stream and selected tribs

**Drain Basin:** Owsego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** WEEDSPORT (I-14-3)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: D.O./Oxygen Demand  
Possible: ---

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

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

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational uses in Cold Spring/North Brook are known to experience minor impacts due to nutrient enrichment from nonpoint sources.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Cold Spring/North Brook in Weedsport, Cayuga County, (at Route 13B) was conducted in 2006. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. Nonpoint sources of nutrient enrichment were indicated as the primary contributor to the impacts. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates/suggests the level of eutrophication is sufficient to stress/threaten aquatic life support. Pervious sampling in 2001 suggested municipal/industrial impacts, but these influences were not present in the 2006 sample. Poor habitat conditions also may have affected the sample. Water column sampling revealed dissolved solids to be a parameters of concern. However, these results likely reflect high stream conductivities that are characteristic on the entire basin. Some occasional high coliform values were also noted. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

Local agencies have expressed concerns regarding impacts from golf course runoff, cattle access to the stream and streambank erosion. (Cayuga County WQMA, 2003)

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C,C(T). Tribs to this reach/segment, including Upper Cold Spring Brook (-5a), are also Class C,C(T). Putnam Brook (-1) and upper unnamed trib (-10-1) are listed separately. The portion of the stream from the Seneca River to Cold Spring Brook is referred to as both Cold Spring and North Brook.

# Putnam Brook and tribs (0701-0039)

NoKnownImpct

## Waterbody Location Information

Revised: 07/02/2007

|                         |                         |                     |                      |
|-------------------------|-------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-12-36- 1         | <b>Drain Basin:</b> | Owsego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140201/330            | <b>Str Class:</b>   | C                    |
| <b>Waterbody Type:</b>  | River                   | <b>Reg/County:</b>  | 7/Cayuga Co. ( 6)    |
| <b>Waterbody Size:</b>  | 42.1 Miles              | <b>Quad Map:</b>    | WEEDSPORT (I-14-3)   |
| <b>Seg Description:</b> | entire stream and tribs |                     |                      |

## 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

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

## Further Details

A biological (macroinvertebrate) assessment of Putnam Brook in North Weedsport (at Route 31) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was identified as the primary contributor to the conditions resulting in this assessment. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other indications of impacts to uses. (DEC/DOW, BWAM/SBU, June 2005)

Local agencies have expressed concerns regarding impacts from agricultural activities and streambank erosion, as well as discharges from a mobile home park and a county residential center. (Cayuga County WQMA, 2003)

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

# Owasco Outlet, Lower, and tribs (0706-0008)

MinorImpacts

## Waterbody Location Information

Revised: 07/12/2007

**Water Index No:** Ont 66-12-43  
**Hydro Unit Code:** 04140201/330      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 18.2 Miles  
**Seg Description:** stream and tribs, from mouth to Throopsville

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** MONTEZUMA (I-14-4)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: - - -  
Possible: D.O./Oxygen Demand, Water Level/Flow

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

Known: AGRICULTURE  
Suspected: MUNICIPAL (Port Byron WWTP), URBAN/STORM RUNOFF  
Possible: Hydro Modification

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational uses in this portion of Owasco Outlet are known to experience minor impacts due to nutrient enrichment and other pollutants from agricultural and other nonpoint sources and urban/municipal and industrial sources.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Owasco Outlet in North Port Byron, Cayuga County, (at Central Road) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. Nutrient enrichment from nonpoint sources is the most likely contributor to these impacts. Water column sampling revealed quantifiable level of mercury in one of five samples collected; there were no other parameters of concern noted. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) survey of Owasco Outlet at multiple sites along its entire length from the mouth to Owasco Lake was conducted in 2002. Sampling results indicated slightly impacted quality conditions at all six sites,

including the three sites within this reach. Results of Impact Source Determination analysis identified the most likely primary sources influencing the fauna as being nutrients and urban municipal or industrial runoff. Water quality at two of the three sites in this reach improved from moderately impacted in 1990 to slightly impacted. Although improved from 1990 conditions, the most downstream site revealed impacts that could be attributed to the Port Byron WWTP. Completion of an upgrade to the City of Auburn WWTP in 1995 has resulted in dramatic improvements to the Outlet above this reach and likely contributes to the improvement in this segment as well. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Concerns have also been raised regarding the impact of water level and flow fluctuations in the outlet due to operation of hydroelectric dam at outlet of the lake. There is a conflict over how dam should be operated - lake residents want water level high in lake, but flow maintenance is needed downstream.

This segment includes the portion of the stream and all tribs from the mouth to/including unnamed trib (-7) in Throopville. The waters of this portion of the stream are Class C. Tribs to this reach/segment are Class C,C(T). Upper Owasco Outlet is listed separately.

# Owasco Outlet, Upper, and tribs (0706-0001)

MinorImpacts

## Waterbody Location Information

Revised: 07/12/2007

**Water Index No:** Ont 66-12-43  
**Hydro Unit Code:** 04140201/330      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 12.6 Miles  
**Seg Description:** stream and tribs, from Throopsville to Owasco Lake

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** AUBURN (J-14-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: D.O./Oxygen Demand  
Possible: Water Level/Flow

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

Known: - - -  
Suspected: COMB. SEWER OVERFLOW (Auburn), MUNICIPAL (Auburn WWTP), URBAN/STORM RUNOFF, Agriculture  
Possible: - - -

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational uses in this portion of Owasco Outlet are known to experience minor impacts due to nutrient enrichment and other pollutants from various nonpoint and urban/municipal and industrial sources.

A biological (macroinvertebrate) survey of Owasco Outlet at multiple sites along its entire length from the mouth to Owasco Lake was conducted in 2002. Sampling results indicated slightly impacted quality conditions at all six sites, including the three sites within this reach. Results of Impact Source Determination analysis identified the most likely primary sources influencing the fauna as being nutrients and urban municipal or industrial runoff. Water quality at the two sites below the Auburn WWTP improved from moderately impacted in 1990 to slightly impacted. This improvement can be attributed to the 1995 upgrade of the WWTP to include activated sludge treatment, phosphorus removal, post-aeration and UV disinfection. Impacts at the site above the treatment plant also improved. Previous impacts attributed to CSOs and urban sources in Auburn were not as pronounced in the 2002 sample, although it is not certain if this is the result of changes to the sewer system. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Concerns have also been raised regarding the impact of water level and flow fluctuations in the outlet due to operation of hydroelectric dam at outlet of the lake. There is a conflict over how dam should be operated - lake residents want water level high in lake, but flow maintenance is needed downstream.

This segment includes the portion of the stream and all tribs from unnamed trib (-7) in Throopsville to Owasco Lake. The waters of this portion of the stream are Class C. Tribs to this reach/segment are Class C,C(T). Lower Owasco Outlet and Owasco Lake are listed separately.

# Owasco Lake (0706-0009)

# Impaired Seg

## Waterbody Location Information

Revised: 03/25/2008

**Water Index No:** Ont 66-12-43-P212  
**Hydro Unit Code:** 04140201/320      **Str Class:** AA(T)  
**Waterbody Type:** Lake  
**Waterbody Size:** 6796.9 Acres  
**Seg Description:** entire lake

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** AUBURN (J-14-2)

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Water Supply    | Threatened | Known                 |
| PUBLIC BATHING  | Impaired   | Known                 |
| RECREATION      | Impaired   | Known                 |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, PATHOGENS, Nutrients (phosphorus), Silt/Sediment  
Suspected: ---  
Possible: ---

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

Known: HABITAT MODIFICATION, OTHER SOURCE (wildlife), Agriculture, Municipal (Groton WWTP), Streambank Erosion  
Suspected: Hydro Modification, On-Site/Septic Syst  
Possible: Construction

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DOW/Reg7  
**TMDL/303d Status:** 3a->1,4c

**Resolution Potential:** Medium

## Further Details

Public bathing and recreational uses in Owasco Lake are considered to be periodically impaired by pathogen contamination along the north shore and by excessive growth of aquatic vegetation and algae in other parts of the lake, particularly its southern end. The sources of pathogens include wildlife and waterfowl, agricultural runoff and to a lesser extent on-site wastewater treatment systems. Though nutrient (phosphorus) levels are generally low in much of the lake, elevated levels in the southern end of the lake may exacerbate the growth of aquatic vegetation. Water supply uses of the lake are also considered to be threatened due to the potential for the formation of disinfection by-products when the water is treated with chlorine for public water use.

Owasco Lake has been sampled by a number of agencies and investigators over recent years. NYSDEC issued a report on a synoptic study of the Finger Lakes, including Owasco Lake, in June 2001. More recently, researchers from the Finger Lakes Institute of Hobart and William Smith College issued A Preliminary Water Quality Study of Owasco Lake and its Watershed (Halfman, et.al., January 2006). These studies indicate that the lake continues to be best characterized as mesoligotrophic, or somewhat productive. Phosphorus levels in the lake are typically below the state guidance values that

would indicate impacted/stressed recreational uses. Chlorophyll and clarity measurements also indicate no significant impacts to uses in the main lake. However, although water quality in Owasco Lake is generally found to be favorable and supportive of most recreational uses and aquatic life, there are a few specific water quality concerns. Public bathing in the northern end of the lake is restricted by pathogen levels that result in periodic beach closures. Along the lake shore and most notably at the southern end of the lake excessive rooted aquatic plant and algal growth restrict recreational uses such as bathing, boating and fishing. Elevated phosphorus loads and silt/sediment deposition from lake tributaries are thought to be contributing to and exacerbating this growth. The potential for formation of disinfection by-products that threatened water supply uses of the lake is also a concern.

The most specific impairment to uses of the lake are related to periodic elevated fecal coliform levels in the north end of the lake have resulted in closures of the public beach at Emerson Park. Of the 772 samples taken at Emerson Park beaches by the Cayuga County Environmental Health Division between 1993 and 1998, 36% (281) were above the NYSDOH fecal coliform density standard of 200 colonies/100 mL. In the fall 1998, a study used DNA ribotyping techniques to determine the sources of fecal contamination. This study determined that the major source of contamination at the Emerson Park beaches was from wildlife, while agriculture was an intermediate source, and humans and pets were minor sources. The study also showed that agriculture and wildlife were the major sources of contamination in the tributaries, while humans and pets were minor sources. (Cayuga County WQMA, January 2000)

Other recreational impairments in the lake are the result of excessive aquatic weed and algal growth, particularly in the southern end of the lake. A number of factors contribute to the weed and algal growth. Nutrient and sediment loads from Owasco Inlet and other tributaries are thought to promote this growth and efforts to reduce these loadings to the lake are encouraged. The sources of these loads include municipal wastewater treatment facility discharges, agricultural activities and associated runoff, on-site wastewater treatment systems, soil/streambank erosion, and various other nonpoint sources. Maintaining the quality of Owasco Lake into the future will require efforts to identify, quantify, address and reduce these sources of nutrient and sediment loads. (Finger Lakes Institute, January 2006)

Habitat and hydrologic impacts are also thought to contribute to the weed and algal growth and the impact on recreational uses. Zebra mussel infestation of the lake has increased lake clarity. The increased clarity allows for greater penetration of light which supports plant growth into the lake. Hydrologic modification of the inlet to bypass the Owasco Flats wetland complex at the southern end of the lake is also likely contributing to the water quality impacts on the lake. The value of wetlands in providing a buffer to reduce the runoff of pollutants into waters is well established. Conversely the loss of these wetlands results in increased loads, particularly during wet-weather high flow events. (Finger Lakes Institute, January 2006)

Water supply use of the lake is also threatened by the potential formation of disinfection by-products (DBPs) as well as taste and odor concerns. DBPs are formed when disinfectants such as chlorine used in water treatment plants react with natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types and amounts of disinfection byproducts. Disinfection byproducts occurring in drinking water can include trihalomethanes, haloacetic acids, bromate, and chlorite. The study of DBPs on the lake to date has focused on the potential to form DBPs, rather than the actual levels in the finished water supply. However some municipalities that purchase water from the City of Auburn and Town of Owasco have found elevated DBP levels in their finished water. Cayuga County Health and Human Service also reports increased taste and odor complaints related to algal and weed growth have resulted in the addition of activated carbon at the treatment plants. (DEC/DOW, BWAM, June 2007)

Owasco Inlet has been identified as a significant source of nutrients (phosphorus) to the south end of the Owasco Lake. Sampling and biological assessment of the Inlet in 2006 revealed elevated nutrient impacts in the stream. Municipal discharges to the stream were identified as primary sources, while nonpoint source nutrient enrichment were also identified as contributing sources. Subsequent to these findings, municipal discharges of phosphorus have been reduced. Water quality studies currently underway will evaluate whether additional municipal discharge reductions need to be evaluated. But it is important to note that to fully address concerns regarding Owasco Lake water quality, other communities in this watershed basin must contribute towards implementing a comprehensive approach to reduce contaminants from various other point and nonpoint contributors. (DEC/DOW, Region 7, June 2007)

In addition to the use impairments and threats outlined above, the lake is considered a highly valued water resource due to its AA(T) drinking water supply classification. This classification means the quality of the water is to be maintained to allow its use as a drinking water source with minimal filtration. Water from Owasco Lake is used for both human consumption and irrigation. The City of Auburn, the Town of Owasco, and lakefront property owners all draw water from the lake. In fact, more than 70% of Cayuga County's population obtain their drinking water from the lake. In 1996, the combined users drew more than three billion gallons of water from the lake, serving more than 58,000 residents of Cayuga County. Homeowners along the lake may also use the lake as a water source for a variety of uses. The volume of water used for irrigation is unknown. (Cayuga County WQMA, January 2000)

Although there are no known water quality impacts to the drinking water use of Owasco Lake, a Source Water Assessment by the NYSDOH found a moderate susceptibility to contamination from pesticides and other contaminants due to the level of row crop agriculture and the number of point sources (permitted municipal wastewater discharges) in the watershed. (NYSDOH, Source Water Assessment Program, 2005)

Owasco Lake is included on the NYS 2006 Section 303(d) List of Impaired/TMDL Waters due to pathogens. The lake is included on Part 3a of the List as a Water Requiring Verification of Impairment, however this updated assessment indicates that the suspected impairments are confirmed and that the lake be moved to Part 1 of the List as Waterbody Requiring TMDL Development (or other strategy to attain water quality standards). As noted above, the lake is also impaired by excessive aquatic weed/algal growth. Waters impaired by weeds/algae are not included on the Section 303(d) List because weeds/algae are not easily addressed by a TMDL. However a watershed analysis and/or TMDL to evaluate sources and appropriate reductions of contributing pollutants, such as phosphorus, would be useful toward developing a whole-watershed strategy and protecting water quality in the lake. (DEC/DOW, BWAM, July 2007)

# Minor Tribs to Owasco Lake (0706-0010)

# MinorImpacts

## Waterbody Location Information

Revised: 07/02/2007

**Water Index No:** Ont 66-12-43-P212-  
**Hydro Unit Code:** 04140201/320      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 89.4 Miles  
**Seg Description:** total length of selected tribs to Owasco Lake

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** AUBURN (J-14-2)

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

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| Aquatic Life      | Stressed | Known                 |
| Recreation        | Stressed | Suspected             |
| Habitat/Hydrology | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (10), SILT/SEDIMENT  
Suspected: ---  
Possible: ---

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

Known: STREAMBANK EROSION  
Suspected: Agriculture, Urban/Storm Runoff  
Possible: Construction, Roadbank Erosion

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support, recreational uses and habitat/hydrologic conditions in these tribs to Owasco Lake are known to experience minor impacts/threats due to silt/sediment and nutrients from streambank erosion and other nonpoint sources. The Impacts of increasing residential development in the watershed around the lake are a significant concern.

Stream banks in the lower reaches have lost significant amounts of soil. Visible sediment plumes and sediment deltas at the mouth of these tribs combined with increased runoff from development in its watershed result in flooding. The stream channel in Sucker Brook is inadequate. Flooding further compounds the stream's problems with increased scouring and erosion of streambanks and increased nonpoint source pollution as flood waters wash over the ground surface. Since most of the land through which Sucker Brook passes is active cropland or a golf course, this increases the nutrient loading. Similar conditions are noted in Veness Brook. Streambank erosion from rapid residential development and agricultural activity and the primary sources of impact. When the lake level is lowered through the fall and winter, exposed stream banks are weakened, and undercutting and bank wasting are severe, especially during Spring flush. (Cayuga County SWCD, 2001)

A biological (macroinvertebrate) assessment of Sucker Brook in Auburn (at Route 72) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Algal-feeding riffle beetles dominated the fauna. Nonpoint source nutrient enrichment was identified as the primary contributing source of impacts to the fauna. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the total length of selected/smaller tribs to Owasco Lake. Tribs within this segment, including Sucker Brook (-1), Long Point Stream (-5) and Veness Brook (-51) are primarily Class C,C(T),C(TS), with a small portion of unnamed trib (-4) designated Class AA. Dutch Hollow Brook (-3) and Owasco Inlet (-28) are listed separately.

# Dutch Hollow Brook and tribs (0706-0003)

# MinorImpacts

## Waterbody Location Information

Revised: 07/02/2007

**Water Index No:** Ont 66-12-43-P212- 3  
**Hydro Unit Code:** 04140201/310      **Str Class:** C(TS)  
**Waterbody Type:** River  
**Waterbody Size:** 68.5 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** AUBURN (J-14-2)

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

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| Habitat/Hydrology | Stressed | Known                 |

### Type of Pollutant(s)

Known: SILT/SEDIMENT  
Suspected: Thermal Changes  
Possible: - - -

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

Known: - - -  
Suspected: HABITAT MODIFICATION, STREAMBANK EROSION, Hydro Modification  
Possible: Agriculture

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Habitat/hydrologic condition of Dutch Hollow Brook is thought to experience minor impacts due to silt/sedimentation from streambank erosion and stream disturbances related to flood control efforts.

Previously it was noted that significant bedload deposited in the lower end of the brook contributes to flooding and people use bulldozers to clean out the area for flood control. This has impact on the warm water fish spawning area. The removal of riparian vegetation and channel widening farther upstream impact trout spawning. However, the fishery of the stream includes a good rainbow and brown trout population. The sediment loading to and impact on Owasco Lake from this tributary are also a concern. (DEC/DFWMR, Region 7, 2001)

Biological (macroinvertebrate) assessments of Dutch Hollow Brook in Niles (at Old State Road) and in Owasco (at Route 38A) were conducted in 2000 and 2001, respectively. Sampling results indicated non-impacted water quality conditions. Other sampling at these and other sites along the stream since 1993 revealed generally non-impacted condition, though some slight impacts occurred in 1994 and 1998. The fauna is diverse and criteria for waters having no known impacts are typically met. (DEC/DOW, BWAM/SBU, June 2005)

Source of Information: Regional Fisheries and Water This segment includes the entire stream and all tribs. The waters

of the stream are Class C(TS). Tribs to this reach/segment are Class C.

# Owasco Inlet, Lower, and minor tribs (0706-0002)

# MinorImpacts

## Waterbody Location Information

Revised: 07/03/2007

**Water Index No:** Ont 66-12-43-P212-28  
**Hydro Unit Code:** 04140201/300      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 59.1 Miles  
**Seg Description:** stream and selected tribs, from mouth to Locke

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** MORAVIA (K-15-1)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: Silt/Sediment  
Possible: ---

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

Known: AGRICULTURE, MUNICIPAL (Groton WWTP), Streambank Erosion  
Suspected: ---  
Possible: ---

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support in this portion of Owasco Inlet is known to experience minor impacts due to nutrients from municipal wastewater and agricultural and various nonpoint sources.

A biological (macroinvertebrate) survey of Owasco Inlet at multiple sites from the mouth at Owasco Lake to above Groton was conducted in 2006. Sampling results for all three sites within this segment indicated slightly impacted water quality conditions. Impact Source Determination identified nonpoint source nutrient enrichment as the primary cause of the impacts in this reach. However municipal discharges from the Village of Moravia at the downstream end of this reach and from the Village of Groton WWTP upstream of this segment also contribute nutrient loading to the stream. The impact of nutrient loading on uses is greater in the upstream segment than in this reach. In the lower Owasco Inlet, nutrient biotic evaluation determined the effects on the fauna to be minor and aquatic life support is considered to be fully supported in the stream. (DEC/DOW, BWAM/SBU, January 2007)

Previous assessments of this segment included concerns about the constant natural turbidity of the stream that impacts the cold water fishery. The natural erosion of exposed clay layers along the shore may not be easily resolvable. (Cayuga County WQCC, 2001)

This segment includes the portion of the stream and all tribs from the mouth to Hemlock Creek (-29) in Locke. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are primarily Class C, with a small portion of trib (-20) designated Class B. Upper Owasco Inlet, Mill/Dresserville Creek (-17), upper unnamed trib (-28) and Hemlock Creek (-29) are listed separately.

# Owasco Inlet, Upper, and tribs (0706-0014)

Impaired Seg

## Waterbody Location Information

Revised: 07/03/2007

**Water Index No:** Ont 66-12-43-P212-28  
**Hydro Unit Code:** 04140201/300      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 81.4 Miles  
**Seg Description:** stream and tribs, above Locke

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** GROTON (K-15-3)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| AQUATIC LIFE    | Impaired | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: ---  
Possible: ---

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

Known: MUNICIPAL (Groton WWTP)  
Suspected: Agriculture  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DOW/Reg7  
**TMDL/303d Status:** 4b (Other Control(s) More Suitable than TMDL, Not Listed)

**Resolution Potential:** High

## Further Details

Aquatic life support in this portion of Owasco Inlet is impaired due to nutrients from municipal wastewater discharges. Agricultural and various nonpoint sources also contribute.

A biological (macroinvertebrate) survey of Owasco Inlet at multiple sites from the mouth at Owasco Lake to above Groton was conducted in 2006. Sampling results for the 4 sites within this segment revealed waters quality that ranged from non-impacted to moderately impacted. The upstream site was found to be non-impacted, however a substantial decline in water quality occurred downstream of the Village of Groton WWTP discharge. The macroinvertebrate community at this site was dominated by tolerant aquatic worms and black fly larvae, and had high similarity to communities expected downstream of sewage treatment plant discharges. At sites farther downstream, water quality was assessed as slightly impacted. Based on the Biological Assessment Profile, the Nutrient Biotic Index, and phosphorus monitoring data collected by the Cornell Cooperative Extension of Cayuga County, the Village of Groton WWTP had been identified as the major source of phosphorus in Owasco Inlet. (DEC/DOW, BWAM/SBU, January 2007)

Since these studies were conducted, NYSDEC has working with local partners toward reducing the amount of nutrient phosphorus discharged into Owasco Lake, both from the Groton WWTP as well as other significant sources. Since

entering into a Consent Order with the DEC last year, the Village of Groton has reduced the amount of phosphorous discharge from the WWTP by two-thirds. In addition to requiring the implementation of new treatment technology to reduce phosphorus, the DEC has already set a more protective interim phosphorus discharge limit at the sewage treatment plant. DEC is currently working with Groton on a revised SPDES permit that will include even more stringent limits on phosphorus discharges to Lake Owasco. The limit now proposed to be included in a final permit will further reduce the total amount of phosphorus discharged from this plant. The proposed permit will also be available for public comment and review before DEC makes any final determination on its content. (DEC/DOW. BWC and Discharge Monitoring Reports, September 2007)

Excess phosphorus causes algae blooms that can, in turn, result in low levels of dissolved oxygen that harm fish and impact water odor and color restricting recreational uses. In drinking water supplies, phosphorus induced algae blooms raise a range of additional, serious concerns. It is important to note that to fully address concerns over Lake Owasco water quality, other communities in this watershed basin must contribute towards implementing a comprehensive approach to reduce phosphorus from various contributors. Runoff from developed areas, among other sources, continue to transport phosphorus into the lake, and have negative impacts on the quality of the this important water body.

This segment includes the portion of the stream and all tribs above Hemlock Creek (-29) in Locke. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are primarily Class C,C(T), with a small portion of unnamed tribs (-51) designated Class AA. Lower Owasco Inlet and Hemlock Creek (-29) are listed separately.

# Mill/Dresserville Creek and minor tribs (0706-0015)

NoKnownImpct

## Waterbody Location Information

Revised: 07/02/2007

**Water Index No:** Ont 66-12-43-P212-28-17  
**Hydro Unit Code:** 04140201/290      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 33.2 Miles  
**Seg Description:** entire stream and selected tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** MORAVIA (K-15-1)

## 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

A biological (macroinvertebrate) assessment of Dresserville Creek in Moravia (at Route 38A) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. The fauna was dominated by clean-water mayflies. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C(T),C(TS). Tribs to this reach/segment, including Lower Decker Creek, are Class C,C(T),C(TS). Upper Decker Creek (-1) is listed separately.

# Decker Creek, Upper, and tribs (0706-0016)

NoKnownImpct

## Waterbody Location Information

Revised: 07/02/2007

**Water Index No:** Ont 66-12-43-P212-28-17- 1      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/290      **Str Class:** AA      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 7/Cayuga Co. ( 6)  
**Waterbody Size:** 30.5 Miles      **Quad Map:** MORAVIA (K-15-1)  
**Seg Description:** stream and tribs, above Wilson Corners

## 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

A biological (macroinvertebrate) assessment of Decker Creek in Moravia (at Jugg Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions, but results were very near the range of non-impacted. Nonpoint source nutrient enrichment was identified as the likely stressor to the stream. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

Local agencies have expressed concerns regarding the impact of erosion and agricultural nonpoint sources. (Cayuga County WQMA, 2003)

This segment includes the portion of the stream and all tribs above the diversion dam near Wilson Corners. The waters of this portion of the stream are Class AA,AA(T). Tribs to this reach/segment are Class AA(T) and C,C(T).

# Mud Pond (0701-0044)

Need Verific

## Waterbody Location Information

Revised: 08/13/2007

**Water Index No:** Ont 66-12-44-P221  
**Hydro Unit Code:** 04140201/280      **Str Class:** C  
**Waterbody Type:** Lake  
**Waterbody Size:** 19.3 Acres  
**Seg Description:** entire pond  
**Drain Basin:** Owsego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** VICTORY (I-14-1)

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

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| Habitat/Hydrology | Stressed | Possible              |

### Type of Pollutant(s)

Known: ---  
Suspected: WATER LEVEL/FLOW  
Possible: ---

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

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

## Resolution/Management Information

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

## Further Details

Habitat and hydrology of Mud Pond may experience impacts as a result of modifications related to agricultural activities.

Local agencies have expressed concerns regarding the impact of agricultural activities in the mucklands around the pond. Hydrologic changes may be affecting uses of the waterbody. (Cayuga County WQMA, 2003)

# Duck Lake (0704-0025)

# MinorImpacts

## Waterbody Location Information

Revised: 07/11/2007

**Water Index No:** Ont 66-12-46-P222  
**Hydro Unit Code:** 04140201/280      **Str Class:** C  
**Waterbody Type:** Lake  
**Waterbody Size:** 198.4 Acres  
**Seg Description:** entire lake  
**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** VICTORY (I-14-1)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus)  
Suspected: - - -  
Possible: Silt/Sediment

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

Known: OTHER SOURCE (naturally eutrophic)  
Suspected: Agriculture  
Possible: On-Site/Septic Syst, Streambank Erosion

## Resolution/Management Information

**Issue Resolvability:** 5 (Not Resolvable, natural/conflicting use)  
**Verification Status:** (Not Applicable for Selected RESOLVABILITY)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Low  
**TMDL/303d Status:** n/a

## Further Details

Recreational uses of Duck Lake are known to experience minor impacts due to algal and aquatic weed growth. The shallow lake is situated in a low-lying, marshy area and is largely considered to be naturally eutrophic. However, elevated nutrient loadings from various nonpoint sources contribute to these impacts.

Duck Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1988 and continuing off and on through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. These data indicate that the lake continues to be best characterized as eutrophic, or highly productive. However, the lake was much less productive in the last two years than in most previous sampling seasons. While these changes were probably within the normal variability for this lake, variable due to impacts from weather, long-term changes in the lake should continue to be evaluated. Phosphorus levels in the lake regularly exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements typically fail to meet what is recommended for swimming beaches. Measurements of pH are somewhat high but typically fall within the state water quality range of 6.5 to 8.5. The lake water is moderately colored but lake color does not appear to impact transparency. Oxygen levels do not appear to be significantly reduced at lower lake depths and internal nutrient cycling is not significant. Nitrate and ammonia levels do not appear to warrant a threat to the lake, and the primary component of nitrogen appears to be organic (within algae cells). Calcium levels are high enough to support zebra mussels, but they

are not found at the lake, although the threat of introduction from nearby lakes is significant. (DEC/DOW, BWAM/CSLAP, March 2006)

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 vary from "excellent" to "slightly impaired for most uses." The lake itself is most often described as having "definite algal greenness." This assessment is more favorable than expected given the water clarity. However the assessments appear to reflect limited impact from aquatic weed growth which only rarely grow to the lake surface. Aquatic plant survey to determine the presence of invasive plants have not been conducted on the lake. (DEC/DOW, BWAM/CSLAP, March 2006)

This lake waterbody is designated class C, suitable for general recreation use and aquatic life support, but not as a water supply or public bathing beach. 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.

# Crane Brook and tribs (0704-0024)

Impaired Seg

## Waterbody Location Information

Revised: 07/11/2007

**Water Index No:** Ont 66-12-51  
**Hydro Unit Code:** 04140201/150      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 79.9 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** MONTEZUMA (I-14-4)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| AQUATIC LIFE    | Impaired | Suspected             |
| Recreation      | Stressed | Known                 |
| Aesthetics      | Stressed | Known                 |

### Type of Pollutant(s)

Known: SALTS, Nutrients (phosphorus)  
Suspected: Silt/Sediment  
Possible: - - -

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

Known: Agriculture, Urban/Storm Runoff  
Suspected: OTHER SOURCE (salt spring)  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 3 (Cause Identified, Source Unknown)  
**Lead Agency/Office:** DEC/Reg7  
**TMDL/303d Status:** 3b\*

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational use in Crane Brook are thought to be impaired due to impacts due to high conductance from a salt spring, which might be natural. Nonpoint source nutrient enrichment from agricultural activities in the watershed and urban runoff in and around Auburn also contribute to water quality impacts in the stream. Previous severe impacts appear to have been addressed with the elimination of an unpermitted food processing plant discharge to the stream.

This stream has been sampled numerous times since an unpermitted discharge to the creek was identified in July 2002. Most recently, a biological (macroinvertebrate) survey of Crane Brook at multiple sites above and below the discharge near Auburn was conducted in 2006. Sampling results indicated that the elimination of the discharge has resulted in improved water quality conditions. Sampling of the upstream site indicated slightly impacted conditions with nonpoint source nutrient enrichment being the primary influence on the assessment. Below the discharge water quality improved from severely impacted in 2002, to moderately impacted in 2003 and 2004 after the cessation of the discharge. Assessments in 2005 and 2006 were also determined to be moderately impacted. During the 2005 sampling an effort was made to identify the source of continued high conductance in the stream. This effort revealed a tributary spring/pool of

orange color and very high specific conductance (>100,000 microsiemen/cm). Natural salt springs are not uncommon in central New York, but it was not determined whether this seep is a natural occurrence or is related to human disturbance. The conclusions drawn from the multiple surveys is that the impacts from the previous discharge have been remediated, that impacts from agricultural activities and urban runoff in the watershed are likely to result in slight impacts to the stream and that implementation of practices to reduce these nonpoint sources would have benefits to water quality. However until and unless the impacts from the salt spring are addressed, the downstream reaches of the stream cannot be expected to improve to reflect conditions upstream. (DEC/DOW, BWAM/SBU, March 2007)

Local agencies have expressed concerns regarding other possible sources of impact including streambank erosion and agricultural nonpoint sources. (Cayuga County WQMA, 2003)

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.

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# Waterbody Inventory for Seneca River (Clyde River) Watershed

| Water Index Number                          | Waterbody Segment                                    | Category     |
|---|--|--------------|
| <b>Clyde River/Ganargua Creek Watershed</b> |  |              |
| Ont 66-12-52                                | NYS Barge Canal/Clyde River (portion 6) (0704-0017)  | UnAssessed   |
| Ont 66-12-52                                | NYS Barge Canal/Clyde River (portion 7) (0704-0027)  | MinorImpacts |
| Ont 66-12-52- 1                             | Black Brook and tribs (0704-0007)                    | Need Verific |
| Ont 66-12-52- 1 thru 22 (selected)          | Minor Tribs to Clyde River (0704-0008)               | Need Verific |
| Ont 66-12-52-18                             | Pond Brook and tribs (0704-0004)                     | Need Verific |
| Ont 66-12-52-18- P238,P240                  | Junius Ponds (0704-0028)                             | UnAssessed   |
| Ont 66-12-52-18-4a-P244                     | Burnett Pond (0704-0029)                             | UnAssessed   |
| Ont 66-12-52-23                             | Ganargua Creek, Lower, and minor tribs (0704-0026)   | MinorImpacts |
| Ont 66-12-52-23                             | Ganargua Creek, Upper, and minor tribs (0704-0013)   | MinorImpacts |
| Ont 66-12-52-23 (Mud Creek)                 | Mud Creek, Lower, and minor tribs (0704-0030)        | MinorImpacts |
| Ont 66-12-52-23 (Mud Creek)                 | Mud Creek, Upper, and tribs (0704-0031)              | UnAssessed   |
| Ont 66-12-52-23- 1                          | Marbletown Creek and tribs (0704-0003)               | UnAssessed   |
| Ont 66-12-52-23- 8                          | Fairville Creek and tribs (0704-0032)                | UnAssessed   |
| Ont 66-12-52-23-17                          | Red Creek and tribs (0704-0015)                      | Need Verific |
| Ont 66-12-52-23-24                          | Red Creek and tribs (0704-0033)                      | MinorImpacts |
| Ont 66-12-52-23-43                          | Great Brook and minor tribs (0704-0034)              | Impaired Seg |
| Ont 66-12-52-23-43..P263a,P263b             | Fairport Reservoirs (0704-0035)                      | UnAssessed   |
| Ont 66-12-52-23-43..P263a/b-                | Tribs to Fairport Reservoirs (0704-0036)             | UnAssessed   |
| Ont 66-12-52-23-45                          | Fish Creek and tribs (0704-0037)                     | UnAssessed   |
| Ont 66-12-52-23-46                          | Beards/Beaver Creek and tribs (0704-0038)            | UnAssessed   |
| Ont 66-12-52-23-51                          | Schaffer Creek and tribs (0704-0039)                 | UnAssessed   |
| Ont 66-12-52-23-52-P267                     | Sterling Pond (0704-0040)                            | UnAssessed   |
| Ont 66-12-52-23..(Barge Canal)              | NYS Barge Canal (portion 5) (0704-0020)              | Impaired Seg |
| Ont 66-12-52-23..(Barge Canal)-             | Minor Tribs to Barge Canal (0704-0019)               | UnAssessed   |
| <b>Canandaigua Outlet Watershed</b>         |  |              |
| Ont 66-12-52..                              | Canadaigua Outlet, Low, and minor trib (0704-0041)   | MinorImpacts |
| Ont 66-12-52..                              | Canadaigua Outlet, Mid, and minor tribs (0704-0042)  | MinorImpacts |
| Ont 66-12-52..                              | Canadaigua Outlet, Upp, and minor tribs (0704-0011)  | MinorImpacts |
| Ont 66-12-52..35                            | Marsh Creek and tribs (0704-0043)                    | UnAssessed   |
| Ont 66-12-52..40                            | Flint Creek, Lower, and tribs (0704-0044)            | MinorImpacts |
| Ont 66-12-52..40                            | Flint Creek, Upper, and tribs (0704-0006)            | MinorImpacts |
| Ont 66-12-52..40-P273                       | Newark Reservoir (0704-0045)                         | UnAssessed   |
| Ont 66-12-52..46                            | Rocky Run and tribs (0704-0046)                      | UnAssessed   |
| Ont 66-12-52..49                            | Black Brook and tribs (0704-0047)                    | UnAssessed   |
| <b>Canandaigua Lake Watershed</b>           |  |              |
| Ont 66-12-52..P286                          | Canandaigua Lake (0704-0001)                         | Threat(Poss) |
| Ont 66-12-52..P286- 1 thru 17               | Minor Tribs to Canandaigua Lake, Eastern (0704-0048) | UnAssessed   |

# ...Seneca River (Clyde River) Watershed

| Water Index Number                        | Waterbody Segment                                    | Category     |
|---|--|--------------|
| <b>Canandaigua Lake Watershed (con't)</b> |  |              |
| Ont 66-12-52..P286-18                     | West River, Lower, and minor tribs (0704-0049)       | MinorImpacts |
| Ont 66-12-52..P286-18                     | West River, Upper, and tribs (0704-0050)             | UnAssessed   |
| Ont 66-12-52..P286-18- 2                  | Naples Creek, Lower, and minor tribs (0704-0051)     | Need Verific |
| Ont 66-12-52..P286-18- 2                  | Naples/Eelpot Cr, Upper, and minor tribs (0704-0052) | UnAssessed   |
| Ont 66-12-52..P286-18- 2- 8               | Grimes Creek and tribs (0704-0002)                   | Need Verific |
| Ont 66-12-52..P286-18- 2-10               | Reservoir Creek, Upper, and tribs (0704-0053)        | UnAssessed   |
| Ont 66-12-52..P286-19 thru 49             | Minor Tribs to Canandaigua Lake, Western (0704-0054) | UnAssessed   |

# NYS Barge Canal/Clyde River (portion 7) (0704-0027) MinorImpacts

## Waterbody Location Information

Revised: 08/13/2007

|                         |                                 |                     |                      |
|-------------------------|---------------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-12-52                    | <b>Drain Basin:</b> | Oswego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140201/280                    | <b>Str Class:</b>   | C                    |
| <b>Waterbody Type:</b>  | River                           | <b>Reg/County:</b>  | 8/Wayne Co. (59)     |
| <b>Waterbody Size:</b>  | 31.5 Miles                      | <b>Quad Map:</b>    | SAVANNAH (I-13-3)    |
| <b>Seg Description:</b> | portion from Montezuma to Clyde |                     |                      |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: ---  
Suspected: D.O./OXYGEN DEMAND, NUTRIENTS  
Possible: Pathogens

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

Known: ---  
Suspected: AGRICULTURE, Municipal  
Possible: On-Site/Septic Syst

## Resolution/Management Information

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS)) |                                     |
| <b>Verification Status:</b> | 3 (Cause Identified, Source Unknown)      |                                     |
| <b>Lead Agency/Office:</b>  | DOW/Reg8                                  | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | n/a                                       |                                     |

## Further Details

Aquatic life support and recreational uses in this portion of the NYS Barge Canal and Clyde River are known to experience impacts due to organic wastes from various nonpoint and/or discharges in the area.

A biological (macroinvertebrate) assessment of the Barge Canal/Clyde River in Clyde (at canal light 586) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. This represented a decline in water quality from previous sampling. The samples indicated organic (decomposable) wastes were the primary cause of the impacts. Zebra mussels, which have significant impact on other portions of the canal, did not appear to influence this sample. (DEC/DOW, BWAM/SBU, June 2004)

This segment includes the portion of the canal/river from the confluence with the Seneca River near Montezuma to Melvin Brook (-10) in Clyde. The waters of this portion of the river/canal are Class C. Tribs to this reach/segment are listed separately.

# Black Brook and tribs (0704-0007)

Need Verific

## Waterbody Location Information

Revised: 08/13/2007

|                         |                         |                     |                       |
|-------------------------|-------------------------|---------------------|-----------------------|
| <b>Water Index No:</b>  | Ont 66-12-52- 1         | <b>Drain Basin:</b> | Oswego-Seneca-Oneida  |
| <b>Hydro Unit Code:</b> | 04140201/260            | <b>Str Class:</b>   | C                     |
| <b>Waterbody Type:</b>  | River                   | <b>Reg/County:</b>  | 8/Seneca Co. (50)     |
| <b>Waterbody Size:</b>  | 39.3 Miles              | <b>Quad Map:</b>    | SENECA FALLS (J-13-2) |
| <b>Seg Description:</b> | entire stream and tribs |                     |                       |

## 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: UNKNOWN TOXICITY  
 Possible: Nutrients

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

Known: ---  
 Suspected: LANDFILL/LAND DISP.  
 Possible: Agriculture

## Resolution/Management Information

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

## Further Details

Aquatic life support and recreational uses in Black Brook may continue to experience minor impacts due to toxic pollutants from land disposal activities.

The stream flows through the Seneca Meadows Landfill. This is an active landfill site with a site monitor. Previous Part 360 violations have been issued in the past (1990s) due to leachate runoff. Current conditions and verification of any impacts need to be documented.

The barnyard and on-site system problems are isolated incidents.

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.

# Minor Tribs to Clyde River (0704-0008)

Need Verific

## Waterbody Location Information

Revised: 08/13/2007

**Water Index No:** Ont 66-12-52- 1 thru 22 (selected)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/260      **Str Class:** C      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 8/Wayne Co. (59)  
**Waterbody Size:** 159.8 Miles      **Quad Map:** LYONS (I-13-4)  
**Seg Description:** total length of selected tribs, fr Montezuma to Lyons

## 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: D.O./OXYGEN DEMAND, Nutrients  
Possible: ---

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

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

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 1 (Waterbody Nominated, Problem Not Verified)  
**Lead Agency/Office:** DOW/Reg8      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support and recreational uses in these tribs the Clyde River may continue to experience minor impacts due to nutrients and low dissolved oxygen from agricultural activities in the watershed.

Previous assessments noted that barnyard runoff and the dumping of excess milk in the stream had impact on the fishery as well as the aesthetics of the stream. These problems were not considered to be widespread at the time. Current conditions and verification of any impacts need to be documented.

This segment includes the total length of selected/smaller tribs to the Clyde River from the confluence with the Seneca River near Montezuma to Canandaigua Outlet in Lyons. Tribs within this segment, including White Brook (-2), Melvin Brook (-10) and Black Brook (-12), are Class C. Black Brook (-1), Pond Brook (-18) and Canandaigua Outlet are listed separately.

# Pond Brook and tribs (0704-0004)

Need Verific

## Waterbody Location Information

Revised: 08/13/2007

**Water Index No:** Ont 66-12-52-18  
**Hydro Unit Code:** 04140201/260      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 31.3 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Seneca Co. (50)  
**Quad Map:** LYONS (I-13-4)

## 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: D.O./OXYGEN DEMAND  
Possible: Nutrients

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

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

## 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:** 3a (Waterbody Requiring Verification of Impairment)

## Further Details

Aquatic life support and recreational uses in Pond Brook may continue to experience minor impacts due to low dissolved oxygen and nutrients from agricultural activities in the watershed.

Previous assessments noted that barnyard runoff and silage leakage had impact on the fishery as well as the aesthetics of the stream. Fisheries surveys at the time documented impacts below the agricultural areas. Formal enforcement action was taken again one of the farms in 1990. Current conditions and verification of any impacts need to be documented.

Pond Brook is currently included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 3a of the List as a Water Requiring Verification of Impairment.

This segment includes the entire stream and all tribs. The waters of the stream are primarily Class C. Some tribs (those connecting the Junius Ponds) are Class A. Other tribs to this reach/segment, including Dublin Brook, are also Class C.

# Ganargua Creek, Lower, and minor tribs (0704-0026)

# MinorImpacts

## Waterbody Location Information

Revised: 08/10/2007

**Water Index No:** Ont 66-12-52-23  
**Hydro Unit Code:** 04140201/230      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 50.6 Miles  
**Seg Description:** stream and selected tribs, from Lyons to Palmyra

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Wayne Co. (59)  
**Quad Map:** NEWARK (I-12-3)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Suspected             |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: Silt/Sediment  
Possible: D.O./Oxygen Demand

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

Known: CONSTRUCTION (development), URBAN/STORM RUNOFF, Municipal (Newark WWTP)  
Suspected: Agriculture  
Possible: - - -

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support in this portion of Ganargua Creek is thought to experience minor impacts due to nutrients from primarily nonpoint sources. Impacts from municipal discharges had been identified in the past, but additional sampling is recommended to determine the whether these impacts continue.

A biological (macroinvertebrate) survey of Ganargua Creek at multiple sites between East Victor and Lyons was conducted in 1996. Sampling results indicated primarily slightly impacted water quality conditions. However moderate impact was noted in Mud Mills below the Newark WWTP. One of these reaches was in this lower portion of the creek in Mud Mills, below the Newark WWTP. Another short reach upstream and outside this portion of the creek was similarly impacted. This impact represents a worsening of conditions since previous sampling in 1980 when slight impact was found. The assessment for this waterbody is listed as suspected due to the length of time since it was last sampled. (DEC/DOW, BWAM/SBU, June 2003)

The Newark WWTP experiences high plant flows resulting from inflow/infiltration problems in the collection system. And a constriction in the effluent line also restricts the ability to handle flow, particularly during wet weather events. Resolution to these problems are being discussed. (DEC/DOW, Region 8, Aug 2007)

This segment includes the portion of the stream and selected/smaller tribs from the confluence with the Barge Canal in Lyons to the diversion spillway at the Barge Canal near Palmyra. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Lower Military Run (-11), are Class C,C(T). Marletown Creek (-1), Fairville Creek (-8) and Red Creek (17) are listed separately.

# Ganargua Creek, Upper, and minor tribs (0704-0013) MinorImpacts

## Waterbody Location Information

Revised: 08/09/2007

|                         |   |                     |                      |
|-------------------------|---|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-12-52-23                                   | <b>Drain Basin:</b> | Oswego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140201/160                                      | <b>Str Class:</b>   | C                    |
| <b>Waterbody Type:</b>  | River   | <b>Reg/County:</b>  | 8/Wayne Co. (59)     |
| <b>Waterbody Size:</b>  | 67.1 Miles  | <b>Quad Map:</b>    | MACEDON (I-11-3)     |
| <b>Seg Description:</b> | stream and selected tribs, from Palmyra to Victor |                     |                      |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: Silt/Sediment  
Possible: D.O./Oxygen Demand, Ammonia

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

Known: CONSTRUCTION (development), URBAN/STORM RUNOFF  
Suspected: Agriculture, Municipal  
Possible: - - -

## Resolution/Management Information

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS)) |                                     |
| <b>Verification Status:</b> | 4 (Source Identified, Strategy Needed)    |                                     |
| <b>Lead Agency/Office:</b>  | ext/WQCC                                  | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | n/a                                       |                                     |

## Further Details

Aquatic life support in this portion of Ganargua Creek is known to experience minor impacts due to nutrients from primarily nonpoint sources. Impacts from municipal discharges had been identified in the past, but additional sampling is recommended to determine the whether these impacts continue.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Ganargua Creek in Macedon, Wayne County, (at Erie Road) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. The impacts are attributed to nonpoint source nutrient enrichment. Water column sampling revealed dissolved solids and iron to be parameters of concern, however these finding are thought to be more reflective of natural conditions in the basin than a source of water quality impacts. Toxicity testing of the water column showed significant mortality and reproductive impacts in one of the three tests conducted. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Ganargua Creek in Macedon was also conducted in 2001. Sampling results at that time also indicated slightly impacted water quality. Previous sampling in 1980 and prior reflected non-impacted conditions. The headwaters of the creek are in the Town of Victor, a rapidly growing suburb of Rochester.

Recent development in the watershed and along the stream (including a golf course) increases the nutrient and other loadings to the stream. This stream is typical of many waters in the state that are slipping from non-impacted to slightly impacted due to nonpoint source nutrient enrichment attributed to development pressures. A survey of the entire Ganargua Creek at multiple sites between East Victor and Lyons was conducted in 1996. Sampling results at that time also indicated primarily slightly impacted water quality conditions. However moderate impact was noted along one short reach below Victor and Farmington related to municipal discharges. Another short reach outside this portion of the creek was similarly impacted. Since this sampling, the Village of Victor WWTP has been updated and is meeting permit discharge limits and the Farmington WWTP is about to complete and upgrade as well. Due to the length of time since it was last sampled, conditions regarding this impact should be verified. (DEC/DOW, BWAM/SBU, August 2007)

This segment includes the portion of the stream and selected/smaller tribs from the confluence with the Barge Canal in Palmyra to Mud Creek in Victor. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Trapp Brook (-33), are also Class C. Great Brook (-43) and Mud Creek are listed separately.

# Mud Creek, Lower, and minor tribs (0704-0030)

# MinorImpacts

## Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52-23 (Mud Creek)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/160      **Str Class:** C      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 8/Ontario Co. (35)  
**Waterbody Size:** 35.5 Miles      **Quad Map:** VICTOR (J-11-1)  
**Seg Description:** stream and selected tribs, from Victor to S.Bloomfield

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: AMMONIA, Chlorine, D.O./Oxygen Demand, Silt/Sediment  
Possible: - - -

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

Known: AGRICULTURE, CONSTRUCTION (development), URBAN/STORM RUNOFF  
Suspected: Municipal  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support in this portion of Mud Creek is known to experience minor impacts due primarily to nutrients from nonpoint sources. Impacts from municipal discharges had been identified in the past, but additional sampling is recommended to determine the whether these impacts continue.

A biological (macroinvertebrate) assessment of Mud Creek in East Victor (at Route 96) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. This site had been assessed as non-impacted in previous sampling conducted in 1996. This stream is typical of many waters in the state that are slipping from non-impacted to slightly impacted due to nonpoint source nutrient enrichment attributed to development pressures. Sampling at an additional site below the Farmington WWTP (at railroad bridge) conducted in 1996 found moderately impacted conditions attributed to municipal/industrial discharges. However since this sampling the Farmington WWTP has initiated an upgrade to expand plant capacity; the upgrade is nearing completion. Due to the length of time since it was last sampled, conditions regarding this impact should be verified. (DEC/DOW, BWAM/SBU, August 2007)

This segment includes the portion of the stream and selected/smaller tribs from the confluence with Ganargua Creek in Victor to/including unnamed trib (-56) near South Bloomfield. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C. Fish Creek (-45), Beards/Beaver Creek (-46) and Schaffer Creek (-51) are listed

separately.

# Red Creek and tribs (0704-0015)

Need Verific

## Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52-23-17  
**Hydro Unit Code:** 04140201/230      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 39.1 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Wayne Co. (59)  
**Quad Map:** PALMYRA (I-12-4)

## 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: D.O./OXYGEN DEMAND, NUTRIENTS  
Possible: ---

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

Known: ---  
Suspected: AGRICULTURE  
Possible: Industrial

## 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

Aquatic life support in Red Creek may experience minor impacts due to nutrients and BOD loading from agricultural activities and a food processing discharge.

Previously, concerns were raised regarding the impact of nonpoint runoff from agricultural fields with high application rates of apple pomace. A food processing plant discharge was although thought to be contributing to the loading in the stream. Sampling to verify the actual level of impact in the stream is recommended. (DEC/DOW, BWAM/RIBS, June 2005)

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

# Red Creek and tribs (0704-0033)

# MinorImpacts

## Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52-23-24  
**Hydro Unit Code:** 04140201/230      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 78.3 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Wayne Co. (59)  
**Quad Map:** PALMYRA (I-12-4)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus), Silt/Sediment  
Suspected: ---  
Possible: ---

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

Known: HABITAT MODIFICATION  
Suspected: AGRICULTURE  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support and recreational uses in Red Creek are known to experience minor impacts due to nonpoint nutrients and silt/sediment. Aquatic weed growth also contributes to the impacts.

A biological (macroinvertebrate) assessment of Red Creek in Palmyra (at Maple Avenue) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. The stream carried an abundance of aquatic weeds (duckweed) indicating ponded waters upstream. The ponded water likely influenced the sample. Specific conductance at the site was quite high also. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates/suggests the level of eutrophication is sufficient to stress/threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment, including Black Creek (-9) are Class C,C(T).

# Great Brook and minor tribs (0704-0034)

# Impaired Seg

## Waterbody Location Information

Revised: 08/15/2007

|                         |                                  |                     |                      |
|-------------------------|----------------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-12-52-23-43               | <b>Drain Basin:</b> | Oswego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140201/160                     | <b>Str Class:</b>   | C                    |
| <b>Waterbody Type:</b>  | River                            | <b>Reg/County:</b>  | 8/Ontario Co. (35)   |
| <b>Waterbody Size:</b>  | 33.2 Miles                       | <b>Quad Map:</b>    | VICTOR (J-11-1)      |
| <b>Seg Description:</b> | entire stream and selected tribs |                     |                      |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| AQUATIC LIFE    | Impaired | Suspected             |
| RECREATION      | Impaired | Suspected             |
| Aesthetics      | Stressed | Known                 |

### Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, NUTRIENTS (phosphorus), SILT/SEDIMENT, Aesthetics (floatables)  
 Suspected: ---  
 Possible: ---

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

Known: URBAN/STORM RUNOFF  
 Suspected: MUNICIPAL, Agriculture  
 Possible: ---

## Resolution/Management Information

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS)) |                                     |
| <b>Verification Status:</b> | 4 (Source Identified, Strategy Needed)    |                                     |
| <b>Lead Agency/Office:</b>  | DOW/Reg8                                  | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | 1*  |                                     |

## Further Details

Aquatic life support and recreational uses in Great Brook are thought to be impaired by low dissolved oxygen the result of urban runoff and other primarily nonpoint sources. Municipal wastewater discharges are also thought to contribute to water quality impacts.

A biological (macroinvertebrate) assessment of Great Brook in Victor (at Maple Avenue) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. Silt and sedimentation was evident in the stream and considerable trash and other urban runoff impacts were also noted. Sampling at an alternate site downstream of the Village of Victor WWTP conducted in 1996 also found moderately impacted conditions. At the time, sewage effluent was identified as the cause of the impacts. Since this sampling the Victor WWTP has completed an upgrade of the plant and is currently meeting permit discharge limits. Due to the length of time since it was last sampled, conditions regarding the sewage impacts should be verified. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the entire stream and selected/smaller tribs. The waters of this portion of the stream are Class C. Tribs to this reach/segment, Sucker Brook (-6), are also Class C. Tribs to the Fairport Reservoirs are listed separately.

# NYS Barge Canal (portion 5) (0704-0020)

# Impaired Seg

## Waterbody Location Information

Revised: 08/13/2007

**Water Index No:** Ont 66-12-52-23..(Barge Canal)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/230      **Str Class:** C      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 8/Wayne Co. (59)  
**Waterbody Size:** 23.5 Miles      **Quad Map:** NEWARK (I-12-3)  
**Seg Description:** portion from Lyons to Wayneport

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| AQUATIC LIFE    | Impaired | Suspected             |

### Type of Pollutant(s)

Known: - - -  
Suspected: D.O./OXYGEN DEMAND, Water Level/Flow, Nutrients  
Possible: Pathogens

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

Known: - - -  
Suspected: MUNICIPAL, Agriculture, Hydro Modification, Urban/Storm Runoff  
Possible: On-Site/Septic Syst, Other Sanitary Disch

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 3 (Cause Identified, Source Unknown)  
**Lead Agency/Office:** DOW/Reg8      **Resolution Potential:** Medium  
**TMDL/303d Status:** 3a\*

## Further Details

Aquatic life support and recreational uses in this portion of the NYS Barge Canal are impaired due to oxygen-demanding substances that cause low dissolved oxygen. Municipal discharges are the likely source of the pollutants. Zebra mussel infestation of the canal may also be contributing to the impacts.

A biological (macroinvertebrate) assessment of the Barge Canal in Newark (at canal light 719) was conducted in 2006. Multiple sampling results indicated moderately impacted water quality conditions. The fauna was dominated by sewage-tolerant midges. Zebra mussels were numerous on the plates, but not so numerous that they invalidated the samples. Habitat factors (slow current) may have some effect on the results, but the samples showed greater impacts than previous sampling results. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the canal from Canadaigua Outlet in Lyons to the western edge of the drainage basin in Wayneport. The waters of this portion of the canal are Class C.

# Canadaigua Outlet, Low, and minor trib (0704-0041)

# MinorImpacts

## Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52..  
**Hydro Unit Code:** 04140201/220      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 68.5 Miles  
**Seg Description:** stream and selected tribs, from Lyons to Phelps

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Wayne Co. (59)  
**Quad Map:** GENEVA NORTH (J-13-1)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: Silt/Sediment  
Possible: - - -

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

Known: AGRICULTURE, URBAN/STORM RUNOFF  
Suspected: - - -  
Possible: Municipal

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support in this portion of Canadaigua Creek is known to experience minor impacts due to nutrients from nonpoint sources.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Canadaigua Outlet in Alloway, Wayne County, (at Route 339) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. The site was determined to be impacted by nonpoint sources that result in nutrient enrichment of the stream. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to stress aquatic life support. Water column sampling revealed dissolved solids to be a parameter of concern. However this finding is consistent with high conductivity that is characteristic on this basin. One of ten samples collected showed mercury to be present above detection levels. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Canadaigua Creek in Alloway (at Alloway Road) was also conducted in 2001 as part of teh RIBS Biological Screening effort. Sampling results indicated slightly impacted water quality

conditions in this sample as well. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and selected/smaller tribs from the mouth at the Seneca River in Lyons to Flint Creek (-40) in Phelps. The waters of this portion of the stream are Class C. Tribs to this reach/segment are Class C,C(T). Marsh Creek (-35), Flint Creek (-40) and Middle/Upper Canadaigua Outlet are listed separately.

# Canadaigua Outlet, Mid, and minor tribs (0704-0042)

# MinorImpacts

## Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52..  
**Hydro Unit Code:** 04140201/220      **Str Class:** C  
**Waterbody Type:** River      **Drain Basin:** Oswego-Seneca-Oneida  
**Waterbody Size:** 45.9 Miles      **Reg/County:** 8/Ontario Co. (35)  
**Seg Description:** stream and selected tribs, from Phelps to Manchester      **Quad Map:** CLIFTON SPRINGS (J-12-1)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: Silt/Sediment  
Possible: D.O./Oxygen Demand

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

Known: AGRICULTURE, URBAN/STORM RUNOFF  
Suspected: Industrial  
Possible: - - -

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/BWAM      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support in this portion of Canadaigua Creek is thought to experience minor impacts due to nutrients from nonpoint sources.

Biological (macroinvertebrate) assessments of Canadaigua Creek were conducted upstream at multiple sites between Manchester and Canadaigua in 2006 and downstream of this segment in Alloway (at Alloway Road) in 2001 and 2002. Sampling results upstream ranged from moderate to non-impacted, with better water quality noted farther downstream (i.e., closer to this reach). Slightly impacted water quality conditions were noted at the sites downstream of this reach. Both sites were determined to be impacted by nonpoint sources that result in nutrient enrichment of the stream. Though these sampling points lie just outside the described segment, they are considered representative of water quality in this reach. This segment should be considered as being evaluated rather than monitored. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and selected/smaller tribs from Flint Creek (-40) in Phelps to Black Brook (-49) in Manchester. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment are primarily Class C,C(T); Sulphur Creek (-44) is Class D. Flint Creek (-40), Rocky Run (-46), Black Brook (-49) and Lower/Upper Canadaigua Outlet are listed separately.

# Canadaigua Outlet, Upp, and minor tribs (0704-0011) MinorImpacts

## Waterbody Location Information

Revised: 08/09/2007

|                         |   |                     |                          |                     |
|-------------------------|---|---------------------|--------------------------|---------------------|
| <b>Water Index No:</b>  | Ont 66-12-52..  | <b>Drain Basin:</b> | Oswego-Seneca-Oneida     |                     |
| <b>Hydro Unit Code:</b> | 04140201/220  | <b>Str Class:</b>   | C                        | Seneca/Clyde Rivers |
| <b>Waterbody Type:</b>  | River   | <b>Reg/County:</b>  | 8/Ontario Co. (35)       |                     |
| <b>Waterbody Size:</b>  | 67.4 Miles  | <b>Quad Map:</b>    | CLIFTON SPRINGS (J-12-1) |                     |
| <b>Seg Description:</b> | stream and selected tribs, fr Manchester to Canandaigua |                     |                          |                     |

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |
| Recreation      | Stressed | Suspected             |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: D.O./OXYGEN DEMAND, Silt/Sediment, Unknown Toxicity  
Possible: ---

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

Known: URBAN/STORM RUNOFF  
Suspected: Agriculture, Municipal  
Possible: ---

## Resolution/Management Information

|                             |   |                                     |
|-----------------------------|---|-------------------------------------|
| <b>Issue Resolvability:</b> | 1 (Needs Verification/Study (see STATUS)) |                                     |
| <b>Verification Status:</b> | 3 (Cause Identified, Source Unknown)      |                                     |
| <b>Lead Agency/Office:</b>  | DOW/Reg8                                  | <b>Resolution Potential:</b> Medium |
| <b>TMDL/303d Status:</b>    | n/a                                       |                                     |

## Further Details

Aquatic life support in this portion of Canandaigua Creek is known to experience minor impacts due to nutrients from nonpoint sources. Impacts from municipal discharges and urban/storm runoff are suspected.

A biological (macroinvertebrate) survey of Canandaigua Creek at multiple sites from Canandaigua to Manchester was conducted in 2005. Sampling results indicated that water quality conditions ranged from non-impacted to moderately impacted. These findings are similar to previous sampling results. Results showed that water quality improved as one moved downstream. The moderate impacts at the head of the segment are the result of a combination of impoundment effects which influence the sample and municipal wastewater inputs. The City of Canandaigua WWTP appears to provide adequate wastewater treatment based on downstream sampling showing eventual return to non-impacted water quality. Nonpoint sources that result in some nutrient enrichment of the stream also influence water quality. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and selected/smaller tribs from Black Brook (-49) in Manchester to Canandaigua Lake, including feeder canal. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Padelford Brook (-50) and Freshour Creek (-52) are also Class C. Black Brook (-49) and

Lower/Upper Canadaigua Outlet are listed separately.

# Flint Creek, Lower, and tribs (0704-0044)

MinorImpacts

## Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52..40  
**Hydro Unit Code:** 04140201/210      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 51.9 Miles  
**Seg Description:** stream and tribs, from mouth to Gorham

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Ontario Co. (35)  
**Quad Map:** PHELPS (J-12-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), SILT/SEDIMENT  
Suspected: UNKNOWN TOXICITY, D.O./Oxygen Demand, Pesticides  
Possible: ---

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

Known: AGRICULTURE, HABITAT MODIFICATION  
Suspected: INDUSTRIAL, MUNICIPAL  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/Reg8  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Aquatic life support in this portion of Flint Creek are known to experience impacts due to nutrient enrichment and other pollutants from agricultural nonpoint sources. Municipal and industrial discharges are also thought to be contributing to impacts.

A biological (macroinvertebrate) survey of Flint Creek at multiple sites between Phelps and Italy was conducted in 2002. Sampling results revealed water quality conditions that ranged from non-impacted to moderately impacted. Overall, aquatic life support in this reach is considered stressed. Above this segment in the upper reaches, non-impacted waters support wild populations of brown and rainbow trout. But as agricultural activity increases downstream, water quality declines to slightly impacted. At the upstream end of this reach, toxicity from complex municipal/industrial discharges appear to be a more prominent source. A municipal facility serving the Town of Gorham and a food processing facility both discharge to the stream in this area. Extensive muckland drainage also likely contributes to the impacts on the biota. Water quality conditions improve steadily downstream, returning to slightly impacted conditions. Silt and sedimentation becomes a more prevalent influence on water quality near the mouth. (DEC/DOW, BWAM/SBU, June 2005)

Previously, there have been concerns regarding the impact of pesticide use in this watershed on water quality and aquatic life support. A 1997 study by USGS found various pesticides in water samples. (USGS, 1998)

This segment includes the portion of the stream and all tribs from the mouth to the old dam in Gorham. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C. Upper Flint Creek is listed separately.

# Flint Creek, Upper, and tribs (0704-0006)

MinorImpacts

## Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52..40  
**Hydro Unit Code:** 04140201/210      **Str Class:** A  
**Waterbody Type:** River  
**Waterbody Size:** 137.2 Miles  
**Seg Description:** stream and tribs, above Gorham

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Yates Co. (62)  
**Quad Map:** RUSHVILLE (J-12-4)

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Water Supply    | Threatened | Possible              |
| Aquatic Life    | Stressed   | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: UNKNOWN TOXICITY, D.O./Oxygen Demand, Pesticides, Silt/Sediment  
Possible: ---

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

Known: AGRICULTURE, HABITAT MODIFICATION  
Suspected: INDUSTRIAL, MUNICIPAL  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/Reg8      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support in this portion of Flint Creek are known to experience impacts due to nutrient enrichment and other pollutants from agricultural nonpoint sources. Municipal and industrial discharges are also thought to be contributing to impacts.

A biological (macroinvertebrate) survey of Flint Creek at multiple sites between Phelps and Italy was conducted in 2002. Sampling results revealed water quality conditions that ranged from non-impacted to moderately impacted. Overall, aquatic life support in this reach is considered stressed. In the upper reaches, non-impacted waters support wild populations of brown and rainbow trout. But as agricultural activity increases downstream, water quality declines to slightly impacted. In addition to agricultural nonpoint sources, habitat effects from swampy areas also likely influence the sampling results. At the downstream end of this reach, toxicity from complex municipal/industrial discharges appear to be a more prominent source. A municipal facility serving the Town of Gorham and a food processing facility both discharge to the stream in this area. Again, extensive muckland drainage also likely contributes to the impacts on the biota. (DEC/DOW, BWAM/SBU, June 2005)

Previously, there have been concerns regarding the impact of pesticide use in this watershed on water quality and aquatic

life support. A 1997 study by USGS found various pesticides in water samples. (USGS, 1998)

This segment includes the portion of the stream and all tribs above the old dam in Gorham. The waters of this portion of the stream are Class A. Tribs to this reach/segment, including Nettle Valley Creek (-26) and Segar Gully (-39) are Class C,C(T),C(TS). Lower Flint Creek is listed separately.

# Canandaigua Lake (0704-0001)

Threat(Poss)

## Waterbody Location Information

Revised: 08/13/2007

**Water Index No:** Ont 66-12-52..P286  
**Hydro Unit Code:** 04140201/190      **Str Class:** AA(TS)  
**Waterbody Type:** Lake  
**Waterbody Size:** 10604.5 Acres  
**Seg Description:** entire lake  
**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Ontario Co. (35)  
**Quad Map:** CANANDAIGUA LAKE (J-11-3)

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Water Supply    | Threatened | Possible              |

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Possible: OTHER POLLUTANTS

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

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

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DEC/DOW  
**TMDL/303d Status:** n/a  
**Resolution Potential:** High

## Further Details

Water supply uses in Canandaigua Lake may experience minor threats due to various activities in the watershed. The designation of this waterbody as a threatened water is reflective of a need to protect its particular resource value, rather than specifically identified threats.

Canandaigua Lake is best characterized as oligotrophic due to low phosphorus concentrations and chlorophyll a and high lake clarity. These trophic indicators have improved significantly over the past several decades. The water column of the lake remains well-oxygenated during the growing season. The rate of sediment deposition in the lake is one of the lowest in all Finger Lakes. (Water Quality Study of the Finger Lakes, DEC/DOW, July 2001)

A previously issued fish consumption advisory for the lake due to PCBs was lifted in 2005. Elevated levels of DDT have been noted in the lake, but these levels in the sediments have declined markedly over the last several decades.

Although there are no known water quality impacts in Canandaigua Lake, the segment is considered a highly valued water resource due to its drinking water supply classification of AA(TS). This designation indicates the lake is to be maintained so as to provide a potable water supply with a minimum of treatment. The inclusion of this waterbody on the DEC/DOW Priority Waterbodies List as a Threatened water is a reflection of the particular resource value reflected in this

designation and the need to provide additional protection, rather than any specifically identified threats.

## West River, Lower, and minor tribs (0704-0049)

MinorImpacts

### Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52..P286-18  
**Hydro Unit Code:** 04140201/190      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 39.8 Miles  
**Seg Description:** stream and selected tribs, from mouth to Middlesex

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Yates Co. (62)  
**Quad Map:** MIDDLESEX (K-11-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

#### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: Silt/Sediment  
Possible: ---

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

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

### Resolution/Management Information

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

**Resolution Potential:** Medium

### Further Details

Aquatic life support and recreational uses in this portion of West River are known to experience impacts due to nutrient enrichment from agricultural and other nonpoint sources in the watershed.

A biological (macroinvertebrate) assessment of West River in Middlesex (at Valley View Road) was conducted in 2006. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was identified as the likely cause of the impact. Previous sampling at this site in 2001 revealed conditions to be moderately impacted. Although aquatic life is supported in the stream and in spite of recent apparent improvement to slightly impacted, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to/including unnamed trib (-16) in Middlesex. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C. Naples Creek (-2) and Upper West River are listed separately.

# Naples Creek, Lower, and minor tribs (0704-0051)

Need Verific

## Waterbody Location Information

Revised: 08/09/2007

**Water Index No:** Ont 66-12-52..P286-18-2  
**Hydro Unit Code:** 04140201/180      **Str Class:** C(TS)  
**Waterbody Type:** River  
**Waterbody Size:** 22.3 Miles  
**Seg Description:** stream and tribs, from mouth to Naples

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Ontario Co. (35)  
**Quad Map:** BRISTOL SPRINGS (K-11-1)

## 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: NUTRIENTS, SILT/SEDIMENT  
Possible: ---

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

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

## 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 Naples Creek may experience minor impacts/threats due to nutrients and silt/sediment from nonpoint sources.

A biological (macroinvertebrate) assessment of Naples Creek in Naples (at Parish Road ) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions, however the impact likely reflects some habitat (impoundment) effect. A good diversity of macroinvertebrates was present, including mayflies, stoneflies and caddisflies. However many worms and scuds were also noted, reflecting high levels of silt and algae. Similar results were found during 1996 sampling, however that sample was assessed as within the range of non-impacted. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and all tribs from the mouth to Grimes Creek (-8) in Naples. The waters of this portion of the stream are Class C(TS). Tribs to this reach/segment are Class C. Grimes Creek (-8) and Upper Naples/Eelpot Creek are listed separately.

# Grimes Creek and tribs (0704-0002)

Need Verific

## Waterbody Location Information

Revised: 08/16/2007

**Water Index No:** Ont 66-12-52..P286-18- 2- 8  
**Hydro Unit Code:** 04140201/190      **Str Class:** AA(TS)  
**Waterbody Type:** River  
**Waterbody Size:** 23.9 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
**Reg/County:** Seneca/Clyde Rivers  
**Quad Map:** 8/Ontario Co. (35)  
**Quad Map:** NAPLES (K-11-4)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Recreation      | Stressed | Possible              |
| Aesthetics      | Stressed | Possible              |

### Type of Pollutant(s)

Known: ---  
Suspected: AESTHETICS, D.O./OXYGEN DEMAND, PATHOGENS, Nutrients  
Possible: ---

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

Known: ---  
Suspected: ON-SITE/SEPTIC SYST, OTHER SANITARY DISCH, Urban/Storm Runoff  
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  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Aquatic life support and recreational uses in Grimes Creek may continue to experience impacts due to pollutants from storm sewers and inadequate on-site systems. Previous assessments of this creek indicated that failing onsite septic systems and other direct sanitary discharges to the creek impact recreational and other uses. Storm sewer discharges and other urban runoff in the Village of Naples were also noted as contributing to the impacts. Soil percolation rates in the village are too fast for subsurface disposal on a small lots to be appropriate. Naples is in the early stages of developing a proposal for sanitary sewers and a wastewater treatment system. Concerns had also been previously raised regarding the impact of the Widmer Winery discharge, however the discharge does not go to Grimes Creek (it discharges to a trib of Naples Creek) and the facility is in general compliance with its permit. (DEC/DOW, Region 8, August 2007)

This segment includes the entire stream and all tribs. The waters of the stream are Class C(TS) from the mouth to the water supply intake and Class AA(TS) for the remainder of the reach. Tribs to this reach/segment are Class C,C(T).

# Waterbody Inventory for Seneca River (Upper) Watershed

| Water Index Number                  | Waterbody Segment                                    | Category      |
|-------------------------------------|--|---------------|
| <b>Cayuga Lake Watershed</b>        |  |               |
| Ont 66-12-P296 (portion 1)          | Cayuga Lake, Northern End (0705-0030)                | NoKnownImpact |
| Ont 66-12-P296 (portion 2)          | Cayuga Lake, Main Lake, Mid-North (0705-0025)        | Threat(Poss)  |
| Ont 66-12-P296 (portion 3)          | Cayuga Lake, Main Lake, Mid-South (0705-0050)        | Threat(Poss)  |
| Ont 66-12-P296 (portion 4)          | Cayuga Lake, Southern End (0705-0040)                | Impaired Seg  |
| Ont 66-12-P296- 1 thru 56 (sel.)    | Minor Tribs to Cayuga Lake, Eastern (0705-0051)      | UnAssessed    |
| Ont 66-12-P296- 4                   | Yawgers Creek and tribs (0705-0006)                  | Need Verific  |
| Ont 66-12-P296- 15                  | Great Gully Creek and tribs (0705-0052)              | UnAssessed    |
| Ont 66-12-P296- 27                  | Paines Creek and tribs (0705-0053)                   | UnAssessed    |
| Ont 66-12-P296- 57                  | Salmon Creek, Lower, and tribs (0705-0097)           | MinorImpacts  |
| Ont 66-12-P296- 57                  | Salmon Creek, Upper (Big), and tribs (0705-0054)     | MinorImpacts  |
| Ont 66-12-P296- 57-21               | Little Salmon Creek and tribs (0705-0098)            | NoKnownImpact |
| Ont 66-12-P296- 58 thru 73 (sel.)   | Minor Tribs to Cayuga Lake, Southeastern (0705-0055) | UnAssessed    |
| Ont 66-12-P296- 74                  | Fall Creek, Lower, and tribs (0705-0036)             | NoKnownImpact |
| Ont 66-12-P296- 74                  | Fall Creek, Upper, and tribs (0705-0056)             | UnAssessed    |
| Ont 66-12-P296- 74- 4- 6-P318       | Dryden Lake (0705-0042)                              | UnAssessed    |
| Ont 66-12-P296- 74-16               | Virgil Creek and tribs (0705-0057)                   | MinorImpacts  |
| Ont 66-12-P296- 74-P308             | Beebee Lake (0705-0058)                              | UnAssessed    |
| Ont 66-12-P296- 74-P333             | Lake Como (0705-0029)                                | MinorImpacts  |
| Ont 66-12-P296- 75                  | Cayuga Inlet, Lower, and minor tribs (0705-0041)     | MinorImpacts  |
| Ont 66-12-P296- 75                  | Cayuga Inlet, Upper, and minor tribs (0705-0059)     | Threatened    |
| Ont 66-12-P296- 75- 3               | Cascadilla Creek and tribs (0705-0035)               | MinorImpacts  |
| Ont 66-12-P296- 75- 5               | Sixmile Creek, Upper, and tribs (0705-0043)          | Need Verific  |
| Ont 66-12-P296- 75- 5-P340b         | Ithaca Reservoir (0705-0060)                         | UnAssessed    |
| Ont 66-12-P296- 75-10               | Buttermilk Creek, Lower, and tribs (0705-0061)       | UnAssessed    |
| Ont 66-12-P296- 75-10               | Buttermilk Creek, Upper, and tribs (0705-0062)       | UnAssessed    |
| Ont 66-12-P296- 75-10-P347a         | Lake Treman (0705-0063)                              | Need Verific  |
| Ont 66-12-P296- 75-10-P349          | Jennings Pond (0705-0064)                            | Need Verific  |
| Ont 66-12-P296- 75-16               | Enfield Creek, Lower, and tribs (0705-0065)          | Need Verific  |
| Ont 66-12-P296- 75-16               | Fish Kill, Upper, and tribs (0705-0066)              | UnAssessed    |
| Ont 66-12-P296- 75-16- 4            | Endfield Creek, Upper, and tribs (0705-0067)         | UnAssessed    |
| Ont 66-12-P296- 76 thru 97 (sel.)   | Minor Tribs to Cayuga Lake, Southwestern (0705-0068) | UnAssessed    |
| Ont 66-12-P296- 98                  | Taughannock Creek, Lower, and tribs (0705-0069)      | Threatened    |
| Ont 66-12-P296- 98                  | Taughannock Creek, Upper, and tribs (0705-0013)      | UnAssessed    |
| Ont 66-12-P296- 99 thru 167 (sel.)  | Minor Tribs to Cayuga Lake, Western (0705-0070)      | UnAssessed    |
| Ont 66-12-P296-102                  | Trumansburg Creek and tribs (0705-0071)              | UnAssessed    |
| <b>Upper Seneca River Watershed</b> |  |               |
| Ont 66-12 (portion 6)               | Seneca River, Upper, Main Stem (0705-0023)           | Need Verific  |
| Ont 66-12 (portion 6a)/P366a        | Van Cleef Lake (0705-0072)                           | UnAssessed    |
| Ont 66-12 (portion 7)               | Seneca River, Upper, Main Stem (0705-0044)           | UnAssessed    |

# ...Seneca River (Upper) Watershed

| Water Index Number                          | Waterbody Segment                                 | Category     |
|---|---|--------------|
| <b>Upper Seneca River Watershed (con't)</b> |   |              |
| 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   |
| <b>Seneca Lake Watershed</b>                |   |              |
| Ont 66-12-P369 (portion 1)                  | Seneca Lake, Main Lake, North (0705-0026)         | NoKnownImpct |
| Ont 66-12-P369 (portion 2)                  | Seneca Lake, Main Lake, Middle (0705-0021)        | Threat(Poss) |
| Ont 66-12-P369 (portion 3)                  | Seneca Lake, Main Lake, South (0705-0014)         | NoKnownImpct |
| Ont 66-12-P369- 1 thru 58 (sel.)            | Minor Tribs to Seneca Lake, Eastern (0705-0073)   | UnAssessed   |
| Ont 66-12-P369- 6                           | Reeder Creek and tribs (0705-0074)                | UnAssessed   |
| Ont 66-12-P369- 14                          | Indian Creek and tribs (0705-0075)                | UnAssessed   |
| Ont 66-12-P369- 28                          | Mill Creek and tribs (0705-0076)                  | NoKnownImpct |
| Ont 66-12-P369- 44                          | Saw Mill Creek and tribs (0705-0077)              | NoKnownImpct |
| Ont 66-12-P369- 56                          | Hector Falls Creek and tribs (0705-0007)          | NoKnownImpct |
| Ont 66-12-P369- 59                          | Seneca Lake Inlet and minor tribs (0705-0078)     | UnAssessed   |
| Ont 66-12-P369- 59 (upper)                  | Catherine Creek and tribs (0705-0011)             | NoKnownImpct |
| Ont 66-12-P369- 59- 3a                      | Johns Creek, Upper, and tribs (0705-0079)         | UnAssessed   |
| Ont 66-12-P369- 59- 5a                      | Catlin Mills Creek and tribs (0705-0080)          | UnAssessed   |
| Ont 66-12-P369- 59- 6                       | Mitchell Hollow Creek and tribs (0705-0081)       | UnAssessed   |
| Ont 66-12-P369- 60                          | Glen Creek and minor tribs (0705-0082)            | UnAssessed   |
| Ont 66-12-P369- 60- 1                       | Old Barge Canal and minor tribs (0705-0083)       | UnAssessed   |
| Ont 66-12-P369- 60- 1- 2                    | Shequaga Creek and tribs (0705-0084)              | UnAssessed   |
| Ont 66-12-P369- 61 thru 114                 | Minor Tribs to Seneca Lake, Southwest (0705-0085) | UnAssessed   |
| Ont 66-12-P369- 91                          | Rock Stream and tribs (0705-0086)                 | NoKnownImpct |
| Ont 66-12-P369- 93                          | Big Stream, Lower, and tribs (0705-0087)          | NoKnownImpct |
| Ont 66-12-P369- 93                          | Big Stream, Upper, and tribs (0705-0088)          | UnAssessed   |
| Ont 66-12-P369-104                          | Plum Point Creek and tribs (0705-0089)            | UnAssessed   |
| Ont 66-12-P369-115                          | Keuka Lake Outlet and tribs (0705-0020)           | NoKnownImpct |
| Ont 66-12-P369-115-P388                     | Keuka Lake (0705-0003)                            | Impaired Seg |
| Ont 66-12-P369..P388- 1 thru 35             | Minor Tribs to Keuka Lake, Eastern (0705-0090)    | UnAssessed   |
| Ont 66-12-P369..P388-36                     | Keuka Lake Inlet/Cold Brook and tribs (0705-0091) | NoKnownImpct |
| Ont 66-12-P369..P388-37 thru 61             | Minor Tribs to Keuka Lake, Western (0705-0092)    | UnAssessed   |
| Ont 66-12-P369..P388-62                     | Sugar Creek, Lower, and tribs (0705-0018)         | NoKnownImpct |
| Ont 66-12-P369..P388-62                     | Sugar Creek, Upper, and tribs (0705-0093)         | UnAssessed   |
| Ont 66-12-P369..P388-62 thru 69             | Minor Tribs to Keuka Lake, Northern (0705-0094)   | UnAssessed   |
| Ont 66-12-P369-116 thru 139                 | Minor Tribs to Seneca Lake, Northwest (0705-0027) | UnAssessed   |
| Ont 66-12-P369-128                          | Kashong Creek and tribs (0705-0017)               | Need Verific |
| Ont 66-12-P369-133                          | Wilson/Burrell Creek and tribs (0705-0096)        | UnAssessed   |

# Cayuga Lake, Northern End (0705-0030)

NoKnownImpct

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296 (portion 1)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/150      **Str Class:** B(T)      Seneca/Clyde Rivers  
**Waterbody Type:** Lake      **Reg/County:** 8/Seneca Co. (50)  
**Waterbody Size:** 888.2 Acres      **Quad Map:** CAYUGA (J-14-1)  
**Seg Description:** portion of lake, as described below

## 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

Cayuga Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 2002 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. Over the years, CSLAP sampling of this large lake has been conducted at four separate site, referred to as the North, Mid-North, Mid-South and South sites; the most recent (2005) sampling was conducted at the North and Mid-South sites. All of these sites are located outside the bounds of this segment of the lake, but are considered generally representative of conditions. These data indicate that the lake continues to be best characterized as mesotrophic to oligotrophic, or moderately productive to unproductive. With the exception of higher clarity and lower algae levels in the mid-north basin, there does not appear to be a statistically significant difference among the results from the different sampling sites. Phosphorus levels in the lake consistently fall below the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements consistently meet what is recommended for swimming beaches. Measurements of pH occasionally fall above the state water quality range of 6.5 to 8.5 but these results appear to be a result of naturally hard water and does not seem to limit the ecology of the lake. The lake water is weakly colored, which considered to be reflective of natural conditions. (DEC/DOW, BWAM/CSLAP, March 2006 and Water Quality Study of the Finger Lakes, DEC/DOW, July 2001)

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." The lake itself is most often described as "not quite crystal clear," an assessment that is slightly more favorable than in other lakes with similar water quality conditions, although perhaps also typical of lakes in which water clarity showed an increase. Both the north and mid-south sites are occasionally described as "slightly" or "substantially" impacted for recreational uses, although these assessments do not correspond to "poor water clarity" or "excessive weed growth" and may be more closely associated with poor weather or other non-water quality factors. (DEC/DOW, BWAM/CSLAP, March 2006)

Invasive species remain a concern in the lake, though there are currently no significant impacts on recreational or other uses. Excessive growth of macrophytic vegetation including Eurasian water milfoil has been previously cited as a problem in the north end of the lake. However the appearance of the European Aquatic Moth (*Acentria nivea*) has dramatically reduced the impact of milfoil and the aquatic macrophyte community is dominated by lower and later growing native species of plants which have improved the recreational use and aesthetics of the lake. The introduction of the zebra mussel into the lake in the early 1990's has led to a dramatic increase in water clarity. Since 1993, algae blooms have become less frequent. However other potential changes to the ecology of the lake due to zebra mussels should be monitored. (Cayuga County WQMA, 2001)

This segment includes the portion of the lake south of Lock 1 in Mud Lock and north of an east-west line extending from Bridgeport-Seneca Falls Road on the west shore to the Village of Cayuga on the east shore.

# Cayuga Lake, Main Lake, Mid-North (0705-0025)

Threat(Poss)

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296 (portion 2)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/150      **Str Class:** A(T)      Seneca/Clyde Rivers  
**Waterbody Type:** Lake      **Reg/County:** 8/Seneca Co. (50)  
**Waterbody Size:** 7861.1 Acres      **Quad Map:** CAYUGA (J-14-1)  
**Seg Description:** portion of lake, as described below

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Water Supply    | Threatened | Possible              |

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Possible: OTHER POLLUTANTS

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

Known: ---  
Suspected: ON-SITE/SEPTIC SYST  
Possible: OTHER SOURCE, Agriculture, Atmosph. Deposition, Industrial, Landfill/Land Disp., Municipal, Roadbank Erosion, Streambank Erosion, Urban/Storm Runoff

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DEC/DOW      **Resolution Potential:** High  
**TMDL/303d Status:** n/a

## Further Details

Water supply uses in this portion of Cayuga Lake may experience minor threats due to various activities in the watershed. The designation of this waterbody as a threatened water is reflective of a need to protect its particular resource value, rather than specifically identified threats.

Cayuga Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 2002 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. Over the years, CSLAP sampling of this large lake has been conducted at four separate site, referred to as the North, Mid-North, Mid-South and South sites; the most recent (2005) sampling was conducted at the North and Mid-South sites. The North site is located within this portion of the lake. While it is not appropriate to assume homogeneity of water quality throughout this large lake, it is assumed that results at these two sites are generally reflective on conditions in this portion of the lake. These data indicate that the lake continues to be best characterized as mesotrophic to oligotrophic, or moderately productive to unproductive. With the exception of higher clarity and lower algae levels in the mid- north basin, there does not appear to be a statistically significant difference among the results from the different sampling sites. Phosphorus levels in the lake consistently fall below the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements consistently meet what is

recommended for swimming beaches. Measurements of pH occasionally fall above the state water quality range of 6.5 to 8.5 but these results appear to be a result of naturally hard water and does not seem to limit the ecology of the lake. The lake water is weakly colored, which considered to be reflective of natural conditions. (DEC/DOW, BWAM/CSLAP, March 2006 and Water Quality Study of the Finger Lakes, DEC/DOW, July 2001)

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." The lake itself is most often described as "not quite crystal clear," an assessment that is slightly more favorable than in other lakes with similar water quality conditions, although perhaps also typical of lakes in which water clarity showed an increase. Both the north and mid-south sites are occasionally described as "slightly" or "substantially" impacted for recreational uses, although these assessments do not correspond to "poor water clarity" or "excessive weed growth" and may be more closely associated with poor weather or other non-water quality factors. (DEC/DOW, BWAM/CSLAP, March 2006)

Invasive species remain a concern in the lake, though there are currently no significant impacts on recreational or other uses. Excessive growth of macrophytic vegetation including Eurasian water milfoil has been previously cited as a problem. However the appearance of the European Aquatic Moth (*Acentria nivea*) has dramatically reduced the impact of milfoil and the aquatic macrophyte community is dominated by lower and later growing native species of plants which have improved the recreational use and aesthetics of the lake. The introduction of the zebra mussel into the lake in the early 1990's has led to a dramatic increase in water clarity. Since 1993, algae blooms have become less frequent. However other potential changes to the ecology of the lake due to zebra mussels should be monitored. (Cayuga County WQMA, 2001)

The NYSDOH Source Water Assessment Program (SWAP) compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. Drinking water supplies in this waterbody include the Village of Cayuga and Village of Seneca Falls water supplies. This assessment found an elevated susceptibility to contamination for this source of drinking water. Specifically the amount of agricultural lands in the assessment area results in elevated potential for phosphorus, DBP precursors, and pesticides contamination. In addition, the moderate density of CAFOs in the assessment area may add to the potential for contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality based on their density in the assessment area. However, it appears that the total amount of wastewater discharged to surface water in this assessment area is high enough to seriously raise the potential for contamination. Some susceptibility associated with other sources, such as landfills, was also noted. (NYSDOH, Source Water Assessment Program, 2004)

Although there are no significant known water quality impacts in this portion of Cayuga Lake, the segment is considered a highly valued water resource due to its drinking water supply classification. The inclusion of this waterbody on the DEC/DOW Priority Waterbodies List as a Threatened water is a reflection of the particular resource value reflected in this designation and the need to provide additional protection, rather than any specifically identified threats.

This segment includes the portion of the lake south of an east-west line extending from Bridgeport-Seneca Falls Road on the west shore to the Village of Cayuga on the east shore and north of an east-west line extended from Coonley Corners Road in Coonley Corners.

# Cayuga Lake, Main Lake, Mid-South (0705-0050)

Threat(Poss)

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296 (portion 3)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/150      **Str Class:** AA(T)      Seneca/Clyde Rivers  
**Waterbody Type:** Lake      **Reg/County:** 8/Seneca Co. (50)  
**Waterbody Size:** 33082.7 Acres      **Quad Map:** UNION SPRINGS (J-14-4)  
**Seg Description:** portion of lake, as described below

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Water Supply    | Threatened | Possible              |

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Possible: OTHER POLLUTANTS (24)

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

Known: ---  
Suspected: ---  
Possible: OTHER SOURCE

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DEC/DOW      **Resolution Potential:** High  
**TMDL/303d Status:** n/a

## Further Details

Water supply uses in this portion of Cayuga Lake may experience minor threats due to various activities in the watershed. The designation of this waterbody as a threatened water is reflective of a need to protect its particular resource value, rather than specifically identified threats.

Cayuga Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 2002 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. Over the years, CSLAP sampling of this large lake has been conducted at four separate sites, referred to as the North, Mid-North, Mid-South and South sites; the most recent (2005) sampling was conducted at the North and Mid-South sites. The Mid-North, Mid-South and South sites are all located within this portion of the lake. These data indicate that the lake continues to be best characterized as mesotrophic to oligotrophic, or moderately productive to unproductive. With the exception of higher clarity and lower algae levels in the mid-north basin, there does not appear to be a statistically significant difference among the results from the different sampling sites. Phosphorus levels in the lake consistently fall below the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements consistently meet what is recommended for swimming beaches. Measurements of pH occasionally fall above the state water quality range of 6.5 to 8.5 but these results appear to be a result of naturally hard water and does not seem to limit the ecology of the lake. The lake water is weakly colored, which is considered to be

reflective of natural conditions. (DEC/DOW, BWAM/CSLAP, March 2006 and Water Quality Study of the Finger Lakes, DEC/DOW, July 2001)

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." The lake itself is most often described as "not quite crystal clear," an assessment that is slightly more favorable than in other lakes with similar water quality conditions, although perhaps also typical of lakes in which water clarity showed an increase. Both the north and mid-south sites are occasionally described as "slightly" or "substantially" impacted for recreational uses, although these assessments do not correspond to "poor water clarity" or "excessive weed growth" and may be more closely associated with poor weather or other non-water quality factors. (DEC/DOW, BWAM/CSLAP, March 2006)

Invasive species remain a concern in the lake, though there are currently no significant impacts on recreational or other uses. Excessive growth of macrophytic vegetation including Eurasian water milfoil has been previously cited as a problem. However the appearance of the European Aquatic Moth (*Acentria nivea*) has dramatically reduced the impact of milfoil and the aquatic macrophyte community is dominated by lower and later growing native species of plants which have improved the recreational use and aesthetics of the lake. The introduction of the zebra mussel into the lake in the early 1990's has led to a dramatic increase in water clarity. Since 1993, algae blooms have become less frequent. However other potential changes to the ecology of the lake due to zebra mussels should be monitored. (Cayuga County WQMA, 2001)

Although there are no significant known water quality impacts in this portion of Cayuga Lake, the segment is considered a highly valued water resource due to its drinking water supply classification of AA(TS). This designation indicates the lake is to be maintained so as to provide a potable water supply with a minimum of treatment. The inclusion of this waterbody on the DEC/DOW Priority Waterbodies List as a Threatened water is a reflection of the particular resource value reflected in this designation and the need to provide additional protection, rather than any specifically identified threats.

This segment includes the portion of the lake south of an east-west line extended from Coonley Corners Road in Coonley Corners and north of an east-west line through McKinneys Point in McKinneys.

# Cayuga Lake, Southern End (0705-0040)

**Impaired**

## Waterbody Location Information

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Revised: 03/11/2015

**Water Index No:** Ont 66-12-P296 (portion 4)      **Drain Basin:** Oswego-Seneca-Oneida  
**Unit Code:** 04140201      **Class:** A      Seneca/Clyde Rivers  
**Water Type/Size:** Lake      965.3 Acres      **Reg/County:** 7/Tompkins Co. (55)  
**Description:** southern portion, as described

## Water Quality Problem/Issue Information

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| Uses Evaluated   | Severity        | Confidence  |
|------------------|-----------------|-------------|
| Water Supply     | Threatened      | Known       |
| Public Bathing   | Impaired        | Known       |
| Recreation       | Impaired        | Known       |
| Aquatic Life     | Fully Supported | Suspected   |
| Fish Consumption | Fully Supported | Unconfirmed |

### Conditions Evaluated

|                   |      |
|-------------------|------|
| Habitat/Hydrology | Fair |
| Aesthetics        | Fair |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus), SILT/SEDIMENT, AQUATIC INVASIVE SPECIES (Hydrilla)  
Suspected: - - -  
Unconfirmed: - - -

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

Known: - - -  
Suspected: AGRICULTURE, URBAN/STORM RUNOFF, Municipal, Power Generation Discharges, Habitat Modification, Streambank Erosion  
Unconfirmed: - - -

## Management Information

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

## Further Details

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### Overview

Public bathing and recreational uses in the Southern End of Cayuga Lake are impaired by periodic algal blooms and aquatic plant growth along the shore. Nutrient (phosphorus) and silt/sediment loads from various sources throughout the watershed result in the algal/plant growth. Aquatic invasive species (Hydrilla) have also been identified in the South End of the Lake and its tributaries. Water supply uses are also considered to be threatened as well.

### Use Assessment

This portion of the Lake is a Class A waterbody, suitable for use as a water supply, public bathing beach, for general

recreation and support of aquatic life.

Since the 1960s, Stewart Beach along the southern shore of Cayuga Lake has been closed to public bathing due to limited water clarity and corresponding safety issues. Aesthetic concerns including nuisance algal blooms, extensive rooted aquatic plant growth, and odors from decaying plants also discourage recreational use of the lake. Sediment loads to the lake contribute to the water clarity issues and also support rooted plant growth. Monitoring data has found that while phosphorus levels in the main lake consistently fall below the state guidance value, concentrations in the shallow southern end of the lake approach and regularly exceed the guidance value of 20 ug/l indicating impacted/stressed recreational uses. (DEC/DOW, BWAM/CSLAP, March 2006 and Water Quality Study of the Finger Lakes, DEC/DOW, July 2001)

Aquatic life is considered to be fully supported based on the support of a healthy fishery. The main lake supports warm and cold water species. Gamefish include lake trout, rainbow trout, landlocked salmon, brown trout, northern pike, chain pickerel, largemouth and smallmouth bass. Panfish include crappies, bluegill, pumpkinseed, yellow perch and bullheads. Carp, channel catfish and longnose gar are also found in the lake. The main forage base is alewives, smelt and yellow perch. Cayuga is stocked annually with approximately 60,000 lake trout, 25,000 brown trout and 40,000 landlocked salmon. Cayuga's tributaries are stocked with 50,000 rainbow trout. (DEC/DFWMR, Region 7 Fisheries, December 2014)

Hydrilla verticillatum (hydrilla, or water thyme) was discovered in Cayuga Inlet in August of 2011. Hydrilla restricts recreational activities and has created significant ecological and economic problems throughout the country, and is particularly challenging to control due to abundant and persistent modes of reproduction, spread, and transport.

The NYSDOH Source Water Assessment Program (SWAP) compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. Drinking water supplies in this waterbody include the Southern Cayuga Lake Intermunicipal Water Commission water supply. This assessment found a moderate susceptibility to contamination for this source of drinking water. Specifically the amount of agricultural lands and the number of CAFOs in the assessment area results in elevated potential for pesticides and other contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality based on their density in the assessment area. However, it appears that the total amount of wastewater discharged to surface water in this assessment area is high enough to seriously raise the potential for contamination. Some susceptibility associated with other sources, such as salt mines, was also noted. (NYSDOH, Source Water Assessment Program, 2004)

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

Cayuga Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 2002 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. Over the years, CSLAP sampling of this large lake has been conducted at four separate sites, referred to as the North, Mid-North, Mid-South and South sites; the most recent (2005) sampling was conducted at the North and Mid-South sites. None of these sites are located within the bounds of the shallower Southern End of the lake and are not thought to be fully representative of conditions in this segment. (DEC/DOW, BWAM/CSLAP, March 2006)

As part of a more comprehensive effort to address algal growth and other recreational impairments in the South End of the lake, a water quality/modeling study of Cayuga Lake to support the development of a phosphorus TMDL began in 2013. The Cayuga Lake Modeling Project (CLMP) includes considerable lake and watershed monitoring components (completed in 2013), and associated model development efforts that are anticipated to continue through 2016. (DEC/DOW, BWAM and BWP, January 2015)

The lake and watershed has been the focus of on-going monitoring by a number of other groups, including the Finger Lakes Institute and the Community Science Institute. A significant NYSDEC monitoring effort, entitled Water Quality Study of the Finger Lakes (Callinan, NYSDEC, 2002), provides a previous comparison of water quality in all the Finger Lakes. (DEC/DOW, BWAM, January 2015)

#### Source Assessment

The sources of pollutant loadings to this segment of Cayuga Lake are numerous. Agricultural activity in the Southern Cayuga Lake watershed is significant and includes, dairy farming, poultry farms and cropland. This portion of the lake also receives discharges from three large point sources: The Ithaca Area WWTP, Cayuga Heights WWTP, and the Cornell Lake Source Cooling Facility. Urban/storm runoff from the City of Ithaca also impacts the lake. Increasing development and stream erosion are also identified as contributors of pollutant loadings to the tribs and to the lake. (Tompkins County Planning Department, 2003)

#### Management Action

An effort to develop a Total Maximum Daily Load (TMDL) plan to address the phosphorus impairment to the southern end of Cayuga Lake is currently underway. The Cayuga Lake Modeling Project (CLMP) represents the first step in this effort. At the end of the CLMP, NYSDEC will begin a TMDL development process that will look at all sources of nutrients to the lake and determine necessary reductions to restore uses in the South End. The model development component of the CLMP is expected to continue through 2016, with formal development of a TMDL by NYSDEC to commence at that time. (DEC/DOW, BWAM, January 2014)

The CLMP/TMDL effort evolved from negotiations for a final SPDES permit to address water releases from Cornell University's Lake Source Cooling (LSC) facility. The permit includes a limit on the amount of phosphorous the Cornell LSC facility draws from the deeper lake and discharges to the shallower southern shelf. An interim limit holds Cornell's discharge of phosphorus at its then-current levels. Once the TMDL is completed, a final limit will be developed based on the results of the TMDL. The permit includes a requirement outlining Cornell's commitment to fund the water quality/modeling study of Cayuga Lake to assist NYSDEC with the development of the TMDL for the South End of the Lake. (DEC/DOW, BWAM, January 2014)

The discovery of the highly invasive aquatic plant Hydrilla in Cayuga Inlet in 2011 prompted immediate and forceful action, due to the great concern that this plant could move into Cayuga Lake and the Great Lakes ecosystem. A state and local Task Force was quickly established to delineate the hydrilla populations, identify appropriate management actions, and proceed with an aggressive strategy to eradicate the 166 acre infestation found in the Inlet and some connected waterways, using federal, state, and local resources. Key members of the Task Force include the City of Ithaca, the Tompkins County Soil and Water Conservation District and Department of Health, Racine-Johnson Aquatic Ecologists, NYSDEC, Canal Corps, and other local and state organizations. Recommendations of the Task Force led NYSDEC to conduct emergency rule-making to allow for a Hydrilla infestation treatment effort. The Task Force is presently engaged in a multi-pronged eradication strategy, including the use of aquatic herbicides, hand removal, boat inspections, and extensive public education, outreach and monitoring. (DEC/DOW, BWAM/LMAS, January 2014)

#### Section 303(d) Listing

The Southern End of Cayuga Lake is included on the current (2014) NYS Section 303(d) List of Impaired Waters. The waterbody is included on Part 1 of the List as a waterbody segment requiring the development of a TMDL or other

strategy to attain water quality standards; the segment is listed for phosphorus and silt/sediment. These waterbody/pollutants were first listed on the 2002 List. The waterbody had also been listed for pathogens (since 2008), but this pollutant was removed from the List in 2014, based on data indicating that pathogen criteria were not being exceeded and that the original listing appeared to be unjustified. (DEC/DOW, BWAM, January 2015)

#### Segment Description

This segment includes the portion of the lake south of an east-west line through McKinneys Point in McKinneys.

# Yawgers Creek and tribs (0705-0006)

Need Verific

## Waterbody Location Information

Revised: 08/16/2007

**Water Index No:** Ont 66-12-P296- 4  
**Hydro Unit Code:** 04140201/140      **Str Class:** C(TS)  
**Waterbody Type:** River  
**Waterbody Size:** 40.4 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** CAYUGA (J-14-1)

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

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| Habitat/Hydrology | Stressed | Possible              |

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: AGRICULTURE  
Possible: Streambank Erosion

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Hydrologic/habitat conditions in Yawger Creek may experience minor impacts/threats due to silt/sedimentation from agricultural nonpoint sources.

Previous assessments have suggested that rainbow trout propagation is impacted by siltation covering spawning areas and nests. A number of agricultural sources are located in the watershed and are thought to contribute sediment to the stream. (DEC/DFWMR, Region 7, 1998)

A biological (macroinvertebrate) assessment of Yawger Creek in Cross Roads (at Cross Road) was last conducted in 2001. Sampling results indicated slightly impacted water quality conditions. The watershed is primarily agricultural and nonpoint source nutrient enrichment is the most significant cause of impact to the stream. These findings are similar to previous sampling on this stream. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

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

# Salmon Creek, Lower, and tribs (0705-0097)

MinorImpacts

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 57  
**Hydro Unit Code:** 04140201/110      **Str Class:** C(TS)  
**Waterbody Type:** River  
**Waterbody Size:** 89.4 Miles  
**Seg Description:** stream and tribs, from mouth to Forks of the Creek

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** LUDLOWVILLE (K-14-3)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), SILT/SEDIMENT  
Suspected: ---  
Possible: ---

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

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

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support in Salmon Creek is known to experience minor impacts due to nutrient enrichment from agricultural nonpoint sources. Contributions from silt/sedimentation were also noted.

A biological (macroinvertebrate) survey of Salmon/Big Salmon Creek at multiple sites between Ludlowville and Bolts Corners was conducted in 2005. Sampling results indicated slightly impacted water quality conditions in most of the Salmon Creek reach, though a site just below the confluence of Little Salmon and Big Salmon Creeks in Forks of the Creek revealed a fauna that was evaluated to be just into the moderately impacted range. Nonpoint sources of nutrients and silt/sedimentation were determined to be the primary causes of the impacts. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, October 2005)

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Salmon Creek in Myers Point, Tompkins County, (at Lake Shore Road) was conducted in 2002. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated slightly impacted water quality conditions. nutrient enrichment and siltation were noted as the primary cause of impacts. Water column

sampling revealed nitrite was found to slightly exceed assessment criteria in one of the ten samples collected and was identified to be a parameters of concern. Two of ten pH values were found to be above the 6.5 to 8.5 range, however this is likely more reflective of natural conditions that a water quality impact. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

This segment includes the portion of the stream and all tribs from the mouth in Myers to the Little Salmon Creek (-21) in Forks of the Creek. Above Little Salmon Creek the stream is known as Big Salmon Creek. The waters of this portion of the stream are Class C(TS). Tribs to this reach/segment, including Locke Creek (-8), are primarily Class C,C(T); a portion of one unnamed trib (-3-4) is designated Class B. Upper Salmon Creek and Little Salmon Creek (-21) are listed separately.

# Salmon Creek, Upper (Big), and tribs (0705-0054)

MinorImpacts

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 57  
**Hydro Unit Code:** 04140201/110      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 81.2 Miles  
**Seg Description:** stream and tribs, above Forks of the Creeks

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** GENOA (K-14-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: Silt/Sediment  
Possible: ---

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

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

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support in Big Salmon Creek is known to experience minor impacts due to nutrient enrichment from agricultural nonpoint sources.

A biological (macroinvertebrate) survey of Salmon/Big Salmon Creek at multiple sites between Ludlowville and Bolts Corners was conducted in 2005. Sampling results indicated slightly impacted water quality conditions in the Big Salmon Creek reach, though a site just downstream of this reach in Forks of the Creek revealed a fauna that was evaluated to be just into the moderately impacted range. Nonpoint sources of nutrients were determined to be the primary cause of the impacts. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, October 2005)

This segment includes the portion of the stream and all tribs above Little Salmon Creek (-21) in Forks of the Creek. The waters of this portion of the stream are Class C,C(TS). Tribs to this reach/segment are Class C. Lower Salmon Creek and Little Salmon Creek are listed separately.

# Little Salmon Creek and tribs (0705-0098)

NoKnownImpct

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 57-21  
**Hydro Unit Code:** 04140201/110      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 32.4 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** GENOA (K-14-2)

## 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

A biological (macroinvertebrate) assessment of Little Salmon Creek Little Hollow (at Creek Road) was conducted in 1996. Sampling results indicated non-impacted water quality conditions. Some nonpoint source nutrient enrichment was evident. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

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.

# Fall Creek, Lower, and tribs (0705-0036)

NoKnownImpet

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 74  
**Hydro Unit Code:** 04140201/100      **Str Class:** A  
**Waterbody Type:** River  
**Waterbody Size:** 52.6 Miles  
**Seg Description:** stream and tribs, from mouth to Freeville

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** ITHACA EAST (L-15-1)

## 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

A biological (macroinvertebrate) assessment of Fall Creek in Ithaca (below Ithaca Falls) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. Previous sampling in 1995 and 1996 found water quality to be slightly impacted. (DEC/DOW, BWAM/SBU, June 2005)

The NYSDOH Source Water Assessment Program (SWAP) compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. Drinking water supplies in this waterbody include the supply for Cornell University. This assessment found no specific source of contamination, however elevated susceptibility to contamination for this source was noted due to the amount of pasture in the assessment area. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality, based on their density in the assessment area. However, it is appears that the total amount of wastewater discharged to surface water in this assessment area is high enough to further raise the potential for contamination. It should also be noted that relatively high flow rates make river drinking water supplies highly sensitive to existing and new sources of microbial contamination. (NYSDOH, Source Water Assessment Program, 2005)

This segment includes the portion of the stream and all tribs from the mouth in Ithaca to Virgil Creek (-16) near Freeville. The waters of this portion of the stream are Class B from the mouth to the Cornell University water supply intake and Class A for the remainder of the reach. Tribs to this reach/segment are also Class A. Virgil Creek (-16) is listed separately.

# Virgil Creek and tribs (0705-0057)

# MinorImpacts

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 74-16  
**Hydro Unit Code:** 04140201/090      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 88.2 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** DRYDEN (L-15-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: Silt/Sediment  
Possible: ---

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

Known: ---  
Suspected: HABITAT MODIFICATION (stream realignment), Agriculture  
Possible: ---

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support in Virgil Creek is known to experience minor impacts due to nutrient enrichment. Nutrient enrichment is typically the result of nonpoint sources. However, the more significant impacts in the stream correspond to a stream realignment project that was completed just prior to the most recent sampling and may have influenced the sample results.

A biological (macroinvertebrate) survey Virgil Creek at multiple sites between Freeville and Virgil was conducted in 2005. Sampling results indicated non-impacted to slightly impacted water quality conditions. Nutrient enrichment was identified as the primary cause of the impact. These impacts were most significant downstream of a stream realignment project and may be related to that activity. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, March 2006)

A biological assessment of the site in Freeville (Johnson Road) was conducted in 2001. Sampling revealed slightly impacted conditions, which represented a decline from non-impacted conditions found in 1987. The 2005 survey was a response to this finding and an attempt to identify the cause of the water quality decline. (DEC/DOW, BWAM/SBU, March 2006)

This segment includes the entire stream and all tribs. The waters of the stream are Class C(T),C(TS). Tribs to this reach/segment, including Dryden Creek (-6), are Class C,C(T),C(TS).

# Lake Como (0705-0029)

# MinorImpacts

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 74-P333  
**Hydro Unit Code:** 04140201/100      **Str Class:** B  
**Waterbody Type:** Lake  
**Waterbody Size:** 64.1 Acres  
**Seg Description:** entire lake

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Cayuga Co. ( 6)  
**Quad Map:** SEMPRONIUS (K-15-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Public Bathing  | Stressed | Known                 |
| Recreation      | Stressed | Known                 |

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus), PROBLEM SPECIES  
Suspected: D.O./Oxygen Demand  
Possible: Pathogens

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

Known: AGRICULTURE, HABITAT MODIFICATION  
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:** ext/WQCC  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Recreational uses in Lake Como are known to experience minor impacts due to aquatic weed growth. Elevated nutrient levels from various nonpoint sources are thought to contribute to the weed and algal growth.

Lake Como has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1988 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2006. These data indicate that the lake continues to be best characterized as mesoeutrophic, or moderately to highly productive. Phosphorus levels in the lake occasionally exceed the state guidance values indicating impacted/stressed recreational uses. However corresponding transparency measurements typically meet what is recommended for swimming beaches. Measurements of pH were occasionally noted to be above the state water quality range of 6.5 to 8.5, but this is likely reflective on natural conditions in this watershed and not representative of a water quality problem. The lake water is weakly to moderately colored, which is also likely typical of natural conditions. Nitrate levels in the lake are high. (DEC/DOW, BWAM/CSLAP, March 2006)

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 have been less favorable in recent years. The recreational suitability of the lake is

described most frequently as "slightly" impacted for most uses. The lake itself is most often described as having "definite algal greenness." Assessments have noted that aquatic plants typically grow to the lake surface and, though not usually dense, they do impact recreational use. Aquatic plants are dominated by a mix of native and non-native (invasive) species and as noted above have resulted in impacts to recreational uses. (DEC/DOW, BWAM/CSLAP, March 2006)

This lake waterbody is designated class B, suitable for use as a public bathing beach, general recreation and aquatic life support, but not as a public water supply. 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.

The primary source of nutrients appears to be onsite systems from surrounding lake residences. Agricultural runoff from manure-spread fields, and cattle access to tributary streams are also considered to contribute nutrient loads. Mechanical harvesting of aquatic weed beds is conducted by the Cayuga County SWCD. (Cayuga County WQMA, 2003)

# Cayuga Inlet, Lower, and minor tribs (0705-0041)

# MinorImpacts

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 75  
**Hydro Unit Code:** 04140201/080      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 2.1 Miles  
**Seg Description:** stream and selected tribs, from mouth to Ithaca

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** ITHACA WEST (L-14-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Suspected             |

### Type of Pollutant(s)

Known: ---  
Suspected: NUTRIENTS, SILT/SEDIMENT  
Possible: ---

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

Known: ---  
Suspected: AGRICULTURE, Streambank Erosion, Urban/Storm Runoff  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support in Cayuga Inlet is thought to experience minor impacts due to silt/sedimentation and nutrient enrichment from various nonpoint sources.

A biological (macroinvertebrate) assessment of Cayuga Inlet above this reach near Newfield Station (at Route 34) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions at this site. Nonpoint source nutrient enrichment was determined to be the primary cause of the impact. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to stress/threaten aquatic life support in the downstream reach. (DEC/DOW, BWAM/SBU, June 2005)

Cayuga Inlet is a primary spawning and nursery area for rainbow trout. Erosion and sedimentation can impact the fishery by filling the gravel beds, limiting spawning, and by creating turbid conditions. Streambank and roadbank erosion, land development, urban runoff and some agriculture are the primary sources of sediment. Streambank stabilization efforts should be considered. (Tompkins County Planning Department, 2003)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to a point 0.7 miles above the mouth in Ithaca. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C.

Cascadilla Creek (-3) and Upper Cayuga Inlet are listed separately.

# Cayuga Inlet, Upper, and minor tribs (0705-0059)

**Threatened**

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 75  
**Hydro Unit Code:** 04140201/080      **Str Class:** C(T)  
**Waterbody Type:** River  
**Waterbody Size:** 129.5 Miles  
**Seg Description:** stream and selected tribs, above Ithaca

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** ITHACA WEST (L-14-2)

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Aquatic Life    | Threatened | Known                 |

### Type of Pollutant(s)

Known: ---  
Suspected: NUTRIENTS (phosphorus), SILT/SEDIMENT  
Possible: ---

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

Known: ---  
Suspected: URBAN/STORM RUNOFF, Agriculture, Habitat Modification (channelization), Streambank Erosion  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support in Cayuga Inlet is known to experience minor impacts/threats due to nutrient enrichment from various nonpoint sources.

A biological (macroinvertebrate) assessment of Cayuga Inlet near Newfield Station (at Route 34) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was determined to be the primary cause of the impact. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and selected/smaller tribs above a point 0.7 miles above the mouth in Ithaca. The waters of this portion of the stream are Class C,C(T),C(TS). Tribs to this reach/segment, including Cliff Park Brook (-4), Lower Sixmile Creek (-5), Coy Glen (-7), Lick Brook (-17), West Branch (-25) and VanBuskirk Creek (-31) are also Class C,C(T),C(TS). Upper Sixmile Creek (-5), Buttermilk Creek (-10), Endfield Creek (-16) and Lower Cayuga Inlet are listed separately.

# Cascadilla Creek and tribs (0705-0035)

MinorImpacts

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 75- 3  
**Hydro Unit Code:** 04140201/080      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 35.3 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** ITHACA EAST (L-15-1)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Aquatic Life    | Stressed | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: SILT/SEDIMENT  
Possible: ---

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

Known: ---  
Suspected: AGRICULTURE, STREAMBANK EROSION, URBAN/STORM RUNOFF  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** ext/WQCC      **Resolution Potential:** Medium  
**TMDL/303d Status:** n/a

## Further Details

Aquatic life support in Cayuga Inlet is known to experience minor impacts/threats due to nutrient enrichment from various nonpoint sources.

A biological (macroinvertebrate) assessment of Cascadilla Creek Ithaca (at Lake/Madison Ave) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. The fauna was dominated by filter-feeding caddisflies and nonpoint source nutrient enrichment was determined to be the primary cause of the impact. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

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

# Sixmile Creek, Upper, and tribs (0705-0043)

Need Verific

## Waterbody Location Information

Revised: 08/16/2007

**Water Index No:** Ont 66-12-P296- 75- 5  
**Hydro Unit Code:** 04140201/080      **Str Class:** A  
**Waterbody Type:** River  
**Waterbody Size:** 92.7 Miles  
**Seg Description:** stream and tribs, above Ithaca

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** ITHACA EAST (L-15-1)

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

| Use(s) Impacted   | Severity | Problem Documentation |
|-------------------|----------|-----------------------|
| Habitat/Hydrology | Stressed | Possible              |

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: HYDRO MODIFICATION, STREAMBANK EROSION  
Possible: Agriculture, Urban/Storm Runoff

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Hydrologic/habitat conditions in Sixmile Creek may experience minor impacts/threats due to silt/sedimentation from agricultural and other nonpoint sources.

Previous assessments have suggested that fish propagation is impacted by siltation covering spawning areas and nests. Some past efforts by local municipalities to remove gravel in the streambed have further destabilized the streambed, thus creating deterioration of fish habitat. Brown trout have been stocked in the stream. (DEC/DFWMR, Region 8, 1998)

A biological (macroinvertebrate) assessment of Sixmile Creek in Ithaca (at S.Plain and S.Titus Streets) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. The fauna was dominated by clean-water mayflies. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and all tribs above the Van Natta Dam located about 1.9 miles above the mouth near the Ithaca City line. The waters of this portion of the stream are Class A,A(T). Tribs to this reach/segment are also Class A,A(T).

# Lake Treman (0705-0063)

Need Verific

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 75-10-P347a  
**Hydro Unit Code:** 04140201/080      **Str Class:** B  
**Waterbody Type:** Lake  
**Waterbody Size:** 6.4 Acres  
**Seg Description:** entire lake  
**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** ITHACA WEST (L-14-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Public Bathing  | Stressed | Possible              |
| Recreation      | Stressed | Possible              |

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: UNKNOWN SOURCE  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 1 (Waterbody Nominated, Problem Not Verified)  
**Lead Agency/Office:** DOW/Reg7  
**TMDL/303d Status:** n/a  
**Resolution Potential:** Medium

## Further Details

Public bathing and recreational uses in Lake Treman may experience impacts from pathogens from unidentified sources.

High levels of pathogens have been reported that have restricted use of the public beach in the state park. The frequency and magnitude of these closings need to be evaluated to determine the severity of impact.

# Jennings Pond (0705-0064)

**Need Verific**

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 75-10-P349  
**Hydro Unit Code:** 04140201/080      **Str Class:** B  
**Waterbody Type:** Lake  
**Waterbody Size:** 32.1 Acres  
**Seg Description:** entire pond

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** WILLSEYVILLE (L-15-4)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Public Bathing  | Stressed | Possible              |
| Recreation      | Stressed | Possible              |

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: UNKNOWN SOURCE  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 1 (Waterbody Nominated, Problem Not Verified)  
**Lead Agency/Office:** DOW/Reg7  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Public bathing and recreational uses in Lake Treman may experience impacts from pathogens from unidentified sources.

High levels of pathogens have been reported that have restricted use of the public beach in the state park. The frequency and magnitude of these closings need to be evaluated to determine the severity of impact.

# Enfield Creek, Lower, and tribs (0705-0065)

Need Verific

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 75-16  
**Hydro Unit Code:** 04140201/080      **Str Class:** B(T)  
**Waterbody Type:** River  
**Waterbody Size:** 16.1 Miles  
**Seg Description:** stream and tribs, from mouth to state park boundary

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** ITHACA WEST (L-14-2)

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

| Use(s) Impacted | Severity | Problem Documentation |
|-----------------|----------|-----------------------|
| Public Bathing  | Stressed | Possible              |
| Recreation      | Stressed | Possible              |

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: UNKNOWN SOURCE  
Possible: ---

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 1 (Waterbody Nominated, Problem Not Verified)  
**Lead Agency/Office:** DOW/Reg7  
**TMDL/303d Status:** n/a

**Resolution Potential:** Medium

## Further Details

Public bathing and recreational uses in this portion of Enfield Creek may experience impacts from pathogens from unidentified sources.

High levels of pathogens have been reported that have restricted use of the public beach in the state park. The frequency and magnitude of these closings need to be evaluated to determine the severity of impact.

This segment includes the portion of the stream and all tribs from the mouth to the southern and western bounds of Robert H. Treman State Park. The waters of this portion of the stream are Class B(T). Tribs to this reach/segment are Class B,B(T) and C,C(T). Upper Enfield Creek and Fish Kill are listed separately.

# Taughannock Creek, Lower, and tribs (0705-0069)

**Threatened**

## Waterbody Location Information

Revised: 08/14/2007

**Water Index No:** Ont 66-12-P296- 98  
**Hydro Unit Code:** 04140201/120      **Str Class:** B(T)  
**Waterbody Type:** River  
**Waterbody Size:** 11.6 Miles  
**Seg Description:** stream and tribs, from mouth to state park boundary

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 7/Tompkins Co. (55)  
**Quad Map:** LUDLOWVILLE (K-14-3)

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Aquatic Life    | Threatened | Known                 |

### Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)  
Suspected: ---  
Possible: ---

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

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

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

Aquatic life support in Taughannock Creek is known to experience minor impacts/threats due to nutrient enrichment from various nonpoint sources.

A biological (macroinvertebrate) assessment of Taughannock Creek in Taughannock Falls State Park (at Route 89) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Rocks were covered with diatoms and nonpoint source nutrient enrichment was determined to be the primary cause of the impact. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and all tribs from the mouth to the western boundary of Taughannock Falls State Park. The waters of this portion of the stream are Class B(T). Tribs to this reach/segment, including Spring Branch (-1), are Class B and C. Upper Taughannock Creek is listed separately.

# 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. Tribes to this reach/segment are listed separately.

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

NoKnownImpct

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369 (portion 1)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/060      **Str Class:** B(T)      Seneca/Clyde Rivers  
**Waterbody Type:** Lake      **Reg/County:** 8/Seneca Co. (50)  
**Waterbody Size:** 2858.7 Acres      **Quad Map:** GENEVA SOUTH (J-13-4)  
**Seg Description:** portion of lake, as described below

## 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

Seneca Lake has been sampled 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. These findings suggest that productivity in the lake has declined significantly. While nutrient control measures implemented in the lake watershed likely contribute to this decrease in productivity, the introduction and proliferation of zebra mussel populations also are assumed to be contributing to these changes in the lake. Hypolimnetic waters of the lake remain well oxygenated throughout the growing season. Recent sampling also reveals a significant decline in chloride and sodium levels. (Water Quality Study of the Finger Lakes, DEC/DOW, BWAM, July 2001)

Seneca Lake supports a productive fishery of lake, brown and rainbow trout, landlocked salmon, perch, pike and smallmouth bass. Lake trout, brown trout and landlocked salmon have been stocked in the lake; the lake supports wild populations of the other species. Impacts to the fishery from invasive species are a threat and a concern. The sea lamprey eel first appeared in the lake in the 1960s. Control of the sea lamprey by chemical treatment of spawning streams has been conducted over the past 25 years and has been largely successful. Zebra and quagga mussels arrived in the lake more recently (1990s). These species are very effective filter feeders and significantly reduce algae in the lake. Similarly,

the spines of fishhook water flea is a filter feeder that reduces algae available to the rest of the lake aquatic species. (Seneca Lake Pure Water Association and DEC/DFWMR, Region 7, 2002)

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.

# Seneca Lake, Main Lake, Middle (0705-0021)

Threat(Poss)

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369 (portion 2)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/060      **Str Class:** AA(TS)      Seneca/Clyde Rivers  
**Waterbody Type:** Lake      **Reg/County:** 8/Seneca Co. (50)  
**Waterbody Size:** 40289.5 Acres      **Quad Map:** GENEVA SOUTH (J-13-4)  
**Seg Description:** portion of lake, as described below

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Water Supply    | Threatened | Possible              |

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Possible: OTHER POLLUTANTS

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

Known: ---  
Suspected: ---  
Possible: OTHER SOURCE

## Resolution/Management Information

**Issue Resolvability:** 3 (Strategy Being Implemented)  
**Verification Status:** 5 (Management Strategy has been Developed)  
**Lead Agency/Office:** DOW/Reg8      **Resolution Potential:** High  
**TMDL/303d Status:** n/a

## Further Details

Water supply uses in this portion of Cayuga Lake may experience minor threats due to various activities in the watershed. The designation of this waterbody as a threatened water is reflective of a need to protect its particular resource value, rather than specifically identified threats.

Seneca Lake has been sampled 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. These findings suggest that productivity in the lake has declined significantly. While nutrient control measures implemented in the lake watershed likely contribute to this decrease in productivity, the introduction and proliferation of zebra mussel populations also are assumed to be contributing to these changes in the lake. Hypolimnetic waters of the lake remain well oxygenated throughout the growing season. Recent sampling also reveals a significant decline in chloride and sodium levels. (Water Quality Study of the Finger Lakes, DEC/DOW, BWAM, July 2001)

Seneca Lake supports a productive fishery of lake, brown and rainbow trout, landlocked salmon, perch, pike and smallmouth bass. Lake trout, brown trout and landlocked salmon have been stoked in the lake; the lake supports wild

populations of the other species. Impacts to the fishery from invasive species are a threat and a concern. The sea lamprey eel first appeared in the lake in the 1960s. Control of the sea lamprey by chemical treatment of spawning streams has been conducted over the past 25 years and has been largely successful. Zebra and quagga mussels arrived in the lake more recently (1990s). These species are very effective filter feeders and significantly reduce algae in the lake. Similarly, the spinyhead fishhook water flea is a filter feeder that reduces algae available to the rest of the lake aquatic species. (Seneca Lake Pure Water Association and DEC/DFWMR, Region 7, 2002)

The NYSDOH Source Water Assessment Program (SWAP) compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. Drinking water supplies in this waterbody include the City of Geneva, the Village of Waterloo and Village of Ovid water supplies. This assessment found an elevated susceptibility to contamination for this source of drinking water. Specifically the amount of agricultural lands in the assessment area results in elevated potential for phosphorus, DBP precursors, and pesticides contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality based on their density in the assessment area. However, it appears that the total amount of wastewater discharged to surface water in this assessment area is high enough to raise the potential for contamination. Some susceptibility associated with other sources, such as landfills, was also noted. (NYSDOH, Source Water Assessment Program, 2004)

Although there are no significant known water quality impacts in this portion of Seneca Lake, the segment is considered a highly valued water resource due to its designation of a Class AA(TS) drinking water supply, which is to maintain such that the water can be used as a potable source with limited treatment. The inclusion of this waterbody on the DEC/DOW Priority Waterbodies List as a Threatened water is a reflection of the particular resource value reflected in this designation and the need to provide additional protection, rather than any specifically identified threats.

This segment includes the portion of the lake south of an east-west line extending from Pastime Park on the east shore to a point 0.2 mile south of the Geneva City line on the west shore and north of an east-west line from the mouth of unnamed trib (-58) on the eastern shore to the mouth of Quarter Mile Creek (-61) on the western shore. This portion of the lake is primarily Class AA(TS); the portion of the lake within a one mile radius of the mouth of Keuka Lake Outlet is Class B(T).

# Seneca Lake, Main Lake, South (0705-0014)

**Threatened**

## Waterbody Location Information

Revised: 07/03/2012

|                         |                                     |                     |                      |
|-------------------------|-------------------------------------|---------------------|----------------------|
| <b>Water Index No:</b>  | Ont 66-12-P369 (portion 3)          | <b>Drain Basin:</b> | Oswego-Seneca-Oneida |
| <b>Hydro Unit Code:</b> | 04140201/060                        | <b>Str Class:</b>   | B(T)                 |
| <b>Waterbody Type:</b>  | Lake                                | <b>Reg/County:</b>  | 8/Schuyler Co. (49)  |
| <b>Waterbody Size:</b>  | 237.7 Acres                         | <b>Quad Map:</b>    | BURDETT (L-13-2)     |
| <b>Seg Description:</b> | portion of lake, as described below |                     |                      |

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

| Use(s) Impacted | Severity   | Problem Documentation |
|-----------------|------------|-----------------------|
| Public Bathing  | Threatened | Suspected             |
| Water Supply    | Threatened | Possible              |

### Type of Pollutant(s)

|            |                                   |
|------------|-----------------------------------|
| Known:     | ---                               |
| Suspected: | Pathogens                         |
| Possible:  | Silt/Sediment, D.O./Oxygen Demand |

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

|            |                               |
|------------|-------------------------------|
| Known:     | Municipal (Watkins Glen WWTP) |
| Suspected: | ---                           |
| Possible:  | ---                           |

## Resolution/Management Information

|                             |  |                                   |
|-----------------------------|--|-----------------------------------|
| <b>Issue Resolvability:</b> | 3 (Strategy Being Implemented)             | <b>Resolution Potential:</b> High |
| <b>Verification Status:</b> | 5 (Management Strategy has been Developed) |                                   |
| <b>Lead Agency/Office:</b>  | DOW/Reg8                                   |                                   |
| <b>TMDL/303d Status:</b>    | n/a  |                                   |

## Further Details

### Overview

Public bathing and water supply use in this portion of Seneca Lake is thought to be threatened by pathogens and other pollutants from inadequate wastewater treatment facilities. There are currently no exceedences of water quality standards or use impacts, but the exceedence of permit limits and resulting enforcement actions against a municipal wastewater treatment facility raise some concerns.

### Water Quality Sampling

Seneca Lake is included in the NYSDEC Lake Classification and Inventory monitoring effort in 2012. Until those sampling results are available, the most recent comprehensive NYSDEC assessment of Seneca Lake is a 2001 Finger Lakes Study noted below. A 2009 Finger Lakes Institute/Hobart & William Smith College study of the Finger Lakes from 2005 -2008 assesses Seneca Lake as mesotrophic, with water quality conditions generally consistent with the 2001 NYSDEC study. (DEC/DOW, BWAM, July 2012)

Seneca Lake has been sampled 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. These findings suggest that productivity in the lake has declined significantly. While nutrient control measures implemented in the lake watershed likely contribute to this decrease in productivity, the introduction and proliferation of zebra mussel populations also are assumed to be contributing to these changes in the lake. Hypolimnetic waters of the lake remain well oxygenated throughout the growing season. Recent sampling also reveals a significant decline in chloride and sodium levels. (Water Quality Study of the Finger Lakes, DEC/DOW, BWAM, July 2001)

#### Fishery Assessment

Seneca Lake supports a productive fishery of lake, brown and rainbow trout, landlocked salmon, perch, pike and smallmouth bass. Lake trout, brown trout and landlocked salmon have been stocked in the lake; the lake supports wild populations of the other species. Impacts to the fishery from invasive species are a threat and a concern. The sea lamprey eel first appeared in the lake in the 1960s. Control of the sea lamprey by chemical treatment of spawning streams has been conducted over the past 25 years and has been largely successful. Zebra and quagga mussels arrived in the lake more recently (1990s). These species are very effective filter feeders and significantly reduce algae in the lake. Similarly, the spiny water flea is a filter feeder that reduces algae available to the rest of the lake aquatic species. (Seneca Lake Pure Water Association and DEC/DFWMR, Region 7, 2002)

#### Source Assessment

The Watkins Glen WWTP has a history of SPDES permit violations dating back to 2007 for various parameters including settleable solids, fecal and total coliform, and total residual chlorine. The WWTP outfall is currently located between a public access beach and a drinking water intake. During the past few months, the WWTP has reported discharge of settleable solids of more than 20ml/l (limit is 0.3) coliform in the thousands and fecal coliform in the several thousands. These periodic exceedences appear to be related to significant infiltration/inflow (I/I) issues in the collection system and outdated disinfection equipment that is currently being upgraded. A consent order is being issued to address primarily the I/I issues, as it appears the village has corrected other items that were thought to be contributing to permit violations. The village is considering building a new plant, but funding for the project has not yet been identified. (DEC/DOW, Region 8, July 2012)

#### Segment Description

This segment includes the portion of the lake south of an east-west line from the mouth of unnamed trib (-58) on the eastern shore to the mouth of Quarter Mile Creek (-61) on the western shore.

# Mill Creek and tribs (0705-0076)

NoKnownImpct

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369- 28  
**Hydro Unit Code:** 04140201/060      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 18.1 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Seneca Co. (50)  
**Quad Map:** LODI (K-13-3)

## 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

A biological (macroinvertebrate) assessment of Mill Creek in Lodi (at Neal Road) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. The sample was dominated by clean-water mayflies and caddisflies, with stoneflies, riffle beetles, dragonflies and hellgrammites also present. (DEC/DOW, BWAM/SBU, June 2005)

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.

# Saw Mill Creek and tribs (0705-0077)

NoKnownImpet

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369- 44  
**Hydro Unit Code:** 04140201/060      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 15.2 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Seneca Co. (50)  
**Quad Map:** BURDETT (L-13-2)

## 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

A biological (macroinvertebrate) assessment of Sawmill Creek in Hector (at Peach Point Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions, however this assessment of impact may be an anomaly as the fauna consisted almost entirely of clean-water species. The low species richness found at the site may be related to habitat considerations; the substrate consisted of loose slate and rubble. (DEC/DOW, BWAM/SBU, June 2005)

Based on these sample results and caveats, uses at this site are assessed as having no known impact. However follow-up sampling to verify conditions in the stream are recommended.

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

# Hector Falls Creek and tribs (0705-0007)

NoKnownImpct

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369- 56  
**Hydro Unit Code:** 04140201/060      **Str Class:** C(TS)  
**Waterbody Type:** River  
**Waterbody Size:** 26.9 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Schuyler Co. (49)  
**Quad Map:** BURDETT (L-13-2)

## 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

A biological (macroinvertebrate) assessment of Hector Falls/Logan Creek in Burdett (at Route 5) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. The habitat was largely made up of bedrock but harbored a diversity of clean-water mayflies, stoneflies and caddisflies. (DEC/DOW, BWAM/SBU, June 2005)

A previous assessment had raised some concerns regarding leachate impacts from the former Hector Landfill. However the more recent sampling found no evidence of impacts from this or any other source.

This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(TS). Tribs to this reach/segment are Class C,C(T),C(TS).

# Catherine Creek and tribs (0705-0011)

NoKnownImpct

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369- 59 (upper)      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/010      **Str Class:** C      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 8/Schuyler Co. (49)  
**Waterbody Size:** 94.5 Miles      **Quad Map:** MONTOUR FALLS (L-13-3)  
**Seg Description:** entire stream and tribs

## 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

A biological (macroinvertebrate) assessment of Catherine Creek in Montour Falls (at Route 14) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. However silt effects were indicated in the sample. (DEC/DOW, BWAM/SBU, June 2005)

Previously concerns have been raised regarding sediment loadings from agricultural and other nonpoint sources in the watershed. Septic system discharges were also suspected as possible source on pollutants. However sampling indicates that there are no impacts to uses in the stream at the sampling location.

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

## Rock Stream and tribs (0705-0086)

NoKnownImpct

### Waterbody Location Information

Revised: 08/15/2007

|                         |                         |                     |                         |
|-------------------------|-------------------------|---------------------|-------------------------|
| <b>Water Index No:</b>  | Ont 66-12-P369- 91      | <b>Drain Basin:</b> | Oswego-Seneca-Oneida    |
| <b>Hydro Unit Code:</b> | 04140201/060            | <b>Str Class:</b>   | C                       |
| <b>Waterbody Type:</b>  | River                   | <b>Reg/County:</b>  | 8/Yates Co. (62)        |
| <b>Waterbody Size:</b>  | 17.9 Miles              | <b>Quad Map:</b>    | READING CENTER (L-13-1) |
| <b>Seg Description:</b> | entire stream and tribs |                     |                         |

### 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

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

### Further Details

A biological (macroinvertebrate) assessment of Rock Creek in Rock Stream (at Old Lake Road) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. This is a small bedrock stream in a gorge. Although productivity was low, the fauna was diverse and well-balanced. (DEC/DOW, BWAM/SBU, June 2005)

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.

# Big Stream, Lower, and tribs (0705-0087)

NoKnownImpet

## Waterbody Location Information

Revised: 05/21/2007

**Water Index No:** Ont 66-12-P369- 93  
**Hydro Unit Code:** 04140201/030      **Str Class:** B  
**Waterbody Type:** River  
**Waterbody Size:** 33.8 Miles  
**Seg Description:** stream and tribs, from mouth to Dundee

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Yates Co. (62)  
**Quad Map:** READING CENTER (L-13-1)

## 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

A biological (macroinvertebrate) assessment of Black Creek near Dundee (at Pre-Emption Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was identified as the primary cause of the impacts in the stream. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and all tribs from the mouth to Preemption Road in Dundee. The waters of this portion of the stream are Class D from the mouth to Route 14A in Dundee and Class B for the remainder of the reach. Tribs to this reach/segment are Class C. Upper Big Stream is listed separately.

# Keuka Lake Outlet and tribs (0705-0020)

NoKnownImpct

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369-115  
**Hydro Unit Code:** 04140201/040      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 63.5 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Yates Co. (62)  
**Quad Map:** DRESDEN (K-13-1)

## 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

A biological (macroinvertebrate) assessment of Keuka Lake Outlet in Dresden (at Kings Landing Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. Results were similar to previous sampling results and indicated some nonpoint source nutrient enrichment. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

Thought there are no apparent water quality concerns, previous assessments in noted habitat/hydrologic effects on the trout fishery. These effects are the results of the outlet being fed by warmer water from the top of Keuka Lake. These suspected impacts should be re-evaluated.

This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(T). Tribs to this reach/segment are Class D.

# Keuka Lake (0705-0003)

# Impaired Seg

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369-115-P388      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/040      **Str Class:** AA(TS)      Seneca/Clyde Rivers  
**Waterbody Type:** Lake      **Reg/County:** 8/Yates Co. (62)  
**Waterbody Size:** 11711.8 Acres      **Quad Map:** KEUKA PARK (K-12-3)  
**Seg Description:** entire lake

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

| Use(s) Impacted  | Severity   | Problem Documentation |
|------------------|------------|-----------------------|
| Water Supply     | Threatened | Possible              |
| FISH CONSUMPTION | Impaired   | Known                 |

### Type of Pollutant(s)

Known: PESTICIDES (DDT)  
Suspected: ---  
Possible: Other Pollutants (various)

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

Known: TOX/CONTAM. SEDIMENT  
Suspected: ---  
Possible: Agriculture, Other Source (various)

## Resolution/Management Information

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

## Further Details

Fish consumption in Keuka Lake is impaired as a result of DDT contamination in some fish and a health advisory recommending limiting the consumption of these species. In addition to this impairment, water supply uses in Keuka Lake may experience minor threats due to various activities in the watershed. The designation of this waterbody as having threatened water supply uses is reflective of a need to protect its particular resource value, rather than specifically identified threats.

Fish consumption in Keuka Lake is impaired due to a NYSDOH health advisory that recommends eating no more than one meal per month of larger (over 25 inches) lake trout because of elevated DDT levels. The source of DDT is assumed to be from past pesticide use in the basin. The advisory for this lake was first issued prior to 1998-99. (2006-07 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2006).

Keuka Lake has been sampled 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. These findings

also suggest that productivity in the lake has declined significantly over recent decades. Nutrient control measures implemented in the lake watershed are considered the most likely reason for this decrease in productivity. The waters of the lake remain well oxygenated throughout the growing season. (Water Quality Study of the Finger Lakes, DEC/DOW, BWAM, July 2001)

The NYSDOH Source Water Assessment Program (SWAP) compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination. These reports do not address the safety or quality of treated finished potable tap water. Drinking water supplies in this waterbody include the Village of Penn Yan and the Village of Hammondsport water supplies. This assessment found an elevated susceptibility to contamination for this source of drinking water. Specifically the amount of agricultural lands in the northern portion of the assessment area results in elevated potential for phosphorus, DBP precursors, and pesticides contamination. While there are some facilities present, permitted discharges do not likely represent an important threat to source water quality based on their density in the assessment area. However, it appears that the total amount of wastewater discharged to surface water in this assessment area is high enough to raise the potential for contamination. Some susceptibility associated with other sources, such as inactive hazardous waste sites and mines, was also noted. (NYSDOH, Source Water Assessment Program, 2004)

In addition to the fish consumption impacts noted above, Keuka Lake is considered a highly valued water resource due to its designation of a Class AA(TS) drinking water supply, which is to maintain such that the water can be used as a potable source with limited treatment. The inclusion of this waterbody on the DEC/DOW Priority Waterbodies List as a Threatened water is a reflection of the particular resource value reflected in this designation and the need to provide additional protection, rather than any specifically identified threats.

Keuka Lake is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a Fish Consumption Water due to DDT contamination.

# Keuka Lake Inlet/Cold Brook and tribs (0705-0091)

NoKnownImpet

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369-115-P388-36  
**Hydro Unit Code:** 04140201/040      **Str Class:** C(TS)  
**Waterbody Type:** River  
**Waterbody Size:** 48.1 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Oswego-Seneca-Oneida  
Seneca/Clyde Rivers  
**Reg/County:** 8/Steuben Co. (51)  
**Quad Map:** HAMMONDSPORT (L-12-1)

## 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

A biological (macroinvertebrate) assessment of Keuka Lake Inlet/Cold Brook in Hammondsport (at South Valley Road) was conducted in 2001. Sampling results indicated slightly impacted water quality conditions. The sampling results indicated some nonpoint source nutrient enrichment. However, nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the entire stream and all tribs. The waters of the stream are Class C(TS). Tribs to this reach/segment are Class C,C(T).

# Sugar Creek, Lower, and tribs (0705-0018)

NoKnownImpct

## Waterbody Location Information

Revised: 08/15/2007

**Water Index No:** Ont 66-12-P369-115-P388-62      **Drain Basin:** Oswego-Seneca-Oneida  
**Hydro Unit Code:** 04140201/040      **Str Class:** C(T)      Seneca/Clyde Rivers  
**Waterbody Type:** River      **Reg/County:** 8/Yates Co. (62)  
**Waterbody Size:** 43.8 Miles      **Quad Map:** PULTENEY (K-12-4)  
**Seg Description:** stream and tribs, from mouth to Guyanoga

## 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

A biological (macroinvertebrate) assessment of Sugar in Branchport (at County House Road) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. The fauna was populated by diversity of clean-water organisms. (DEC/DOW, BWAM/SBU, June 2005)

This segment includes the portion of the stream and all tribs from the mouth to/including Big Gully Creek (-7) in Guyanoga. The waters of this portion of the stream are Class C(T),C(TS). Tribs to this reach/segment, including Big Gully Creek (-7) are primarily Class D; with some tribs designated Class C,C(TS). Upper Sugar Creek is listed separately.

# 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.

# **Summary Listing of Priority Waters**

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# Oswego/Finger Lakes Basin Priority Waterbodies List

## Table 1

| Water Index Number  | Waterbody/Segment Name (ID)<br>Use Impairment(s)  | County | Seg Size     | Type  | Class | W.B.Category |
|---|---|--------|--------------|-------|-------|--------------|
| Ont 66 (portion 1)  | Oswego River, Lower, Main Stem (0701-0022)<br>Recreation SUSPECTED of being STRESSED<br>Aesthetics SUSPECTED of being STRESSED  | Oswego | 2.9 Mile     | River | C     | MinorImpacts |
| Ont 66 (portion 2)<br><b>2006 Section 303(d) Listed Water</b> | Oswego River, Lower, Main Stem (0701-0006)<br>Fish Consumption KNOWN to be IMPAIRED<br>Aquatic Life SUSPECTED of being STRESSED<br>Public Bathing SUSPECTED of being THREATENED<br>Aesthetics SUSPECTED of being THREATENED | Oswego | 12.1 Mile    | River | B     | Impaired Seg |
| Ont 66- 3-P9<br><b>2006 Section 303(d) Listed Water</b>       | Lake Neatahwanta (0701-0018)<br>Public Bathing KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Aquatic Life KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED  | Oswego | 748.7 Acre   | Lake  | B     | Impaired Seg |
| Ont 66- 4   | Waterhouse Creek and tribs (0701-0026)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED   | Oswego | 16.2 Mile    | River | C     | MinorImpacts |
| Ont 66-11   | Oneida River, Main Stem (0703-0020)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED  | Oswego | 24.2 Mile    | River | B     | MinorImpacts |
| Ont 66-11-P26<br><b>2006 Section 303(d) Listed Water</b>      | Oneida Lake (0703-0001)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED<br>Public Bathing POSSIBLY STRESSED   | Oswego | 51090.9 Acre | Lake  | B     | MinorImpacts |
| Ont 66-11-P26-24- 1   | Wood Creek and minor tribs (0703-0012)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED  | Oneida | 151.1 Mile   | River | D     | MinorImpacts |
| Ont 66-11-P26-24- 1- 8  | Stony Creek and tribs (0703-0065)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED   | Oneida | 46.9 Mile    | River | C     | MinorImpacts |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number  | Waterbody/Segment Name (ID)<br>Use Impairment(s)   | County  | Seg Size   | Type  | Class | W.B.Category |
|---|--|---------|------------|-------|-------|--------------|
| Ont 66-11-P26-24-P109                                       | Kasoag Lake (0703-0087)<br>Recreation SUSPECTED of being STRESSED  | Oswego  | 57.6 Acre  | Lake  | B     | MinorImpacts |
| Ont 66-11-P26-25  | Oneida Creek, Lower, and tribs (0703-0032)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED  | Oneida  | 58.6 Mile  | River | C     | MinorImpacts |
| Ont 66-11-P26-25  | Oneida Creek, Upper, and tribs (0703-0090)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED  | Madison | 153.9 Mile | River | C     | MinorImpacts |
| Ont 66-11-P26-25- 6   | Sconondoa Creek and tribs (0703-0003)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED   | Oneida  | 74.2 Mile  | River | C(T)  | MinorImpacts |
| Ont 66-11-P26-33  | Cowaselon Creek, Middle, and minor tribs (0703-0093)<br>Habitat/Hydrology KNOWN to be STRESSED<br>Aquatic Life SUSPECTED of being STRESSED<br>Recreation SUSPECTED of being STRESSED | Madison | 55.2 Mile  | River | C     | MinorImpacts |
| Ont 66-11-P26-33- 2   | Canaseraga Creek, Upper, and tribs (0703-0095)<br>Aquatic Life SUSPECTED of being STRESSED   | Madison | 46.1 Mile  | River | C(T)  | MinorImpacts |
| Ont 66-11-P26-33- 5   | Canastota Creek, Lower, and tribs (0703-0002)<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation SUSPECTED of being IMPAIRED<br>Aesthetics KNOWN to be STRESSED                      | Madison | 10.3 Mile  | River | C     | Impaired Seg |
| Ont 66-11-P26-37<br><b>2006 Section 303(d) Listed Water</b> | Chittenango Creek, Lower, and tribs (0703-0005)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED   | Madison | 121.8 Mile | River | C     | MinorImpacts |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number   | Waterbody/Segment Name (ID)<br>Use Impairment(s)  | County   | Seg Size    | Type  | Class | W.B.Category   |
|--|---|----------|-------------|-------|-------|--|
| Ont 66-11-P26-37- 6- 2   | Limestone Creek, Lower, and minor tribs (0703-0008)<br>Aquatic Life SUSPECTED of being IMPAIRED<br>Recreation SUSPECTED of being IMPAIRED<br>Habitat/Hydrology KNOWN to be STRESSED                           | Onondaga | 50.2 Mile   | River | C     | Impaired Seg   |
|  |   |          |             |       |       | Causes: Aesthetics, D.O./Oxygen Demand, Pathogens<br>Sources: Streambank Erosion, Municipal            |
| Ont 66-11-P26-37- 6- 2-(East Br)                                 | East Branch Limestone Creek and tribs (0703-0105)<br>Habitat/Hydrology KNOWN to be STRESSED   | Onondaga | 20.8 Mile   | River | B(T)  | MinorImpacts   |
|  |   |          |             |       |       | Causes: Silt/Sediment<br>Sources: Habitat Modification, Streambank Erosion                             |
| Ont 66-11-P26-37-35-P153   | Cazenovia Lake (0703-0021)<br>Recreation KNOWN to be STRESSED<br>Public Bathing SUSPECTED of being STRESSED   | Madison  | 1184.1 Acre | Lake  | A     | MinorImpacts   |
|  |   |          |             |       |       | Causes: Algal/Weed Growth, Problem Species, Nutrients<br>Sources: Habitat Modification                 |
| Ont 66-12 (portion 1)<br><b>2006 Section 303(d) Listed Water</b> | Seneca River, Lower, Main Stem (0701-0001)<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED  | Onondaga | 6.9 Mile    | River | C     | Impaired Seg   |
|  |   |          |             |       |       | Causes: D.O./Oxygen Demand<br>Sources: Habitat Modification, Hydro Modification                        |
| Ont 66-12 (portion 2)<br><b>2006 Section 303(d) Listed Water</b> | Seneca River, Lower, Main Stem (0701-0008)<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED  | Onondaga | 22.9 Mile   | River | C     | Impaired Seg   |
|  |   |          |             |       |       | Causes: D.O./Oxygen Demand<br>Sources: Habitat Modification, Hydro Modification                        |
| Ont 66-12 (portion 3)/P185                                       | Cross Lake (0701-0002)<br>Public Bathing KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED<br>Aquatic Life POSSIBLY STRESSED   | Onondaga | 2086.3 Acre | Lake  | B     | MinorImpacts   |
|  |   |          |             |       |       | Causes: Silt/Sediment, Nutrients, Pathogens<br>Sources: Agriculture, On-Site/Septic Syst, Other Source |
| Ont 66-12-12   | Onondaga Lake Outlet (0702-0020)<br>Public Bathing SUSPECTED of being IMPAIRED<br>Aquatic Life SUSPECTED of being IMPAIRED<br>Recreation SUSPECTED of being IMPAIRED<br>Fish Consumption KNOWN to be STRESSED | Onondaga | 0.7 Mile    | River | B     | Impaired Seg   |
|  |   |          |             |       |       | Causes: D.O./Oxygen Demand, Ammonia, Nutrients<br>Sources: Landfill/Land Disp., Other Source           |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number   | Waterbody/Segment Name (ID)<br>Use Impairment(s)  | County   | Seg Size    | Type  | Class | W.B.Category  |
|--|---|----------|-------------|-------|-------|---|
| Ont 66-12-12-P154 (portion 1)<br><b>2006 Section 303(d) Listed Water</b> | Onondaga Lake, northern end (0702-0003)<br>Public Bathing KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be IMPAIRED<br>Aquatic Life SUSPECTED of being IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Aesthetics KNOWN to be STRESSED | Onondaga | 1710.7 Acre | Lake  | B     | Impaired Seg  |
|  |   |          |             |       |       | Causes: Metals, Nutrients, Priority Organics, Priority Organics, Pat...<br>Sources: Comb. Sewer Overflow, Industrial, Landfill/Land Disp., Munic... |
| Ont 66-12-12-P154 (portion 2)<br><b>2006 Section 303(d) Listed Water</b> | Onondaga Lake, southern end (0702-0021)<br>Fish Consumption KNOWN to be IMPAIRED<br>Aquatic Life SUSPECTED of being IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Aesthetics KNOWN to be STRESSED  | Onondaga | 1277.4 Acre | Lake  | C     | Impaired Seg  |
|  |   |          |             |       |       | Causes: Metals, Nutrients, Priority Organics, Priority Organics, Pat...<br>Sources: Comb. Sewer Overflow, Industrial, Landfill/Land Disp., Munic... |
| Ont 66-12-12-P154-   | Minor Tribs to Onondaga Lake (0702-0022)<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED  | Onondaga | 8.9 Mile    | River | C     | Impaired Seg  |
|  |   |          |             |       |       | Causes: D.O./Oxygen Demand, Other Inorganics, Ammonia, Nutrients, Pa...<br>Sources: Comb. Sewer Overflow, Landfill/Land Disp., Other Sanitary Di... |
| Ont 66-12-12-P154- 2   | Bloody Brook and tribs (0702-0006)<br>Public Bathing KNOWN to be IMPAIRED<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED             | Onondaga | 1.0 Mile    | River | C*    | Impaired Seg  |
|  |   |          |             |       |       | Causes: Pathogens<br>Sources: Landfill/Land Disp., Other Sanitary Disch, Urban/Storm Runof...   |
| Ont 66-12-12-P154- 3<br><b>2006 Section 303(d) Listed Water</b>          | Ley Creek and tribs (0702-0001)<br>Public Bathing KNOWN to be IMPAIRED<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED                | Onondaga | 26.1 Mile   | River | C*    | Impaired Seg  |
|  |   |          |             |       |       | Causes: Other Inorganics, Ammonia<br>Sources: Comb. Sewer Overflow, Landfill/Land Disp., Urban/Storm Runof...                                       |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number   | Waterbody/Segment Name (ID)<br>Use Impairment(s)   | County   | Seg Size   | Type  | Class | W.B.Category |
|--|--|----------|------------|-------|-------|--------------|
| Ont 66-12-12-P154- 4<br><b>2006 Section 303(d) Listed Water</b>    | Onondaga Creek, Lower (0702-0023)<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED  | Onondaga | 2.8 Mile   | River | C     | Impaired Seg |
| Ont 66-12-12-P154- 4   | Onondaga Creek, Middle, and tribs (0702-0004)<br>Public Bathing KNOWN to be IMPAIRED<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED | Onondaga | 17.5 Mile  | River | B     | Impaired Seg |
| Ont 66-12-12-P154- 4   | Onondaga Creek, Upper, and minor tribs (0702-0024)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED<br>Habitat/Hydrology KNOWN to be STRESSED   | Onondaga | 110.4 Mile | River | C     | MinorImpacts |
| Ont 66-12-12-P154- 5<br><b>2006 Section 303(d) Listed Water</b>    | Harbor Brook, Lower, and tribs (0702-0002)<br>Public Bathing KNOWN to be IMPAIRED<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED    | Onondaga | 4.9 Mile   | River | B     | Impaired Seg |
| Ont 66-12-12-P154- 6<br><b>2006 Section 303(d) Listed Water</b>    | Ninemile Creek, Lower, and tribs (0702-0005)<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED   | Onondaga | 32.3 Mile  | River | C     | Impaired Seg |
| Ont 66-12-12-P154- 6- 2<br><b>2006 Section 303(d) Listed Water</b> | Geddes Brook and tribs (0702-0007)<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Fish Consumption KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED   | Onondaga | 12.4 Mile  | River | C     | Impaired Seg |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number                                      | Waterbody/Segment Name (ID)<br>Use Impairment(s)  | County   | Seg Size    | Type  | Class | W.B.Category |
|---|---|----------|-------------|-------|-------|--------------|
| Ont 66-12-12-P154- 6-P175                               | Otisco Lake (0702-0011)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED<br>Water Supply POSSIBLY THREATENED | Onondaga | 2214.3 Acre | Lake  | AA    | MinorImpacts |
| Ont 66-12-19  | Dead Creek and tribs (0701-0032)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED                            | Onondaga | 19.7 Mile   | River | C     | MinorImpacts |
| Ont 66-12-28  | Carpenters Brook and tribs (0701-0033)<br>Aquatic Life KNOWN to be STRESSED   | Onondaga | 30.5 Mile   | River | C(T)  | MinorImpacts |
| Ont 66-12-29<br><b>2006 Section 303(d) Listed Water</b> | Skaneateles Creek and tribs (0707-0003)<br>Fish Consumption KNOWN to be IMPAIRED<br>Aquatic Life KNOWN to be STRESSED               | Onondaga | 36.5 Mile   | River | C     | Impaired Seg |
| Ont 66-12-29-P193                                       | Skaneateles Lake (0707-0004)<br>Water Supply POSSIBLY THREATENED  | Onondaga | 8703.9 Acre | Lake  | AA    | Threat(Poss) |
| Ont 66-12-35-P197- 3-P198                               | Otter Lake (0701-0004)<br>Recreation KNOWN to be STRESSED   | Cayuga   | 281.7 Acre  | Lake  | C     | MinorImpacts |
| Ont 66-12-36  | Cold Spring/North Brook and minor tribs (0701-0038)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED         | Cayuga   | 41.2 Mile   | River | C     | MinorImpacts |
| Ont 66-12-43  | Owasco Outlet, Lower, and tribs (0706-0008)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED                 | Cayuga   | 18.2 Mile   | River | C     | MinorImpacts |
| Ont 66-12-43  | Owasco Outlet, Upper, and tribs (0706-0001)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED                 | Cayuga   | 12.6 Mile   | River | C     | MinorImpacts |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number   | Waterbody/Segment Name (ID)<br>Use Impairment(s)  | County | Seg Size    | Type  | Class | W.B.Category |
|--|---|--------|-------------|-------|-------|--------------|
| Ont 66-12-43-P212<br><b>2006 Section 303(d) Listed Water</b> | Owasco Lake (0706-0009)<br>Public Bathing KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Water Supply POSSIBLY THREATENED                           | Cayuga | 6783.9 Acre | Lake  | AA(T) | Impaired Seg |
|  |   |        |             |       |       |              |
| Ont 66-12-43-P212-   | Minor Tribs to Owasco Lake (0706-0010)<br>Aquatic Life KNOWN to be STRESSED<br>Habitat/Hydrology KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED | Cayuga | 89.4 Mile   | River | C     | MinorImpacts |
|  |   |        |             |       |       |              |
| Ont 66-12-43-P212- 3   | Dutch Hollow Brook and tribs (0706-0003)<br>Habitat/Hydrology KNOWN to be STRESSED  | Cayuga | 68.5 Mile   | River | C(TS) | MinorImpacts |
|  |   |        |             |       |       |              |
| Ont 66-12-43-P212-28   | Owasco Inlet, Lower, and minor tribs (0706-0002)<br>Aquatic Life KNOWN to be STRESSED   | Cayuga | 59.1 Mile   | River | C(T)  | MinorImpacts |
|  |   |        |             |       |       |              |
| Ont 66-12-43-P212-28   | Owasco Inlet, Upper, and tribs (0706-0014)<br>Aquatic Life KNOWN to be IMPAIRED<br>Recreation KNOWN to be STRESSED  | Cayuga | 81.4 Mile   | River | C(T)  | Impaired Seg |
|  |   |        |             |       |       |              |
| Ont 66-12-46-P222  | Duck Lake (0704-0025)<br>Recreation KNOWN to be STRESSED  | Cayuga | 198.4 Acre  | Lake  | C     | MinorImpacts |
|  |   |        |             |       |       |              |
| Ont 66-12-51   | Crane Brook and tribs (0704-0024)<br>Aquatic Life SUSPECTED of being IMPAIRED<br>Recreation KNOWN to be STRESSED<br>Aesthetics KNOWN to be STRESSED             | Cayuga | 79.9 Mile   | River | C     | Impaired Seg |
|  |   |        |             |       |       |              |
| Ont 66-12-52   | NYS Barge Canal/Clyde River (portion 7) (0704-0027)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED                                     | Wayne  | 31.5 Mile   | River | C     | MinorImpacts |
|  |   |        |             |       |       |              |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number             | Waterbody/Segment Name (ID)<br>Use Impairment(s)   | County   | Seg Size  | Type  | Class | W.B.Category |
|--------------------------------|--|--|-----------|-------|-------|--------------|
| Ont 66-12-52-23                | Ganargua Creek, Lower, and minor tribs (0704-0026)<br>Aquatic Life SUSPECTED of being STRESSED   | Wayne  | 50.6 Mile | River | C     | MinorImpacts |
|                                |  | Causes: Nutrients                                      |           |       |       |              |
|                                |  | Sources: Construction, Urban/Storm Runoff              |           |       |       |              |
| Ont 66-12-52-23                | Ganargua Creek, Upper, and minor tribs (0704-0013)<br>Aquatic Life KNOWN to be STRESSED  | Wayne  | 67.1 Mile | River | C     | MinorImpacts |
|                                |  | Causes: Nutrients                                      |           |       |       |              |
|                                |  | Sources: Construction, Urban/Storm Runoff              |           |       |       |              |
| Ont 66-12-52-23 (Mud Creek)    | Mud Creek, Lower, and minor tribs (0704-0030)<br>Aquatic Life KNOWN to be STRESSED   | Ontario  | 35.5 Mile | River | C     | MinorImpacts |
|                                |  | Causes: Nutrients, Ammonia                             |           |       |       |              |
|                                |  | Sources: Agriculture, Construction, Urban/Storm Runoff |           |       |       |              |
| Ont 66-12-52-23-24             | Red Creek and tribs (0704-0033)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED  | Wayne  | 78.3 Mile | River | C     | MinorImpacts |
|                                |  | Causes: Algal/Weed Growth, Nutrients                   |           |       |       |              |
|                                |  | Sources: Habitat Modification, Agriculture             |           |       |       |              |
| Ont 66-12-52-23-43             | Great Brook and minor tribs (0704-0034)<br>Aquatic Life SUSPECTED of being IMPAIRED<br>Recreation SUSPECTED of being IMPAIRED<br>Aesthetics KNOWN to be STRESSED | Ontario  | 33.2 Mile | River | C     | Impaired Seg |
|                                |  | Causes: D.O./Oxygen Demand, Nutrients, Silt/Sediment   |           |       |       |              |
|                                |  | Sources: Urban/Storm Runoff, Municipal                 |           |       |       |              |
| Ont 66-12-52-23..(Barge Canal) | NYS Barge Canal (portion 5) (0704-0020)<br>Aquatic Life SUSPECTED of being IMPAIRED  | Wayne  | 23.5 Mile | River | C     | Impaired Seg |
|                                |  | Causes: D.O./Oxygen Demand                             |           |       |       |              |
|                                |  | Sources: Municipal                                     |           |       |       |              |
| Ont 66-12-52..                 | Canadaigua Outlet, Low, and minor trib (0704-0041)<br>Aquatic Life KNOWN to be STRESSED  | Wayne  | 68.5 Mile | River | C     | MinorImpacts |
|                                |  | Causes: Nutrients                                      |           |       |       |              |
|                                |  | Sources: Agriculture, Urban/Storm Runoff               |           |       |       |              |
| Ont 66-12-52..                 | Canadaigua Outlet, Mid, and minor tribs (0704-0042)<br>Aquatic Life KNOWN to be STRESSED   | Ontario  | 45.9 Mile | River | C     | MinorImpacts |
|                                |  | Causes: Nutrients                                      |           |       |       |              |
|                                |  | Sources: Agriculture, Urban/Storm Runoff               |           |       |       |              |
| Ont 66-12-52..                 | Canadaigua Outlet, Upp, and minor tribs (0704-0011)<br>Aquatic Life KNOWN to be STRESSED<br>Recreation SUSPECTED of being STRESSED                               | Ontario  | 67.4 Mile | River | C     | MinorImpacts |
|                                |  | Causes: Nutrients, D.O./Oxygen Demand                  |           |       |       |              |
|                                |  | Sources: Urban/Storm Runoff                            |           |       |       |              |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number  | Waterbody/Segment Name (ID)<br>Use Impairment(s)   | County   | Seg Size     | Type  | Class  | W.B.Category  |
|---|--|----------|--------------|-------|--------|---|
| Ont 66-12-52..40  | Flint Creek, Lower, and tribs (0704-0044)<br>Aquatic Life KNOWN to be STRESSED   | Ontario  | 51.9 Mile    | River | C      | MinorImpacts  |
|   |  |          |              |       |        | Causes: Nutrients, Silt/Sediment, Unknown Toxicity<br>Sources: Agriculture, Habitat Modification, Industrial, Municipal |
| Ont 66-12-52..40  | Flint Creek, Upper, and tribs (0704-0006)<br>Aquatic Life KNOWN to be STRESSED<br>Water Supply POSSIBLY THREATENED   | Yates    | 137.2 Mile   | River | A      | MinorImpacts  |
|   |  |          |              |       |        | Causes: Nutrients, Unknown Toxicity<br>Sources: Agriculture, Habitat Modification, Industrial, Municipal                |
| Ont 66-12-52..P286  | Canandaigua Lake (0704-0001)<br>Water Supply POSSIBLY THREATENED   | Ontario  | 10604.5 Acre | Lake  | AA(TS) | Threat(Poss)  |
|   |  |          |              |       |        | Causes: Other Pollutants  |
| Ont 66-12-52..P286-18   | West River, Lower, and minor tribs (0704-0049)<br>Aquatic Life KNOWN to be STRESSED  | Yates    | 39.8 Mile    | River | C      | MinorImpacts  |
|   |  |          |              |       |        | Causes: Nutrients<br>Sources: Agriculture   |
| Ont 66-12-P296 (portion 2)  | Cayuga Lake, Main Lake, Mid-North (0705-0025)<br>Water Supply POSSIBLY THREATENED  | Seneca   | 7861.1 Acre  | Lake  | A(T)   | Threat(Poss)  |
|   |  |          |              |       |        | Causes: Other Pollutants<br>Sources: On-Site/Septic Syst, Other Source  |
| Ont 66-12-P296 (portion 3)  | Cayuga Lake, Main Lake, Mid-South (0705-0050)<br>Water Supply POSSIBLY THREATENED  | Seneca   | 33082.7 Acre | Lake  | AA(T)  | Threat(Poss)  |
|   |  |          |              |       |        | Causes: Other Pollutants<br>Sources: Other Source   |
| Ont 66-12-P296 (portion 4)<br><b>2006 Section 303(d) Listed Water</b> | Cayuga Lake, Southern End (0705-0040)<br>Public Bathing KNOWN to be IMPAIRED<br>Recreation KNOWN to be IMPAIRED<br>Aesthetics KNOWN to be STRESSED<br>Water Supply POSSIBLY THREATENED | Tompkins | 965.3 Acre   | Lake  | A      | Impaired Seg  |
|   |  |          |              |       |        | Causes: Algal/Weed Growth, Nutrients, Pathogens, Silt/Sediment<br>Sources: Agriculture, Urban/Storm Runoff              |
| Ont 66-12-P296- 57  | Salmon Creek, Lower, and tribs (0705-0097)<br>Aquatic Life KNOWN to be STRESSED  | Tompkins | 89.4 Mile    | River | C(TS)  | MinorImpacts  |
|   |  |          |              |       |        | Causes: Nutrients, Silt/Sediment<br>Sources: Agriculture  |
| Ont 66-12-P296- 57  | Salmon Creek, Upper (Big), and tribs (0705-0054)<br>Aquatic Life KNOWN to be STRESSED  | Cayuga   | 81.2 Mile    | River | C      | MinorImpacts  |
|   |  |          |              |       |        | Causes: Nutrients<br>Sources: Agriculture   |

# Oswego/Finger Lakes Basin

# Priority Waterbodies List

# Table 1

| Water Index Number   | Waterbody/Segment Name (ID)<br>Use Impairment(s)  | County   | Seg Size   | Type  | Class  | W.B.Category |
|--|---|----------|--|-------|--------|--------------|
| Ont 66-12-P296- 74-16  | Virgil Creek and tribs (0705-0057)<br>Aquatic Life KNOWN to be STRESSED                             | Tompkins | 88.2 Mile  | River | C(T)   | MinorImpacts |
|  |   |          | Causes: Nutrients<br>Sources: Habitat Modification   |       |        |              |
| Ont 66-12-P296- 74-P333  | Lake Como (0705-0029)<br>Public Bathing KNOWN to be STRESSED<br>Recreation KNOWN to be STRESSED     | Tompkins | 64.1 Acre  | Lake  | B      | MinorImpacts |
|  |   |          | Causes: Algal/Weed Growth, Nutrients, Problem Species<br>Sources: Agriculture, Habitat Modification, On-Site/Septic Syst |       |        |              |
| Ont 66-12-P296- 75   | Cayuga Inlet, Lower, and minor tribs (0705-0041)<br>Aquatic Life SUSPECTED of being STRESSED        | Tompkins | 2.1 Mile   | River | C      | MinorImpacts |
|  |   |          | Causes: Nutrients, Silt/Sediment<br>Sources: Agriculture   |       |        |              |
| Ont 66-12-P296- 75   | Cayuga Inlet, Upper, and minor tribs (0705-0059)<br>Aquatic Life KNOWN to be THREATENED             | Tompkins | 129.5 Mile   | River | C(T)   | Threatened   |
|  |   |          | Causes: Nutrients, Silt/Sediment<br>Sources: Urban/Storm Runoff  |       |        |              |
| Ont 66-12-P296- 75- 3  | Cascadilla Creek and tribs (0705-0035)<br>Aquatic Life KNOWN to be STRESSED                         | Tompkins | 35.3 Mile  | River | C      | MinorImpacts |
|  |   |          | Causes: Nutrients, Silt/Sediment<br>Sources: Agriculture, Streambank Erosion, Urban/Storm Runoff                         |       |        |              |
| Ont 66-12-P296- 98   | Taughannock Creek, Lower, and tribs (0705-0069)<br>Aquatic Life KNOWN to be THREATENED              | Tompkins | 11.6 Mile  | River | B(T)   | Threatened   |
|  |   |          | Causes: Nutrients<br>Sources: Agriculture  |       |        |              |
| Ont 66-12-P369 (portion 2)   | Seneca Lake, Main Lake, Middle (0705-0021)<br>Water Supply POSSIBLY THREATENED                      | Seneca   | 40289.5 Acre   | Lake  | AA(TS) | Threat(Poss) |
|  |   |          | Causes: Other Pollutants<br>Sources: Other Source  |       |        |              |
| Ont 66-12-P369-115-P388<br><b>2006 Section 303(d) Listed Water</b> | Keuka Lake (0705-0003)<br>Fish Consumption KNOWN to be IMPAIRED<br>Water Supply POSSIBLY THREATENED | Yates    | 11711.8 Acre   | Lake  | AA(TS) | Impaired Seg |
|  |   |          | Causes: Pesticides<br>Sources: Tox/Contam. Sediment  |       |        |              |

# The Waterbody Inventory Priority Waterbodies List Assessment Methodology

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Assessment methodology refers to what monitoring approaches are used and how results are interpreted to determine use support and arrive at an assessment of water quality. The various aspects of assessment methodology include the type of monitoring data and water quality information used in the assessments, the source of the data/information, and the level of confidence in the data/information and the resulting assessment. What follows is an outline of specific criteria relating water quality monitoring data and information to the degree of use support. Such criteria are critical to providing a balanced and consistent assessment of the quality of waters throughout New York State.

## WI/PWL Water Uses

Water Supply  
Shellfishing  
Public Bathing  
Fish Consumption  
Aquatic Life  
Recreation  
Aesthetics

## Waterbody Inventory/Priority Waterbodies List

NYS DEC maintains use support/impairment information for the waters of the state through its Waterbody Inventory/Priority Waterbodies List (WI/PWL) database. The assessment of New York State water resources contained in the WI/PWL is based on the ability of waters to support a range of specific designated uses (see box). The particular uses that a specific waterbody are expected to support is dependent upon the classification of that waterbody. For example, only specifically designated waterbodies are considered to have best uses of water supply, shellfishing and public bathing.

## WI/PWL Severity of Use Impairment

### PRECLUDED

*Frequent/persistent* water quality, or quantity, conditions and/or associated habitat degradation *prevents all aspects* of the waterbody use.

### IMPAIRED

*Occasional* water quality, or quantity, conditions and/or habitat characteristics *periodically prevent* the use of the waterbody, or;

Waterbody uses are not precluded, but some aspects of the use are *limited or restricted*, or;

Waterbody uses are not precluded, but *frequent/persistent* water quality, or quantity, conditions and/or associated habitat degradation *discourage* the use of the waterbody, or;

Support of the waterbody use *requires additional/advanced* measures or treatment.

### STRESSED

Waterbody uses are not significantly limited or restricted, but *occasional* water quality, or quantity, conditions and/or associated habitat degradation *periodically discourage* the use of the waterbody.

### THREATENED

Water quality currently supports waterbody uses and the ecosystem exhibits no obvious signs of stress, however *existing or changing land use patterns* may result in restricted use or ecosystem disruption, or;

Monitoring *data reveals a decrease in water quality* or the presence of toxics below the level of concern, or;

Waterbody uses are not restricted and no water quality problems exists, but the support of a specific and distinctive use makes the waterbody more susceptible to water quality threats.

The use support/impairment information in the WI/PWL database is generated from a variety of available sources including statewide ambient network monitoring data, monitoring of toxic substances in fish and wildlife, special intensive surveys, fisheries resource surveys, water quality complaints, beach closure reports, shellfish area closures, etc. Given the growing involvement of local agency and citizen volunteers in water quality monitoring, the WI/PWL updating process also includes a significant public participation and outreach component. This effort relies on a statewide network of local Water Quality Coordinating Committees and county Soil and Water Conservation Districts working in conjunction with the DEC Division of Water to capture additional available water quality information.

After available water quality information is collected, judgements and evaluations are made regarding:

- whether an impairment to a specific use is actually occurring,
- the severity of the impairment to the use, and
- the level of documentation indicating a use impairment.

The focus of a water quality assessment is based on a specific use being restricted. If this is the case, then the severity of use impairment is evaluated as either *precluded*, *impaired*, *stressed* or *threatened*. Based on the level of documentation, the impairment is also determined to be *known*, *suspected* or *possible*. The national use support categories used by USEPA to assess waters differ somewhat from those tracked in the NYS DEC Waterbody Inventory/Priority Waterbodies List system. The general relationship between the USEPA Designated Use Support

categories (fully supporting, partially supporting, not supporting) and the WI/PWL severity and documentation categories is shown in Table 1. More detailed relationships between specific monitoring and assessment results and various uses supported are outlined and discussed on the following pages.

### WI/PWL Level of Documentation

**Known** - Water quality monitoring data and/or studies have been completed and conclude that the use of the waterbody is restricted to the degree indicated by the listed severity.

**Suspected** - Anecdotal evidence, public perception and/or specific citizen complaints suggest that the use of the waterbody may be restricted. However, water quality data/studies that establish an impairment have not been completed or there is conflicting information.

**Possible** - Land use or other activities in the watershed are such that the use of the waterbody could be affected. However, there is currently very little, if any, documentation of an actual water quality problem.

### Documentation of Waters with No Known Impairment

Historically, limited resources forced the NYS DEC monitoring effort to focus on waterbodies with known or suspected water quality problems and issues. Correspondingly, there was not much emphasis on the monitoring and documentation of waters with good (*fully supporting*) water quality. However, modifications to the NYS DEC Rotating Intensive Basin Studies (RIBS) Sampling Program to correct this bias were piloted in 1996 and began in earnest in 1998. The new RIBS strategy employs a tiered approach where rapid biological screening methods are applied at a large number of sites during the first year of a two-year study. This enables the program to document water quality in a greater percentage of all waters, not just those with known or potential problems. More intensive chemical monitoring is used in the second year to follow-up problems and issues identified by the biological screening effort. While resources are not currently available for a full-blown *probabilistic* monitoring network in the state, the wide coverage of the biological screening allows the RIBS Program to incorporate some of the main ideas behind the probabilistic approach and document good, as well as poor, water quality. However, until the biological screening is employed in a larger percentage of the state, waterbodies with no known use impairments will continue to be characterized as *nonimpacted/unassessed*.

**Table 1**

**Relationships Between  
USEPA Designated Use Assessments and  
WI/PWL Severity/Documentation Categories**

| Severity of Problem | Level of Problem Documentation |                                       |  |
|---------------------|--------------------------------|---------------------------------------|--|
|                     | Known Problem                  | Suspected Problem                     | Possible Problem                               |
| Precluded           | Not Supporting                 | N/A                                   | N/A  |
| Impaired            | Partially Supporting           | Partially Supporting                  | N/A  |
| Stressed            | Supporting, but Threatened     | Supporting, but Threatened            | Fully Supporting (needs verification)          |
| Threatened          | Supporting, but Threatened     | Fully Supporting (needs verification) | Fully Supporting ( <i>Special Protection</i> ) |
| No Known Impairment | Fully Supporting               |                                       |  |

***Aquatic Life Use***

The primary focus of the NYS DEC river and stream monitoring effort involves determining the degree to which waters support aquatic life. There are a number of reasons for this emphasis:

- Aquatic life is the most significant use of the large majority of the states rivers,
- Aquatic life use support can be assessed easily and economically using biological (macroinvertebrate) sampling techniques,
- Aquatic life use support is one of the most sensitive of the national use support categories.

The evaluation of Aquatic Life support represents a recent change to the WI/PWL. Prior to 1999, the WI/PWL tracked waterbody support of *Fish Propagation* and *Fish Survival* rather than *Aquatic Life*. This was a reflection of the designated uses outlined in New York State standards. However, the change to the broader category of *Aquatic Life* better represents the results of the monitoring tools (primarily macroinvertebrate sampling) used to assess water quality. The change from *Fish Propagation/Survival* to *Aquatic Life* also provides greater flexibility in reporting water quality and allows tracking of aquatic impacts that are not sufficiently severe as to be apparent in the fishery. The revised category also corresponds more closely to other New England State’s and the USEPA national use support category.

The relationship between biological (macroinvertebrate) sampling data and the impairment to *Aquatic Life* support is shown in Table 2.

**Atmospheric Deposition (Acid Rain) Impacts on *Aquatic Life***

In addition to the biological (macroinvertebrate) assessment criteria outlined in Table 2, separate criteria to determine aquatic life support is applied to waterbodies, particularly lakes and ponds, that are subject to atmospheric deposition, or acid rain. Acid rain has long been a significant problem in New York State. Because of the extent and significance of this issue, extensive chemical sampling efforts to monitor the pH of lakes and ponds in the state have long been in place. The separate aquatic life use support/acid rain criteria takes advantage of the considerable amount of available chemical (pH) data. The relationship between chemical (pH) monitoring data and the impairment to aquatic life is shown in Table 3.

| <b>Table 2 Aquatic Life Use Assessment Criteria</b>      |  |                              |                                       |                                       |
|--|--|------------------------------|---------------------------------------|---------------------------------------|
| <b>Biological<br/>(Macroinvertebrate)<br/>Assessment</b> |  | <b>WI/PWL Use Impairment</b> |                                       | <b>EPA<br/>Designated Use Support</b> |
|  |  | <b>Severity</b>              | <b>Documentation</b>                  |                                       |
| Non-Impacted<br>(Very Good)                              |  | No Known<br>Impairment       | Assessment Level:<br><i>Monitored</i> | Fully Supporting                      |
| Slightly<br>Impacted*<br>(Good)                          | No other indications of<br>impairment      | No Known<br>Impairment       | Assessment Level:<br><i>Evaluated</i> | Fully Supporting                      |
|  | Other indications of<br>impairment present | Stressed                     | Suspected or<br>Known                 | Fully Supporting,<br>but Threatened   |
| Moderately Impacted<br>(Poor)                            |  | Impaired                     | Known                                 | Partially Supporting                  |
| Severely Impacted<br>(Very Poor)                         |  | Precluded                    | Known                                 | Not Supporting                        |

\* *Slightly Impacted* represents a broad category ranging from generally good water quality to minor impairment of use. Other water quality information and conditions are generally necessary to determine an appropriate level of *Documentation* and corresponding *USEPA Designated Use Support*.

| <b>Table 3 Acid Rain/Aquatic Life Assessment Criteria</b>   |  |                              |                                 |                                       |
|---|--|------------------------------|---------------------------------|---------------------------------------|
| <b>Lake pH/Fishery Assessment</b>   |  | <b>WI/PWL Use Impairment</b> |                                 | <b>EPA Designated<br/>Use Support</b> |
|   |  | <b>Severity</b>              | <b>Documentation</b>            |                                       |
| pH less than 5.0  |  | Precluded                    | Known                           | Not Supporting                        |
| pH between 5.0; and 6.0   |  | Impaired                     | Known                           | Partially Supporting                  |
| pH greater than 6.0,<br>but fishery surveys indicate no fish,<br>and lake characteristics suggest acid<br>rain as cause |  | Impaired*                    | Suspected*                      | Partially Supporting                  |
| other indications of acid rain**  |  | Stressed                     | Suspected                       | Fully Supporting,<br>but Threatened   |
| No indications of acid rain effects   |  | No Known<br>Impairment       | Assessment:<br><i>Evaluated</i> | Fully Supporting                      |

\* Actual use impairment and relationship to acid rain as a cause should be verified with additional monitoring.  
\*\* Lake characteristics may indicate possible acid rain effects, but no pH/fish data exists to support an impairment.

Note about *Episodic Acidification*  
Episodic Acidification refers to short-term decreases in acid neutralizing capacity (ANC) that may occur during high streamflow events (i.e., spring runoff, snowmelt). Although these events are periodic, bioassays and other fish studies show that the impact on the fishery can be significant and longer lasting. The severity of the impact may result in precluded—rather than merely *impaired*—aquatic life, even though episodic acidification occurs over a short time period. This situation represents an exception to the strict application of the Priority Waterbodies List (PWL) definitions for a precluded use (frequent/persistent water quality condition) and an impaired use (occasional water quality conditions).

## Drinking Water Use

Drinking water use support is based on New York State Department of Health or local health department closures or advisories for drinking water supplies, the need for any additional treatment beyond “reasonable” levels, and monitoring data for contaminants that exceed criteria for the protection of human health. Only those waters specifically designated for drinking water use (i.e., Class A, AA, A/AA-Special waters) are evaluated for their support of this use. Furthermore, waterbodies designated for and used as sources of drinking water are considered highly valued resources deemed worthy of *Special Protection*. Even if such waters have no known impairment or imminent threat, these waters are included on the NYS DEC Priority Waterbodies List as *Special Protection* waters. The relationship between public water supply advisories and other monitoring information and the level of drinking water use support is outlined in Table 4.

| <b>Table 4 Drinking Water Use Assessment Criteria</b>  |                                   |                      |  |
|--|-----------------------------------|----------------------|--|
| <b>Criteria</b>  | <b>WI/PWL Use Impairment</b>      |                      | <b>EPA Designated Use Support</b>          |
|  | <b>Severity</b>                   | <b>Documentation</b> |  |
| <b>Frequent/Persistent Conditions Prevent Use</b> <ul style="list-style-type: none"> <li>One or more NYS DOH Drinking water supply closures resulting in closure of the supply for more than 30 days.</li> </ul>   | Precluded                         | Known                | Not Supporting                             |
| <b>Occasional Conditions Prevent Use</b> <ul style="list-style-type: none"> <li>One or more NYS DOH drinking water supply closures resulting in closure of the supply for less than 30 days, or</li> </ul>   | Impaired                          | Known                | Partially Supporting                       |
| <b>Frequent/Persistent Conditions Discourage Use</b> <ul style="list-style-type: none"> <li>Problems that do not require closure or advisories but adversely affect treatment costs and/or the quality of the finished water (e.g., taste/odors, color, excessive turbidity/dissolved solids, need for activated charcoal filters, etc.).</li> <li>Monitoring data exceeds contaminant criteria* more than 25% of time.</li> </ul> | Impaired                          | Known or Suspected   | Partially Supporting                       |
| <b>Occasional Conditions Discourage Use</b> <ul style="list-style-type: none"> <li>Monitoring data exceeds contaminant criteria* more than 10% of time.</li> </ul>   | Stressed                          | Suspected            | Full Support (Threatened)                  |
| <b>Conditions Support Uses, Threats Noted</b> <ul style="list-style-type: none"> <li>Contaminants are present, but at levels sufficiently low that routine treatment results in acceptable drinking water.</li> </ul>  | Threatened                        | Known or Suspected   | Full Support or Full Support, (Threatened) |
| <b>No Known Impairments or Imminent Threats</b> <ul style="list-style-type: none"> <li>No drinking water restrictions, and</li> <li>No additional treatment required, and</li> <li>No known contaminants present.</li> </ul>   | <i>Special Protection Waters*</i> |                      | Full Support                               |

\* Waterbodies designated as drinking water sources (Class A and higher) are considered highly valued resources deemed worthy of *Special Protection*. Regardless of impairment, these waters are included on the NYS DEC Priority Waterbodies List.

## ***Fish Consumption Use***

The assessment of fish consumption use is based on NYS DOH advisories regarding the catching and eating of sportfish, and contaminant monitoring in fish tissue, other biological tissue and surficial bottom sediments. The advisories reflect federal government standards for chemicals in food that is sold commercially, including fish. The NYS DEC Division of Fish Wildlife and Marine Resources routinely monitors contaminant levels in fish and game. Based on this monitoring data, NYS DOH issues advisories for specific waterbodies and species when contaminant levels in sportfish exceed the federal standards. These advisories are updated and published annually.

Because the general advisory for eating sportfish is precautionary and is not based on any actual contaminant monitoring data, it does not represent any documented impairment of fish consumption use. Consequently, the general statewide advisory is not reflected in this assessment of fish consumption use.

In addition to the waterbody-specific advisories, a general advisory recommends eating no more than one meal (one-half pound) per week of fish taken from New York State freshwaters and some marine water at the mouth of the Hudson River. This general advisory is to protect against eating large amounts of fish that have not been

| <b>Table 5 Fish Consumption Use Assessment Criteria</b>   |                              |                                    |   |
|---|------------------------------|------------------------------------|---|
| <b>Criteria</b>   | <b>WI/PWL Use Impairment</b> |                                    | <b>EPA Designated Use Support</b>         |
|   | <b>Severity</b>              | <b>Documentation</b>               |   |
| <b>Frequent/Persistent Conditions Prevent Use</b><br><ul style="list-style-type: none"> <li>• NYS DOH advisory recommends eating no fish (or none of sub-species) from specific waterbody.</li> </ul>   | Precluded                    | Known                              | Not Supporting                            |
| <b>Periodic/Occasional Conditions Prevent Use</b><br><ul style="list-style-type: none"> <li>• NYS DOH advisory recommends limiting consumption of fish from a specific waterbody.</li> <li>• Monitoring of fish tissue show contaminant levels that exceed levels of concern, but NYS DOH advisory has not been issued.</li> </ul>                  | Impaired                     | Known or Suspected                 | Partially Supporting                      |
| <b>Occasional (Other) Conditions Discourage Use</b><br><ul style="list-style-type: none"> <li>• Monitoring of macroinvertebrate tissue or surficial bottom sediment show contaminant levels that exceed levels of concern.</li> </ul>   | Stressed                     | Suspected                          | Fully Supporting (Threatened)             |
| <b>Conditions Support Use, Threats Noted</b><br><ul style="list-style-type: none"> <li>• Monitoring of fish (known), macroinvertebrate tissue/bottom sediment (suspected) show contaminant levels present but not exceeding levels of concern.</li> </ul>   | Threatened                   | Known or Suspected                 | Full Support or Full Support (Threatened) |
| <b>No Known Impairment or Imminent Threats</b><br><ul style="list-style-type: none"> <li>• No fish consumption advisory beyond the NYS DOH <i>General Advisory for Eating Gamefish</i>, and</li> <li>• Monitoring data revealing no contaminants in fish, macroinvertebrate tissue or surficial bottom sediment above background levels.</li> </ul> | No Known Impairment          | Assessment Level: <i>Monitored</i> | Full Support                              |

tested or that may contain unidentified contaminants. It does not apply to most marine waters. Because the general statewide advisory is precautionary and is not based on any actual contaminant monitoring data, it does not represent any documented impairment of fish consumption use. Consequently, the general statewide advisory is not reflected in the assessment of fish consumption use.

The relationship between the waterbody-specific fish consumption advisories and the severity and documentation of an impairment to fish consumption use is reflected in Table 5.

### Shellfishing Use

Marine Resources staff from the NYS DEC Division of Fish Wildlife and Marine Resources (DFWMR) assess the quality of nearly 1,200,000 acres of marine waters for shellfishing purposes. DFWMR certification of shellfishing areas is based on bacteriological water quality and evaluation of potential pollution sources by shoreline surveys. Only those waters specifically classified for shellfishing use (i.e., Class SA waters) are evaluated for their support of this use.

Restrictions on shellfishing are based on either water quality (bacteriological) monitoring results and/or on the proximity to and expected impact of known discharges and potential sources of contamination.

The relationship between the shellfishing certification and the severity and documentation of an impairment to shellfishing use is reflected in Table 6.

| <b>Table 6 Shellfishing Use Assessment Criteria</b>  |                       |                                    |                            |
|--|-----------------------|------------------------------------|----------------------------|
| Criteria   | WI/PWL Use Impairment |                                    | EPA Designated Use Support |
|  | Severity              | Documentation                      |                            |
| <b>Frequent/Persistent Conditions Prevent Use</b><br>• NYS DEC Division of Fish Wildlife and Marine Resources (DFWMR) has issued a year-round shellfishing closure for the water.  | Precluded             | Known                              | Not Supporting             |
| <b>Periodic/Occasional Conditions Prevent Use</b><br>• DFWMR has issued a seasonal or partial shellfishing closure for the water.  | Impaired              | Known                              | Partially Supporting       |
| <b>Occasional (Other) Conditions Discourage Use</b><br>• ???   | Stressed              | Known or Suspected                 | Full Support, Threatened   |
| <b>Conditions Support Use, but Threats Noted</b><br>• Shellfish Land Certification monitoring reveals contaminant above background, but not sufficient to warrant shellfish bed closure.   | Threatened            | Known                              | Full Support (Threatened)  |
| <b>No Known Impairment or Threat to Use</b><br>• DFWMR has certified (opened) the water for direct market harvesting of shellfish, and<br>• Shellfish Land Certification monitoring (DFWMR) reveals no contaminants above background levels. | No Known Impairment   | Assessment Level: <i>Monitored</i> | Full Support               |

### Public Bathing and Recreation Uses

Swimming and public recreation are important and popular uses for the waters of the state. The assessment of these wide range of activities involves two separate use categories: *Public Bathing* and *Recreation*.

| <b>Table 7 Public Bathing/Recreation Use Assessment Criteria</b>  |   |                                    |  |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
|---|---|------------------------------------|--|-----------------------------------|-----------------|-----------------|-------------------|------------------|---------|---------|---------|---------------|---------|---------|--------|-----------------------|-------|-------|-------|--------------------------------------|---|--|---|
| Criteria  | WI/PWL Use Impairment   |                                    | EPA Designated Use Support                 |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
|   | Severity  | Documentation                      |  |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| <b>Frequent/Persistent Conditions Prevent Uses</b><br><ul style="list-style-type: none"> <li>State/local/county health department has closed beach/water to swimming for the entire season.</li> </ul>  | Precluded   | Known                              | Not Supporting                             |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| <b>Periodic/Occasional Conditions Prevent Uses</b><br><ul style="list-style-type: none"> <li>State/local/county health department has issued temporary beach closure for the waterbody.</li> <li>Sufficient stream flow/water level necessary to support recreational uses are artificially restricted.</li> </ul>  | Impaired  | Known                              | Partially Supporting                       |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| <b>Frequent/Persistent Conditions Discourage Uses</b><br><ul style="list-style-type: none"> <li>Recreational Uses of water require additional measures (e.g., weed harvesting/control).</li> <li>Monitoring data exceeds <i>Impaired</i> criteria* more than 10% (suspected) or 25% (known) of time.</li> <li>Observational criteria* for restricted use noted more than 75% of the time.</li> </ul>  | Impaired  | Known or Suspected                 |  |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| <b>Occasional (Other) Conditions Discourage Uses</b><br><ul style="list-style-type: none"> <li>Monitoring data exceeds <i>Stressed</i> criteria* more than 10% (suspected) or 25% (known) of time.</li> <li>Observational criteria* for restricted use noted more than 25% of the time.</li> </ul>  | Stressed  | Known or Suspected                 | Full Support (Threatened)                  |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| <b>Conditions Support Uses, but Threats Noted</b><br><ul style="list-style-type: none"> <li>Data exceeds <i>Threatened</i> criteria* more than 10% (suspected) or 25% (known) of time.</li> <li>Observational criteria* for restricted use noted more than 10% of the time.</li> </ul>  | Threatened  | Known or Suspected                 | Full Support or Full Support, (Threatened) |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| <b>No Known Impairments or Threats to Uses</b><br><ul style="list-style-type: none"> <li>Monitoring data does not exceed use restriction criteria more than 10% of time.</li> <li>Observational criteria* for restricted use noted less than 10% of the time.</li> </ul>  | No Known Impairment   | Assessment Level: <i>Monitored</i> | Full Support                               |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| <table border="0"> <tr> <td>* <b>Monitoring Data Criteria</b></td> <td><i>Impaired</i></td> <td><i>Stressed</i></td> <td><i>Threatened</i></td> </tr> <tr> <td>Total Phosphorus</td> <td>40 µg/l</td> <td>30 µg/l</td> <td>20 µg/l</td> </tr> <tr> <td>Chlorophyll a</td> <td>15 µg/l</td> <td>12 µg/l</td> <td>8 µg/l</td> </tr> <tr> <td>Clarity (Secchi Disc)</td> <td>1.2 m</td> <td>1.5 m</td> <td>2.0 m</td> </tr> <tr> <td>* <b>Observational Data Criteria</b></td> <td colspan="2">Swimming/recreation are slightly (or more seriously) restricted by specifically identified causes (algae, clarity, odors, etc).</td> <td>(C=3,4 or 5) and (A=3,4,5 &amp; D=1,2 &gt;50%)</td> </tr> </table> |   |                                    |  | * <b>Monitoring Data Criteria</b> | <i>Impaired</i> | <i>Stressed</i> | <i>Threatened</i> | Total Phosphorus | 40 µg/l | 30 µg/l | 20 µg/l | Chlorophyll a | 15 µg/l | 12 µg/l | 8 µg/l | Clarity (Secchi Disc) | 1.2 m | 1.5 m | 2.0 m | * <b>Observational Data Criteria</b> | Swimming/recreation are slightly (or more seriously) restricted by specifically identified causes (algae, clarity, odors, etc). |  | (C=3,4 or 5) and (A=3,4,5 & D=1,2 >50%) |
| * <b>Monitoring Data Criteria</b>   | <i>Impaired</i>   | <i>Stressed</i>                    | <i>Threatened</i>                          |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| Total Phosphorus  | 40 µg/l   | 30 µg/l                            | 20 µg/l                                    |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| Chlorophyll a   | 15 µg/l   | 12 µg/l                            | 8 µg/l                                     |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| Clarity (Secchi Disc)   | 1.2 m   | 1.5 m                              | 2.0 m                                      |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| * <b>Observational Data Criteria</b>  | Swimming/recreation are slightly (or more seriously) restricted by specifically identified causes (algae, clarity, odors, etc). |                                    | (C=3,4 or 5) and (A=3,4,5 & D=1,2 >50%)    |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |
| Observational Criteria refers to responses to specific questions on <i>CSLAP Field Observation Forms</i> .  |   |                                    |  |                                   |                 |                 |                   |                  |         |         |         |               |         |         |        |                       |       |       |       |                                      |   |  |   |

Evaluation of *Public Bathing* use is limited to only those waters classified by New York State for primary contact recreation (i.e., Class B, SB, or higher waters). This classification applies to waters specifically designated as public beaches and bathing areas, which have a higher level of swimming use and are more regularly monitored by public health agencies.

The broader *Recreation* use category tracks impairments to a more expansive list of recreational uses, such as fishing, boating, water skiing, and other primary/secondary contact activities, including swimming. The *Recreation* category addresses the federal Clean Water Act goal that all waters be “swimmable.” \* However, while all waters of the state are to be “swimmable,” as a practical matter not all waters of the state are regularly monitored to assess swimming use support to the same degree that designated public bathing areas are. As a result of the varying levels of monitoring, *Public Bathing* waters are evaluated separately from other waters for *Recreation* uses.

As a practical matter, not all waters of the state are regularly monitored to assess swimming use support to the degree that designated public bathing areas are. Therefore, general precautions should be taken regarding recreation in these other waters.

The assessment of *Public Bathing* and *Recreation* uses rely on various water quality indicators. For waters used as public bathing areas state and local/county health departments conduct regular bacteriological sampling programs and perform sanitary surveys. Based on the findings of these surveys, bathing use may be restricted either permanently or periodically. Localized closings may also occur due to contamination by spills, waterfowl, or stormwater runoff.

In addition to swimming restrictions due to bacteriological contamination, the swimming/recreation uses of some waters are discouraged by other water quality conditions. Excessive weed growth, silty/muddy lake bottoms, and poor water clarity all represent lesser impairment of waters for public bathing use.

The relationship between water quality monitoring and other indicators and the severity and documentation of an impairment to swimming/bathing use is reflected in Table 7.

### ***Natural Resources Habitat/Hydrologic Use Support***

In an effort to better incorporate wetlands and other natural resources concerns into the water quality assessment, the additional water use category of *Natural Resources Habitat/Hydrology* was recently added to the list of uses to be assessed. This broad category captures waterbodies where water quality may be satisfactory, but various activities result in degradation of natural resources (e.g., fish and wildlife populations, habitats) and/or impacts to wetland uses such as flood protection, erosion control, nutrient recycling and surface and groundwater recharge. This category may also be used to capture impacts to various water quantity and flooding/flood plain issues including excessively low flows, increased peak flows, alterations to the frequency, duration and timing of floods and loss of flood storage.

For many impacts to habitat/hydrologic use support, situation are more clearly defined by the cause or source of the problem, than by the use affected. Such causes/sources include dredging, draining, excavation/filling of wetlands, stream channels, lakes/ponds; stream widening; stream downcutting; sediment embeddedness; other losses of wetlands; habitat fragmentation; loss of riparian vegetation or upland buffer zones.

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\* In order to meet the federal Clean Water Act goal that all waters be “swimmable,” water quality of New York State waters Class C, SC (and above) “shall be suitable for primary and secondary contact recreation.” However, other factors (such as flow/depth, access, conflicting use) may limit this use. (See NYS Classifications for Surface Waters, Part 701.1 thru 701.14.)

Specific criteria for *Natural Resources Habitat/Hydrology* use support have not yet been developed.

### ***Aesthetic Use***

An assessment of waterbody support of *aesthetics* is much more subjective than those for the other assessed uses. Consequently, there is no table of specific assessment criteria to determine support of aesthetics. Instead, the assessment of aesthetics use support will rely on the PWL definitions for the severity of impairment, level of documentation, and the relationship between severity/documentation and USEPA use support categories as outlined in Table 1.

# Waterbody Inventory Data Sheet

## Background Information

### Waterbody Location Information

Water Index Number (WIN): The stream identification number used in the Stream Classification Regulations (Title 6 - Conservation, Vols. B-F of the Official Compilation of Codes, Rules and Regulations for the State of New York).

Hydrologic (Watershed) Unit Code: Eleven digit code found on USDA-SCS (NRCS) *Hydrologic Watershed Unit Map - 1980 State of New York*.

Waterbody Type: River, Canal, Lake, Lake(Reservoir), Bay, Great Lake Shoreline, Estuary, or Ocean Coastline. NOTE: Bays refer to freshwater bays, saltwater bays and tidal waters should be designated as *Estuary*.

Affected Length/Area: The estimated length of segment with the noted impairment in miles (rivers, canals), Shore/coastal miles (great lakes, ocean) or acres (lakes, bays, reservoirs, estuaries).

Describe Waterbody Segment: Narrative description locating the beginning and endpoint (from downstream to upstream) of the segment.

Waterbody Classification: Current classification of the waterbody as specified in the Stream Classification Regulations (Title 6 - Conservation, Vols. B-F of the Official Compilation of Codes, Rules and Regulations for the State of New York).

Flow Category: Minimum Average Seven Consecutive Day Flow-10 year recurrence (MA7CD/10) flow range, from table.

| <u>Category</u> | <u>MA7CD/10 Range</u>                                 |
|-----------------|---|
| H (for high)    | Streams/Rivers over 150 cfs                           |
| M (for medium)  | Stream/Rivers between 20-150 cfs                      |
| L (for Low)     | Streams/Rivers under 20 cfs                           |
| 0               | Not Applicable (lake, estuary, shore/coastline, etc.) |

Drainage Basin and Sub-Basin: One of 17 major hydrologic basins in New York and the associated sub-basin.

Region: NYSDEC Region in which the waterbody is located.

County: Primary county (and county ID number) of waterbody location. NOTE: Waterbody segments which form the border between or cross two or more counties are listed only once. This is done to avoid double counting the number of segments and/or the length/affected area of the segment. PWL segments that are located in more than one county are indicated by “...” after the *primary* county name. (Listings of PWL segments within each county are included as Appendix C.)

Quad Map: The name of the primary topographic quadrangle map on which the segment appears. NOTE: PWL segments that are located in more than one quadrangle are indicated by “...” after the *primary* quad map name.

## Water Quality Problem Information

### Use Impacts/Impairments:

All specific uses that are restricted by water quality impacts/impairments are listed.

Problem Severity: For each waterbody use impairment, the degree of severity of water quality problem/diminished use (i.e., use precluded, impaired, stressed, or threatened) is listed. The severity is determined using the following criteria.

#### PRECLUDED (P):

Frequent/persistent water quality, or quantity, conditions and/or associated habitat degradation prevents all aspects of the waterbody use (e.g., the Health Department does not allow swimming at the Onondaga Lake Outlet public park beach - *bathing precluded*; consumption advisory recommends eating no fish from Upper Hudson due to PCB contamination - *fish consumption precluded*; Sacandaga River below the dam is periodically dry and devoid of benthic organisms due to flow extremes from power dam releases - *fish propagation precluded*)

#### IMPAIRED (I):

Occasional water quality, or quantity, conditions and/or habitat characteristics periodically prevent the use of the waterbody (e.g., beaches in marine waters are closed after storm events due to high coliform levels from CSOs's and stormwater runoff - *bathing impaired*) or;

Waterbody uses are not precluded, but some aspects of the use are limited or restricted (e.g., a fish consumption advisory for lake trout from Canandaigua Lake recommends eating no more than one meal per month - *fish consumption impaired*) or;

Waterbody uses are not precluded, but frequent/persistent water quality, or quantity, conditions and/or associated habitat degradation discourage the use of the waterbody (algal blooms and heavy rooted aquatic vegetation deter swimming in Oneida Lake - *bathing/swimming impaired*) or;

Support of the waterbody use requires additional/advanced measures or treatment (e.g., the City of Rochester is to build a filtration plant due to high turbidity in the Hemlock Lake water supply - *water supply impaired*, aquatic vegetation control--mechanical harvesting, herbicides--are required in Upper Cassadaga Lake to allow swimming and boating - *bathing/ swimming and boating impaired*).

#### STRESSED (S):

Waterbody uses are not significantly limited or restricted, but occasional water quality, or quantity, conditions and/or associated habitat degradation periodically discourage the use of the waterbody (e.g., high turbidity that occurs after rains reduce clarity and deter swimmers in Babcock Lake - *bathing/swimming stressed*, ambient water column analyses indicate occasional aquatic standard violations but impaired use not evident - *fish survival/ propagation stressed*; localized areas of debris along the shore - *aesthetic stressed*)

#### THREATENED (T):

Water quality currently supports waterbody uses and the ecosystem exhibits no obvious signs of stress, however existing or changing land use patterns may result in restricted use or ecosystem disruption (e.g., numerous proposals for residential development in the Schoharie Creek headwaters create a concern - *fish propagation, aesthetics threatened*) or,

Water quality currently supports waterbody uses and the ecosystem exhibits no obvious signs of stress, however monitoring data reveals a declining trend in water quality which, if it continues, would result in a use impairment, or

Waterbody uses are not restricted and no water quality problems exists, but the support of a specific and distinctive use or uses make the waterbody more susceptible to water quality threats. Note: Such situations are the only instances where a threatened use can have a documentation level of *possible*, other threatened waterbodies (i.e., those related to changing land use activities) must correspond to *known* or *suspected* (planned) land use changes.

Problem Documentation: Each diminished/impacted use is listed according to the level of documentation for the problem/impairment. The level of problem documentation is determined using the following criteria.

Known (K): Water quality monitoring data and/or studies (biologic macro-invertebrate surveys, fishery studies, water column chemistry, beach closures, fish consumption advisories, shellfishing restrictions) have been completed and conclude that the use of the waterbody is restricted to the degree indicated by the listed *severity*.

Suspected (S): Anecdotal evidence, public perception and/or specific citizen complaints indicate that the use of the waterbody may be restricted. However, water quality data/studies that establish an impairment have not been completed or there is conflicting information.

Possible (P): Land use or other activities in the watershed are such that the use of the waterbody could be affected. However, there is currently very little, if any, documentation of an actual water quality problem.

Type of Pollutant: Each pollutant contributing to the water quality problem is listed according to the level of documentation for the pollutant. The criteria for *known*, *suspected*, or *possible* pollutants the same as outlined above. Those pollutants that contribute to the most significant impact/impairment are “major” pollutants and are is listed in CAPITAL LETTERS.

Source(s) of Pollutant: Each source of pollution contributing to the water quality problem is listed according to the level of documentation for the source. The criteria for *known*, *suspected*, or *possible* pollutants the same as outlined above. Those sources that contribute to the most significant impact/impairment are “major” sources and are is listed in CAPITAL LETTERS.

Waterbody Problem Description/Documentation/History/Notes: This narrative description contains more detailed information about the waterbody segment and its water quality problem/impairment. This section may include:

- 1) a detailed description of the waterbody and surrounding area,
- 2) specific examples/instances of water use impairments, e.g., what water supply is affected? how often are beaches closed? what species of fish are restricted for consumption?
- 3) details regarding the specific pollutant and source of the impairment, and
- 4) references for specific reports, studies, monitoring data and/or other documentation that supports the impairment, pollutant and source information.

For some segments, an expected date of completion for a sampling effort, report, facility or other activity that will affect the segment or provide additional segment information may be noted in the **Next Update** field. The **Next Update** information will help ensure the segment information is kept up-to-date.

## Resolution/Management Information

(to be completed by NYSDEC staff)

18. Resolvability: Note with an “X” the one most appropriate *resolvability* class for the segment from the list below.
1. Needs Verification/Study (see Status): The confirmation of a use impairment, the evaluation of possible solutions and/or the development of management action (tailored specifically to the segment) need to be completed. See also *Status of Problem Verification/Study.*)
  2. Strategy Exists, Funding/Resources Needed: Study of the problem is complete, but funding or other resources are needed to implement the management strategy.
  3. Strategy Being Implemented: The recommended strategy for the remediation of the segment is currently underway.
  4. Problem Not Resolvable (technical/economic limitations): Technical, legal, social, political concerns preclude resolution of the impairment for the foreseeable future (e.g., low pH in lakes due to acid rain).
  5. Problem Not Resolvable (natural condition): Limitations to use of a waterbody is attributed to naturally occurring characteristics of the water/watershed (e.g., high sediment load in the Genesee River).
  6. Problem Thought to be Abated, Needs Verification: The prime cause of the use impairment to the waterbody has been brought under control but the expected improvement to the waterbody needs to be confirmed.
  7. Problem Abated, Waterbody Deleted: The waterbody use has been restored and the segment has been marked as *deleted*. Although deleted and not included in the list, the segment and information will remain in the Waterbody Inventory.
19. Status of Problem Verification/Study: Note with an “X” the one most appropriate *status* class for the segment from the list below.
1. Waterbody Nominated, but Problem Not Verified: It has been suggested that a waterbody use impairment exists for the segment, however there is insufficient (or no) available information to confirm that the use is being affected to the degree indicated.
  2. Problem Verified/Documented, Cause Unknown: The waterbody use impairment (and severity) is sufficiently documented, however identification of the cause (pollutant) requires more study.
  3. Cause of Problem Identified, Source Unknown: The specific pollutant(s) causing the use impairment have been sufficiently documented, however the source of the pollutant requires more study.
  4. Source of Problem Identified, Management Strategy Needed: Most details about the problem (use impairment, cause, source) are known/sufficiently documented. A management strategy to address the situation and restore the designated use of the waterbody needs to be developed.
  5. Management Strategy has been Developed: Necessary study of the situation is complete.

20. Lead Agency/Office: Indicate the primary party, either within DEC (division and bureau or office) or outside/external to DEC, responsible for the next steps in the study/strategy implementation concerning the segment. (e.g., DOW/BWAR, DOW/Reg6, DEC/F&W, DOH/PWS, ext/WQCC, ext/SWCD, etc)

21. Resolution Potential: Indicate as *High*, *Medium*, or *Low*, using the following criteria.

High: The waterbody or water quality issue has been deemed to be worthy of the expenditure of available resources (time and dollar) because of the level of public interest and the expectation that the commitment of these resources will result in either a measurable improvement in the situation or additional information necessary for the management of the water resource.

Medium: The resources necessary to address the problem are beyond what are *currently* available. With additional resources, these segments could become High *resolution potential* segments.

Low: Segments with water quality problems so persistent/intractable that improvements are expected to require an unrealistically high commitment of resources, not likely to become available (e.g., acid rain lakes).

NOTE: This field may be left blank if further verification/study of the impairment, pollutant and/or source is necessary to determine the *Resolution Potential* of the segment.

22. Total Maximum Daily Load (TMDL)/303d Status: Note with an “X” the most appropriate *TMDL* note (or notes) for the segment from the list below.

Impaired Water, TMDL Development Needed

Part 1 - High Priority for TMDL

Part 2 - Multiple Segment/Categorical TMDL Waters

- o Acid Rain Waters
- o Fish Consumption Waters
- o Restricted Shellfishing Waters

Part 3 - Water Requiring Re-Evaluation

Impaired Water, TMDL Development NOT Needed

Part 4a - TMDL Complete, being Implemented

Part 4b - *Pollution* Impairment, Not *Pollutants*

Part 4c - Other Controls More Suitable.

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## Waterbody Inventory Data Sheets By County, Segment Name

| Waterbody/Segment (ID)                              | Water Index Number               | Category     |
|---|----------------------------------|--------------|
| <b>Cayuga County</b>                                |                                  |              |
| Cold Spring/North Brook and minor tribs (0701-0038) | Ont 66-12-36                     | MinorImpacts |
| Crane Brook and tribs (0704-0024)                   | Ont 66-12-51                     | Impaired Seg |
| Decker Creek, Upper, and tribs (0706-0016)          | Ont 66-12-43-P212-28-17- 1       | NoKnownImpct |
| Duck Lake (0704-0025)                               | Ont 66-12-46-P222                | MinorImpacts |
| Dutch Hollow Brook and tribs (0706-0003)            | Ont 66-12-43-P212- 3             | MinorImpacts |
| Great Gully Creek and tribs (0705-0052)             | Ont 66-12-P296- 15               | UnAssessed   |
| Hemlock Creek and tribs (0706-0018)                 | Ont 66-12-43-P212-28-29          | UnAssessed   |
| Howland Island Game Refuge Ponds (0701-0045)        | Ont 66-12-45-P222a thru i        | UnAssessed   |
| Little Salmon Creek and tribs (0705-0098)           | Ont 66-12-P296- 57-21            | NoKnownImpct |
| Mill/Dresserville Creek and minor tribs (0706-0015) | Ont 66-12-43-P212-28-17          | NoKnownImpct |
| Minor Tribs to Cayuga Lake, Eastern (0705-0051)     | Ont 66-12-P296- 1 thru 56 (sel.) | UnAssessed   |
| Minor Tribs to Lower Senca River (0701-0043)        | Ont 66-12-44 thru 57 (selected)  | UnAssessed   |
| Minor Tribs to Lower Seneca River (0701-0034)       | Ont 66-12-30 thru 42 (selected)  | UnAssessed   |
| Minor Tribs to Owasco Lake (0706-0010)              | Ont 66-12-43-P212-               | MinorImpacts |
| Mud Pond (0701-0044)                                | Ont 66-12-44-P221                | Need Verific |
| Muskrat Creek and tribs (0701-0035)                 | Ont 66-12-35                     | UnAssessed   |
| Otter Lake (0701-0004)                              | Ont 66-12-35-P197- 3-P198        | MinorImpacts |
| Owasco Inlet, Lower, and minor tribs (0706-0002)    | Ont 66-12-43-P212-28             | MinorImpacts |
| Owasco Inlet, Upper, and tribs (0706-0014)          | Ont 66-12-43-P212-28             | Impaired Seg |
| Owasco Lake (0706-0009)                             | Ont 66-12-43-P212                | Impaired Seg |
| Owasco Outlet, Lower, and tribs (0706-0008)         | Ont 66-12-43                     | MinorImpacts |
| Owasco Outlet, Upper, and tribs (0706-0001)         | Ont 66-12-43                     | MinorImpacts |
| Paines Creek and tribs (0705-0053)                  | Ont 66-12-P296- 27               | UnAssessed   |
| Parker Pond (0701-0036)                             | Ont 66-12-35-P197                | Need Verific |
| Putnam Brook and tribs (0701-0039)                  | Ont 66-12-36- 1                  | NoKnownImpct |
| Salmon Creek, Upper (Big), and tribs (0705-0054)    | Ont 66-12-P296- 57               | MinorImpacts |
| Slayton Pond (0701-0042)                            | Ont 66-12-40- 3-P207             | UnAssessed   |
| Stark Pond (0701-0041)                              | Ont 66-12-37-P206                | UnAssessed   |
| Trib to North Brook, Upper (0701-0040)              | Ont 66-12-36-10- 1               | UnAssessed   |
| Tribs to Duck Lake (0701-0046)                      | Ont 66-12-46-P222-               | UnAssessed   |
| Tribs to Parker Pond (0701-0037)                    | Ont 66-12-35-P197-               | UnAssessed   |
| Unnamed Trib, Upper, and tribs (0706-0017)          | Ont 66-12-43-P212-28-28          | UnAssessed   |
| Yawgers Creek and tribs (0705-0006)                 | Ont 66-12-P296- 4                | Need Verific |
| <b>Cortland County</b>                              |                                  |              |
| Grout Brook and tribs (0707-0001)                   | Ont 66-12-29-P193-55             | NoKnownImpct |
| <b>Lewis County</b>                                 |                                  |              |
| Bloodsucker Lake (0703-0076)                        | Ont 66-11-P26-24-14-14- 1-P79    | UnAssessed   |
| East Br Fish Creek, Upper, minor tribs (0703-0067)  | Ont 66-11-P26-24-14              | UnAssessed   |
| Mud Lake (0703-0074)                                | Ont 66-11-P26-24-14- 9- 8-P77    | UnAssessed   |
| Point Rock Creek and tribs (0703-0073)              | Ont 66-11-P26-24-14- 9           | UnAssessed   |

| <b>Waterbody/Segment (ID)</b>                        | <b>Water Index Number</b>         | <b>Category</b> |
|--|-----------------------------------|-----------------|
| <b>Madison County</b>                                |                                   |                 |
| Canaseraga Creek, Upper, and tribs (0703-0095)       | Ont 66-11-P26-33- 2               | MinorImpacts    |
| Canaseraga/Cowaselon Cr, Low, and tribs (0703-0034)  | Ont 66-11-P26-33                  | Need Verific    |
| Canastota Creek, Lower, and tribs (0703-0002)        | Ont 66-11-P26-33- 5               | Impaired Seg    |
| Canastota Creek, Upper, and tribs (0703-0096)        | Ont 66-11-P26-33- 5               | UnAssessed      |
| Cazenovia Lake (0703-0021)                           | Ont 66-11-P26-37-35-P153          | MinorImpacts    |
| Cazenovia Lake Outlet and tribs (0703-0113)          | Ont 66-11-P26-37-35               | UnAssessed      |
| Chittenango Creek, Lower, and tribs (0703-0005)      | Ont 66-11-P26-37                  | MinorImpacts    |
| Chittenango Creek, Middle, and tribs (0703-0025)     | Ont 66-11-P26-37                  | NoKnownImpct    |
| Chittenango Creek, Upper, and tribs (0703-0099)      | Ont 66-11-P26-37                  | UnAssessed      |
| Clockville Creek and tribs (0703-0097)               | Ont 66-11-P26-33-13               | UnAssessed      |
| Cowaselon Creek, Middle, and minor tribs (0703-0093) | Ont 66-11-P26-33                  | MinorImpacts    |
| Cowaselon Creek, Upper, and tribs (0703-0094)        | Ont 66-11-P26-33                  | UnAssessed      |
| Minor Tribs to Oneida Lake, Southeast (0703-0092)    | Ont 66-11-P26-26 thru 32          | UnAssessed      |
| Minor Tribs to Oneida Lake, Southwest (0703-0098)    | Ont 66-11-P26-35 thru 43          | UnAssessed      |
| Old Erie Barge Canal (0703-0115)                     | Ont 66-11-P26-37-(Old Erie Canal) | UnAssessed      |
| Oneida Creek, Upper, and tribs (0703-0090)           | Ont 66-11-P26-25                  | MinorImpacts    |
| Oneida Lake (0703-0001)                              | Ont 66-11-P26                     | MinorImpacts    |
| Tribs to Cazenovia Lake (0703-0114)                  | Ont 66-11-P26-37-35-P153-         | UnAssessed      |
| Tuscarora Lake (0703-0022)                           | Ont 66-11-P26-37-47-P164          | NoKnownImpct    |
| <b>Oneida County</b>                                 |                                   |                 |
| Bullhead Lake (0703-0075)                            | Ont 66-11-P26-24-14- 9-P76        | UnAssessed      |
| Canada Creek and tribs (0703-0010)                   | Ont 66-11-P26-24- 1-10            | Need Verific    |
| Carterville Pond (0703-0083)                         | Ont 66-11-P26-24-22-P95           | UnAssessed      |
| Cody Pond (0703-0081)                                | Ont 66-11-P26-24-22-15- 1-P93a    | UnAssessed      |
| East Br Fish Creek, Lower, minor tribs (0703-0066)   | Ont 66-11-P26-24-14               | UnAssessed      |
| Emmons Brook, Upper, and tribs (0703-0084)           | Ont 66-11-P26-24-27               | UnAssessed      |
| Fall Brook and tribs (0703-0072)                     | Ont 66-11-P26-24-14- 5            | UnAssessed      |
| Fish Creek and minor tribs (0703-0059)               | Ont 66-11-P26-24                  | NoKnownImpct    |
| Florence Creek, Lower, and tribs (0703-0069)         | Ont 66-11-P26-24-14- 4            | UnAssessed      |
| Florence Creek, Upper, and tribs (0703-0070)         | Ont 66-11-P26-24-14- 4            | UnAssessed      |
| Furnace Creek and tribs (0703-0068)                  | Ont 66-11-P26-24-14- 2            | UnAssessed      |
| Gifford Lake (0703-0086)                             | Ont 66-11-P26-24-38a-P104         | UnAssessed      |
| Gorton Pond (0703-0080)                              | Ont 66-11-P26-24-22- 7- 2-P90     | UnAssessed      |
| Little River and tribs (0703-0078)                   | Ont 66-11-P26-24-22               | UnAssessed      |
| Mack Pond (0703-0077)                                | Ont 66-11-P26-24-18..P86          | UnAssessed      |
| Mad River and tribs (0703-0085)                      | Ont 66-11-P26-24-28               | NoKnownImpct    |
| Minor Tribs to Oneida Lake, Northeast (0703-0057)    | Ont 66-11-P26-16 thru 23 (select) | NoKnownImpct    |
| NYS Barge Canal (portion 6) (0703-0063)              | Ont 66-11-P26-24- 1 (Barge Canal) | UnAssessed      |
| Oneida City Reservoir (0703-0071)                    | Ont 66-11-P26-24-14- 4-P73        | UnAssessed      |
| Oneida Creek, Lower, and tribs (0703-0032)           | Ont 66-11-P26-25                  | MinorImpacts    |
| Oneida Lake (0703-0001)                              | Ont 66-11-P26                     | MinorImpacts    |
| Panther Lake (0703-0082)                             | Ont 66-11-P26-24-22-15-P94        | UnAssessed      |
| Sconondoa Creek and tribs (0703-0003)                | Ont 66-11-P26-25- 6               | MinorImpacts    |
| Starkweather Pond (0703-0079)                        | Ont 66-11-P26-24-22- 2c-P88       | UnAssessed      |
| Stony Creek and tribs (0703-0065)                    | Ont 66-11-P26-24- 1- 8            | MinorImpacts    |
| Sunset Lake (0703-0091)                              | Ont 66-11-P26-25-P120             | UnAssessed      |
| Teelins Pond (0703-0064)                             | Ont 66-11-P26-24- 1- 4-P57        | UnAssessed      |
| Upper Murray Brook, Oneida Lake Trib (0703-0058)     | Ont 66-11-P26-22,23a              | NoKnownImpct    |
| West Br Fish Creek, Lower and tribs (0703-0060)      | Ont 66-11-P26-24                  | NoKnownImpct    |
| West Br Fish Creek, Middle, minor tribs (0703-0061)  | Ont 66-11-P26-24                  | UnAssessed      |
| West Br Fish Creek, Upper, and tribs (0703-0062)     | Ont 66-11-P26-24                  | UnAssessed      |
| Wood Creek and minor tribs (0703-0012)               | Ont 66-11-P26-24- 1               | MinorImpacts    |

| <b>Waterbody/Segment (ID)</b>                       | <b>Water Index Number</b>          | <b>Category</b> |
|---|------------------------------------|-----------------|
| <b>Onondaga County</b>                              |                                    |                 |
| Bloody Brook and tribs (0702-0006)                  | Ont 66-12-12-P154- 2               | Impaired Seg    |
| Butternut Creek Trib, Upper (0703-0107)             | Ont 66-11-P26-37- 6-13             | UnAssessed      |
| Butternut Creek, Lower, and minor tribs (0703-0039) | Ont 66-11-P26-37- 6                | Need Verific    |
| Butternut Creek, Upper, and minor tribs (0703-0100) | Ont 66-11-P26-37- 6                | NoKnownImpct    |
| Carpenters Brook and tribs (0701-0033)              | Ont 66-12-28                       | MinorImpacts    |
| Cross Lake (0701-0002)                              | Ont 66-12 (portion 3)/P185         | MinorImpacts    |
| Dead Creek and tribs (0701-0032)                    | Ont 66-12-19                       | MinorImpacts    |
| East Branch Limestone Creek and tribs (0703-0105)   | Ont 66-11-P26-37- 6- 2-(East Br)   | MinorImpacts    |
| East Syracuse Reservoir (0703-0110)                 | Ont 66-11-P26-37- 6-15- 1-P143a    | UnAssessed      |
| Geddes Brook and tribs (0702-0007)                  | Ont 66-12-12-P154- 6- 2            | Impaired Seg    |
| Green Lake (0703-0108)                              | Ont 66-11-P26-37- 6-14-P143        | UnAssessed      |
| Green Lake (0703-0111)                              | Ont 66-11-P26-37- 8-P147           | UnAssessed      |
| Harbor Brook, Lower, and tribs (0702-0002)          | Ont 66-12-12-P154- 5               | Impaired Seg    |
| Harbor Brook, Upper, and tribs (0702-0012)          | Ont 66-12-12-P154- 5               | UnAssessed      |
| Hiawatha Lake, Woodland Reservoir (0702-0026)       | Ont 66-12-12-P154- 4-P156,P158     | UnAssessed      |
| Jamesville Reservoir (0703-0015)                    | Ont 66-11-P26-37- 6-P144           | UnAssessed      |
| Ley Creek and tribs (0702-0001)                     | Ont 66-12-12-P154- 3               | Impaired Seg    |
| Limestone Creek, Lower, and minor tribs (0703-0008) | Ont 66-11-P26-37- 6- 2             | Impaired Seg    |
| Limestone Creek, Middle, and tribs (0703-0101)      | Ont 66-11-P26-37- 6- 2             | UnAssessed      |
| Limestone Creek, Upper, and tribs (0703-0106)       | Ont 66-11-P26-37- 6- 2-37          | UnAssessed      |
| Minor Tribs to Lower Seneca River (0701-0030)       | Ont 66-12- 2 thru 11               | UnAssessed      |
| Minor Tribs to Lower Seneca River (0701-0031)       | Ont 66-12-13 thru 28               | UnAssessed      |
| Minor Tribs to Onondaga Lake (0702-0022)            | Ont 66-12-12-P154-                 | Impaired Seg    |
| Minor Tribs to Otisco Lake (0702-0030)              | Ont 66-12-12-P154- 6-P175-         | UnAssessed      |
| Minor Tribs to Skaneateles Lake (0707-0005)         | Ont 66-12-29-P193-                 | UnAssessed      |
| Mud Creek and tribs (0703-0046)                     | Ont 66-11-11                       | UnAssessed      |
| Mud Pond (0702-0029)                                | Ont 66-12-12-P154- 6- 5-P165       | UnAssessed      |
| Ninemile Creek, Lower, and tribs (0702-0005)        | Ont 66-12-12-P154- 6               | Impaired Seg    |
| Ninemile Creek, Upper, and tribs (0702-0028)        | Ont 66-12-12-P154- 6               | UnAssessed      |
| Old Erie Barge Canal (0703-0115)                    | Ont 66-11-P26-37-(Old Erie Canal)  | UnAssessed      |
| Oneida Lake (0703-0001)                             | Ont 66-11-P26                      | MinorImpacts    |
| Onondaga Creek, Lower, and tribs (0702-0023)        | Ont 66-12-12-P154- 4               | Impaired Seg    |
| Onondaga Creek, Middle, and tribs (0702-0004)       | Ont 66-12-12-P154- 4               | Impaired Seg    |
| Onondaga Creek, Upper, and minor tribs (0702-0024)  | Ont 66-12-12-P154- 4               | MinorImpacts    |
| Onondaga Lake Outlet (0702-0020)                    | Ont 66-12-12                       | Impaired Seg    |
| Onondaga Lake, northern end (0702-0003)             | Ont 66-12-12-P154 (portion 1)      | Impaired Seg    |
| Onondaga Lake, southern end (0702-0021)             | Ont 66-12-12-P154 (portion 2)      | Impaired Seg    |
| Otisco Lake (0702-0011)                             | Ont 66-12-12-P154- 6-P175          | MinorImpacts    |
| Pratt Falls Creek, Upper, and tribs (0703-0103)     | Ont 66-11-P26-37- 6- 2- 8          | UnAssessed      |
| Round Lake (0703-0112)                              | Ont 66-11-P26-37- 8-P147-1-P148    | UnAssessed      |
| Rush Creek, Upper, and tribs (0703-0109)            | Ont 66-11-P26-37- 6-15             | UnAssessed      |
| Seneca River, Lower, Main Stem (0701-0001)          | Ont 66-12 (portion 1)              | Impaired Seg    |
| Seneca River, Lower, Main Stem (0701-0008)          | Ont 66-12 (portion 2)              | Impaired Seg    |
| Skaneateles Creek and tribs (0707-0003)             | Ont 66-12-29                       | Impaired Seg    |
| Skaneateles Lake (0707-0004)                        | Ont 66-12-29-P193                  | Threat(Poss)    |
| Smith Hollow Pond (0702-0031)                       | Ont 66-12-12-P154- 6-P175- 3-P176  | UnAssessed      |
| Snooks Pond, White Lake (0703-0102)                 | Ont 66-11-P26-37- 6- 2- 6-P134,P13 | UnAssessed      |
| Spafford Creek and tribs (0702-0032)                | Ont 66-12-12-P154- 6-P175-16       | UnAssessed      |
| Tribs to Cross Lake (0701-0029)                     | Ont 66-12 ..P185-                  | UnAssessed      |
| West Branch Limestone Creek and tribs (0703-0104)   | Ont 66-11-P26-37- 6- 2- 8          | UnAssessed      |
| West Branch Onondaga Creek and tribs (0702-0025)    | Ont 66-12-12-P154- 4-11            | Need Verific    |
| Westcott Reservoir (0702-0027)                      | Ont 66-12-12-P154- 5-P158a         | UnAssessed      |

| <b>Waterbody/Segment (ID)</b>                        | <b>Water Index Number</b>          | <b>Category</b> |
|--|------------------------------------|-----------------|
| <b>Ontario County</b>                                |                                    |                 |
| Beards/Beaver Creek and tribs (0704-0038)            | Ont 66-12-52-23-46                 | UnAssessed      |
| Black Brook and tribs (0704-0047)                    | Ont 66-12-52..49                   | UnAssessed      |
| Canadaigua Outlet, Mid, and minor tribs (0704-0042)  | Ont 66-12-52..                     | MinorImpacts    |
| Canadaigua Outlet, Upp, and minor tribs (0704-0011)  | Ont 66-12-52..                     | MinorImpacts    |
| Canandaigua Lake (0704-0001)                         | Ont 66-12-52..P286                 | Threat(Poss)    |
| Fairport Reservoirs (0704-0035)                      | Ont 66-12-52-23-43- 6..P263a,P263b | UnAssessed      |
| Fish Creek and tribs (0704-0037)                     | Ont 66-12-52-23-45                 | UnAssessed      |
| Flint Creek, Lower, and tribs (0704-0044)            | Ont 66-12-52..40                   | MinorImpacts    |
| Great Brook and minor tribs (0704-0034)              | Ont 66-12-52-23-43                 | Impaired Seg    |
| Grimes Creek and tribs (0704-0002)                   | Ont 66-12-52..P286-18- 2- 8        | Need Verific    |
| Marsh Creek and tribs (0704-0043)                    | Ont 66-12-52..35                   | UnAssessed      |
| Minor Tribs to Canandaigua Lake, Eastern (0704-0048) | Ont 66-12-52..P286- 1 thru 17      | UnAssessed      |
| Minor Tribs to Canandaigua Lake, West (0704-0054)    | Ont 66-12-52..P286-19 thru 49      | UnAssessed      |
| Minor Tribs to Seneca Lake, Northwest (0705-0027)    | Ont 66-12-P369-116 thru 139        | UnAssessed      |
| Mud Creek, Lower, and minor tribs (0704-0030)        | Ont 66-12-52-23 (Mud Creek)        | MinorImpacts    |
| Mud Creek, Upper, and tribs (0704-0031)              | Ont 66-12-52-23 (Mud Creek)        | UnAssessed      |
| Naples Creek, Lower, and minor tribs (0704-0051)     | Ont 66-12-52..P286-18- 2           | Need Verific    |
| Naples/Eelpot Cr, Upper, and minor tribs (0704-0052) | Ont 66-12-52..P286-18- 2           | UnAssessed      |
| Newark Reservoir (0704-0045)                         | Ont 66-12-52..40-P273              | UnAssessed      |
| Reservoir Creek, Upper, and tribs (0704-0053)        | Ont 66-12-52..P286-18- 2-10        | UnAssessed      |
| Rocky Run and tribs (0704-0046)                      | Ont 66-12-52..46                   | UnAssessed      |
| Schaffer Creek and tribs (0704-0039)                 | Ont 66-12-52-23-51                 | UnAssessed      |
| Sterling Pond (0704-0040)                            | Ont 66-12-52-23-52-P267            | UnAssessed      |
| Tribs to Fairport Reservoirs (0704-0036)             | Ont 66-12-52-23-43- 6..P263a/b-    | UnAssessed      |
| Wilson/Burrell Creek and tribs (0705-0096)           | Ont 66-12-P369-133                 | UnAssessed      |
| <b>Oswego County</b>                                 |                                    |                 |
| Big Bay Creek and tribs (0703-0049)                  | Ont 66-11-P26- 4                   | UnAssessed      |
| Black Creek and tribs (0703-0056)                    | Ont 66-11-P26-15                   | UnAssessed      |
| Black Creek and tribs (0701-0024)                    | Ont 66- 2                          | NoKnownImpct    |
| Black, Bass, Sisley and Green Ponds (0703-0089)      | Ont 66-11-P26-24-P109-P110 thru 11 | UnAssessed      |
| Caughdenoy Creek and tribs (0703-0048)               | Ont 66-11-21                       | UnAssessed      |
| Chase, South Ponds (0703-0052)                       | Ont 66-11-P26- 9-17-P38a,P39       | UnAssessed      |
| Dutcher, Francis Ponds (0703-0051)                   | Ont 66-11-P26- 9- 5-P34a,P35       | UnAssessed      |
| Fish Creek and tribs (0703-0018)                     | Ont 66-11- 2                       | UnAssessed      |
| Kasoag Lake (0703-0087)                              | Ont 66-11-P26-24-P109              | MinorImpacts    |
| Kibbie Lake (0703-0054)                              | Ont 66-11-P26-10-P42               | UnAssessed      |
| Lake Neatahwanta (0701-0018)                         | Ont 66- 3-P9                       | Impaired Seg    |
| Lake Temalo (0703-0044)                              | Ont 66-11- 2-P17                   | UnAssessed      |
| Minor Tribs to Oneida Lake, Northwest (0703-0035)    | Ont 66-11-P26- 1 thru 14 (select)  | UnAssessed      |
| Minor Tribs to Oneida River (0703-0043)              | Ont 66-11- 1 thru 23 (selected)    | UnAssessed      |
| Minor Tribs to Oswego River (0701-0023)              | Ont 66- 1 thru 10 (selected)       | UnAssessed      |
| Mud Lake (0701-0028)                                 | Ont 66- 6-1-P13                    | UnAssessed      |
| North Pond (0703-0053)                               | Ont 66-11-P26- 9-18-1-P40          | UnAssessed      |
| Oneida Lake (0703-0001)                              | Ont 66-11-P26                      | MinorImpacts    |
| Oneida River, Main Stem (0703-0020)                  | Ont 66-11                          | MinorImpacts    |
| Oswego River, Lower, Main Stem (0701-0006)           | Ont 66 (portion 2)                 | Impaired Seg    |
| Oswego River, Lower, Main Stem (0701-0022)           | Ont 66 (portion 1)                 | MinorImpacts    |
| Oswego River, Upper, Main Stem (0701-0021)           | Ont 66 (portion 3)                 | Need Verific    |
| Ox Creek and tribs (0701-0027)                       | Ont 66- 6                          | UnAssessed      |
| Paddys, Crooks and Mud Ponds (0701-0025)             | Ont 66- 2-P6,P7,P8                 | UnAssessed      |

| <b>Waterbody/Segment (ID)</b>                     | <b>Water Index Number</b>          | <b>Category</b> |
|---|------------------------------------|-----------------|
| <b>Oswego County (con't)</b>                      |                                    |                 |
| Pleasant Lake (0703-0047)                         | Ont 66-11-14a-P19                  | NoKnownImpct    |
| Scriba Creek and tribs (0703-0050)                | Ont 66-11-P26- 9                   | NoKnownImpct    |
| Six Mile Creek and tribs (0703-0042)              | Ont 66-11- 1                       | UnAssessed      |
| Stewarts, Goodfellow Ponds (0703-0045)            | Ont 66-11- 2-P18,P18a              | UnAssessed      |
| Tribs to Kasoag Lake (0703-0088)                  | Ont 66-11-P26-24-P109-             | UnAssessed      |
| Vandercamp Lake (0703-0055)                       | Ont 66-11-P26-12-P44               | UnAssessed      |
| Waterhouse Creek and tribs (0701-0026)            | Ont 66- 4                          | MinorImpacts    |
| <b>Schuyler County</b>                            |                                    |                 |
| Catherine Creek and tribs (0705-0011)             | Ont 66-12-P369- 59 (upper)         | NoKnownImpct    |
| Catlin Mills Creek and tribs (0705-0080)          | Ont 66-12-P369- 59- 5a             | UnAssessed      |
| Glen Creek and minor tribs (0705-0082)            | Ont 66-12-P369- 60                 | UnAssessed      |
| Hector Falls Creek and tribs (0705-0007)          | Ont 66-12-P369- 56                 | NoKnownImpct    |
| Johns Creek, Upper, and tribs (0705-0079)         | Ont 66-12-P369- 59- 3a             | UnAssessed      |
| Minor Tribs to Seneca Lake, Southwest (0705-0085) | Ont 66-12-P369- 61 thru 114        | UnAssessed      |
| Mitchell Hollow Creek and tribs (0705-0081)       | Ont 66-12-P369- 59- 6              | UnAssessed      |
| Old Barge Canal and minor tribs (0705-0083)       | Ont 66-12-P369- 60- 1              | UnAssessed      |
| Seneca Lake Inlet and minor tribs (0705-0078)     | Ont 66-12-P369- 59                 | UnAssessed      |
| Seneca Lake, Main Lake, South (0705-0014)         | Ont 66-12-P369 (portion 3)         | NoKnownImpct    |
| Shequaga Creek and tribs (0705-0084)              | Ont 66-12-P369- 60- 1- 2           | UnAssessed      |
| Taughannock Creek, Upper, and tribs (0705-0013)   | Ont 66-12-P296- 98                 | UnAssessed      |
| <b>Seneca County</b>                              |                                    |                 |
| Black Brook and tribs (0704-0007)                 | Ont 66-12-52- 1                    | Need Verific    |
| Burnett Pond (0704-0029)                          | Ont 66-12-52-18-4a-P244            | UnAssessed      |
| Cayuga Lake, Main Lake, Mid-North (0705-0025)     | Ont 66-12-P296 (portion 2)         | Threat(Poss)    |
| Cayuga Lake, Main Lake, Mid-South (0705-0050)     | Ont 66-12-P296 (portion 3)         | Threat(Poss)    |
| Cayuga Lake, Northern End (0705-0030)             | Ont 66-12-P296 (portion 1)         | NoKnownImpct    |
| Gem Lake (0705-0049)                              | Ont 66-12-69- 3-P367               | UnAssessed      |
| Indian Creek and tribs (0705-0075)                | Ont 66-12-P369- 14                 | UnAssessed      |
| Junius Ponds (0704-0028)                          | Ont 66-12-52-18- P238,P240         | UnAssessed      |
| Kendig Creek and tribs (0705-0024)                | Ont 66-12-70                       | UnAssessed      |
| Mill Creek and tribs (0705-0076)                  | Ont 66-12-P369- 28                 | NoKnownImpct    |
| Minor Tribs to Cayuga Lake, Western (0705-0070)   | Ont 66-12-P296- 99 thru 167 (sel.) | UnAssessed      |
| Minor Tribs to Seneca Lake, Eastern (0705-0073)   | Ont 66-12-P369- 1 thru 58 (sel.)   | UnAssessed      |
| Minor Tribs to Upper Seneca River (0705-0046)     | Ont 66-12-59 thru 70 (selected)    | UnAssessed      |
| Montezuma National Wildlife Refuge (0705-0045)    | Ont 66-12 (portion 5a)/P293        | UnAssessed      |
| Pond Brook and tribs (0704-0004)                  | Ont 66-12-52-18                    | Need Verific    |
| Reeder Creek and tribs (0705-0074)                | Ont 66-12-P369- 6                  | UnAssessed      |
| Saw Mill Creek and tribs (0705-0077)              | Ont 66-12-P369- 44                 | NoKnownImpct    |
| Seneca Lake, Main Lake, Middle (0705-0021)        | Ont 66-12-P369 (portion 2)         | Threat(Poss)    |
| Seneca Lake, Main Lake, North (0705-0026)         | Ont 66-12-P369 (portion 1)         | NoKnownImpct    |
| Seneca River, Lower, Main Stem (0701-0003)        | Ont 66-12 (portion 4)              | UnAssessed      |
| Seneca River, Lower, Main Stem (0701-0051)        | Ont 66-12 (portion 5)              | UnAssessed      |
| Seneca River, Upper, Main Stem (0705-0023)        | Ont 66-12 (portion 6)              | Need Verific    |
| Seneca River, Upper, Main Stem (0705-0044)        | Ont 66-12 (portion 7)              | UnAssessed      |
| Silver Creek and tribs (0705-0048)                | Ont 66-12-67                       | UnAssessed      |
| Sucker Brook and tribs (0705-0047)                | Ont 66-12-65                       | UnAssessed      |
| Trumansburg Creek and tribs (0705-0071)           | Ont 66-12-P296-102                 | UnAssessed      |
| Van Cleef Lake (0705-0072)                        | Ont 66-12 (portion 6a)/P366a       | UnAssessed      |

| <b>Waterbody/Segment (ID)</b>                       | <b>Water Index Number</b>          | <b>Category</b> |
|---|------------------------------------|-----------------|
| <b>Steuben County</b>                               |                                    |                 |
| Keuka Lake Inlet/Cold Brook and tribs (0705-0091)   | Ont 66-12-P369-115-P388-36         | NoKnownImpct    |
| Minor Tribs to Keuka Lake, Western (0705-0092)      | Ont 66-12-P369-115-P388-37 thru 61 | UnAssessed      |
| <b>Tompkins County</b>                              |                                    |                 |
| Beebee Lake (0705-0058)                             | Ont 66-12-P296- 74-P308            | UnAssessed      |
| Buttermilk Creek, Lower, and tribs (0705-0061)      | Ont 66-12-P296- 75-10              | UnAssessed      |
| Buttermilk Creek, Upper, and tribs (0705-0062)      | Ont 66-12-P296- 75-10              | UnAssessed      |
| Cascadilla Creek and tribs (0705-0035)              | Ont 66-12-P296- 75- 3              | MinorImpacts    |
| Cayuga Inlet, Lower, and minor tribs (0705-0041)    | Ont 66-12-P296- 75                 | MinorImpacts    |
| Cayuga Inlet, Upper, and minor tribs (0705-0059)    | Ont 66-12-P296- 75                 | Threatened      |
| Cayuga Lake, Southern End (0705-0040)               | Ont 66-12-P296 (portion 4)         | Impaired Seg    |
| Dryden Lake (0705-0042)                             | Ont 66-12-P296- 74- 4- 6-P318      | UnAssessed      |
| Endfield Creek, Upper, and tribs (0705-0067)        | Ont 66-12-P296- 75-16- 4           | UnAssessed      |
| Enfield Creek, Lower, and tribs (0705-0065)         | Ont 66-12-P296- 75-16              | Need Verific    |
| Fall Creek, Lower, and tribs (0705-0036)            | Ont 66-12-P296- 74                 | NoKnownImpct    |
| Fall Creek, Upper, and tribs (0705-0056)            | Ont 66-12-P296- 74                 | UnAssessed      |
| Fish Kill, Upper, and tribs (0705-0066)             | Ont 66-12-P296- 75-16              | UnAssessed      |
| Ithaca Reservoir (0705-0060)                        | Ont 66-12-P296- 75- 5-P340b        | UnAssessed      |
| Jennings Pond (0705-0064)                           | Ont 66-12-P296- 75-10-P349         | Need Verific    |
| Lake Como (0705-0029)                               | Ont 66-12-P296- 74-P333            | MinorImpacts    |
| Lake Treman (0705-0063)                             | Ont 66-12-P296- 75-10-P347a        | Need Verific    |
| Minor Tribs to Cayuga Lake, Southeast (0705-0055)   | Ont 66-12-P296- 58 thru 73 (sel.)  | UnAssessed      |
| Minor Tribs to Cayuga Lake, Southwest (0705-0068)   | Ont 66-12-P296- 76 thru 97 (sel.)  | UnAssessed      |
| Salmon Creek, Lower, and tribs (0705-0097)          | Ont 66-12-P296- 57                 | MinorImpacts    |
| Sixmile Creek, Upper, and tribs (0705-0043)         | Ont 66-12-P296- 75- 5              | Need Verific    |
| Taughannock Creek, Lower, and tribs (0705-0069)     | Ont 66-12-P296- 98                 | Threatened      |
| Virgil Creek and tribs (0705-0057)                  | Ont 66-12-P296- 74-16              | MinorImpacts    |
| <b>Wayne County</b>                                 |                                    |                 |
| Black Creek and tribs (0701-0047)                   | Ont 66-12-50- 8                    | UnAssessed      |
| Canadaigua Outlet, Low, and minor trib (0704-0041)  | Ont 66-12-52..                     | MinorImpacts    |
| Crusoe Creek and tribs (0705-0028)                  | Ont 66-12-50                       | UnAssessed      |
| Crusoe Lake (0701-0048)                             | Ont 66-12-50-P225                  | UnAssessed      |
| Fairville Creek and tribs (0704-0032)               | Ont 66-12-52-23- 8                 | UnAssessed      |
| Ganargua Creek, Lower, and minor tribs (0704-0026)  | Ont 66-12-52-23                    | MinorImpacts    |
| Ganargua Creek, Upper, and minor tribs (0704-0013)  | Ont 66-12-52-23                    | MinorImpacts    |
| Marbletown Creek and tribs (0704-0003)              | Ont 66-12-52-23- 1                 | UnAssessed      |
| Minor Tribs to Barge Canal (0704-0019)              | Ont 66-12-52-23..(Barge Canal)-    | UnAssessed      |
| Minor Tribs to Clyde River (0704-0008)              | Ont 66-12-52- 1 thru 22 (selected) | Need Verific    |
| NYS Barge Canal (portion 5) (0704-0020)             | Ont 66-12-52-23..(Barge Canal)     | Impaired Seg    |
| NYS Barge Canal/Clyde River (portion 6) (0704-0017) | Ont 66-12-52                       | UnAssessed      |
| NYS Barge Canal/Clyde River (portion 7) (0704-0027) | Ont 66-12-52                       | MinorImpacts    |
| Red Creek and tribs (0704-0033)                     | Ont 66-12-52-23-24                 | MinorImpacts    |
| Red Creek and tribs (0704-0015)                     | Ont 66-12-52-23-17                 | Need Verific    |
| Tribs to Crusoe Lake/Butler Creek (0701-0049)       | Ont 66-12-50-P225-                 | UnAssessed      |
| <b>Yates County</b>                                 |                                    |                 |
| Big Stream, Lower, and tribs (0705-0087)            | Ont 66-12-P369- 93                 | NoKnownImpct    |
| Big Stream, Upper, and tribs (0705-0088)            | Ont 66-12-P369- 93                 | UnAssessed      |
| Flint Creek, Upper, and tribs (0704-0006)           | Ont 66-12-52..40                   | MinorImpacts    |
| Kashong Creek and tribs (0705-0017)                 | Ont 66-12-P369-128                 | Need Verific    |

| <b>Waterbody/Segment (ID)</b>                   | <b>Water Index Number</b>          | <b>Category</b> |
|---|------------------------------------|-----------------|
| <b>Yates County (con't)</b>                     |                                    |                 |
| Keuka Lake (0705-0003)                          | Ont 66-12-P369-115-P388            | Impaired Seg    |
| Keuka Lake Outlet and tribs (0705-0020)         | Ont 66-12-P369-115                 | NoKnownImpct    |
| Minor Tribs to Keuka Lake, Eastern (0705-0090)  | Ont 66-12-P369-115-P388- 1 thru 35 | UnAssessed      |
| Minor Tribs to Keuka Lake, Northern (0705-0094) | Ont 66-12-P369-115-P388-62 thru 69 | UnAssessed      |
| Plum Point Creek and tribs (0705-0089)          | Ont 66-12-P369-104                 | UnAssessed      |
| Rock Stream and tribs (0705-0086)               | Ont 66-12-P369- 91                 | NoKnownImpct    |
| Sugar Creek, Lower, and tribs (0705-0018)       | Ont 66-12-P369-115-P388-62         | NoKnownImpct    |
| Sugar Creek, Upper, and tribs (0705-0093)       | Ont 66-12-P369-115-P388-62         | UnAssessed      |
| West River, Lower, and minor tribs (0704-0049)  | Ont 66-12-52..P286-18              | MinorImpacts    |
| West River, Upper, and tribs (0704-0050)        | Ont 66-12-52..P286-18              | UnAssessed      |

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## Waterbody Inventory Data Sheets By Segment Name

| <b>Waterbody/Segment (ID)</b>                       | <b>Water Index Number</b>          | <b>Category</b> |
|---|------------------------------------|-----------------|
| Beards/Beaver Creek and tribs (0704-0038)           | Ont 66-12-52-23-46                 | UnAssessed      |
| Beebee Lake (0705-0058)                             | Ont 66-12-P296- 74-P308            | UnAssessed      |
| Big Bay Creek and tribs (0703-0049)                 | Ont 66-11-P26- 4                   | UnAssessed      |
| Big Stream, Lower, and tribs (0705-0087)            | Ont 66-12-P369- 93                 | NoKnownImpct    |
| Big Stream, Upper, and tribs (0705-0088)            | Ont 66-12-P369- 93                 | UnAssessed      |
| Black Brook and tribs (0704-0007)                   | Ont 66-12-52- 1                    | Need Verific    |
| Black Brook and tribs (0704-0047)                   | Ont 66-12-52..49                   | UnAssessed      |
| Black Creek and tribs (0701-0024)                   | Ont 66- 2                          | NoKnownImpct    |
| Black Creek and tribs (0701-0047)                   | Ont 66-12-50- 8                    | UnAssessed      |
| Black Creek and tribs (0703-0056)                   | Ont 66-11-P26-15                   | UnAssessed      |
| Black, Bass, Sisley and Green Ponds (0703-0089)     | Ont 66-11-P26-24-P109-P110 thru 11 | UnAssessed      |
| Bloodsucker Lake (0703-0076)                        | Ont 66-11-P26-24-14-14- 1-P79      | UnAssessed      |
| Bloody Brook and tribs (0702-0006)                  | Ont 66-12-12-P154- 2               | Impaired Seg    |
| Bullhead Lake (0703-0075)                           | Ont 66-11-P26-24-14- 9-P76         | UnAssessed      |
| Burnett Pond (0704-0029)                            | Ont 66-12-52-18-4a-P244            | UnAssessed      |
| Buttermilk Creek, Lower, and tribs (0705-0061)      | Ont 66-12-P296- 75-10              | UnAssessed      |
| Buttermilk Creek, Upper, and tribs (0705-0062)      | Ont 66-12-P296- 75-10              | UnAssessed      |
| Butternut Creek Trib, Upper (0703-0107)             | Ont 66-11-P26-37- 6-13             | UnAssessed      |
| Butternut Creek, Lower, and minor tribs (0703-0039) | Ont 66-11-P26-37- 6                | Need Verific    |
| Butternut Creek, Upper, and minor tribs (0703-0100) | Ont 66-11-P26-37- 6                | NoKnownImpct    |
| Canada Creek and tribs (0703-0010)                  | Ont 66-11-P26-24- 1-10             | Need Verific    |
| Canadaigua Outlet, Low, and minor trib (0704-0041)  | Ont 66-12-52..                     | MinorImpacts    |
| Canadaigua Outlet, Mid, and minor tribs (0704-0042) | Ont 66-12-52..                     | MinorImpacts    |
| Canadaigua Outlet, Upp, and minor tribs (0704-0011) | Ont 66-12-52..                     | MinorImpacts    |
| Canandaigua Lake (0704-0001)                        | Ont 66-12-52..P286                 | Threat(Poss)    |
| Canaseraga Creek, Upper, and tribs (0703-0095)      | Ont 66-11-P26-33- 2                | MinorImpacts    |
| Canaseraga/Cowaselon Cr, Low, and tribs (0703-0034) | Ont 66-11-P26-33                   | Need Verific    |
| Canastota Creek, Lower, and tribs (0703-0002)       | Ont 66-11-P26-33- 5                | Impaired Seg    |
| Canastota Creek, Upper, and tribs (0703-0096)       | Ont 66-11-P26-33- 5                | UnAssessed      |
| Carpenters Brook and tribs (0701-0033)              | Ont 66-12-28                       | MinorImpacts    |
| Carterville Pond (0703-0083)                        | Ont 66-11-P26-24-22-P95            | UnAssessed      |
| Cascadilla Creek and tribs (0705-0035)              | Ont 66-12-P296- 75- 3              | MinorImpacts    |
| Catherine Creek and tribs (0705-0011)               | Ont 66-12-P369- 59 (upper)         | NoKnownImpct    |
| Catlin Mills Creek and tribs (0705-0080)            | Ont 66-12-P369- 59- 5a             | UnAssessed      |
| Caughdenoy Creek and tribs (0703-0048)              | Ont 66-11-21                       | UnAssessed      |
| Cayuga Inlet, Lower, and minor tribs (0705-0041)    | Ont 66-12-P296- 75                 | MinorImpacts    |
| Cayuga Inlet, Upper, and minor tribs (0705-0059)    | Ont 66-12-P296- 75                 | Threatened      |
| Cayuga Lake, Main Lake, Mid-North (0705-0025)       | Ont 66-12-P296 (portion 2)         | Threat(Poss)    |
| Cayuga Lake, Main Lake, Mid-South (0705-0050)       | Ont 66-12-P296 (portion 3)         | Threat(Poss)    |
| Cayuga Lake, Northern End (0705-0030)               | Ont 66-12-P296 (portion 1)         | NoKnownImpct    |
| Cayuga Lake, Southern End (0705-0040)               | Ont 66-12-P296 (portion 4)         | Impaired Seg    |
| Cazenovia Lake (0703-0021)                          | Ont 66-11-P26-37-35-P153           | MinorImpacts    |
| Cazenovia Lake Outlet and tribs (0703-0113)         | Ont 66-11-P26-37-35                | UnAssessed      |
| Chase, South Ponds (0703-0052)                      | Ont 66-11-P26- 9-17-P38a,P39       | UnAssessed      |

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|--|------------------------------------|-----------------|
| Chittenango Creek, Lower, and tribs (0703-0005)      | Ont 66-11-P26-37                   | MinorImpacts    |
| Chittenango Creek, Middle, and tribs (0703-0025)     | Ont 66-11-P26-37                   | NoKnownImpct    |
| Chittenango Creek, Upper, and tribs (0703-0099)      | Ont 66-11-P26-37                   | UnAssessed      |
| Clockville Creek and tribs (0703-0097)               | Ont 66-11-P26-33-13                | UnAssessed      |
| Cody Pond (0703-0081)                                | Ont 66-11-P26-24-22-15- 1-P93a     | UnAssessed      |
| Cold Spring/North Brook and minor tribs (0701-0038)  | Ont 66-12-36                       | MinorImpacts    |
| Cowaselon Creek, Middle, and minor tribs (0703-0093) | Ont 66-11-P26-33                   | MinorImpacts    |
| Cowaselon Creek, Upper, and tribs (0703-0094)        | Ont 66-11-P26-33                   | UnAssessed      |
| Crane Brook and tribs (0704-0024)                    | Ont 66-12-51                       | Impaired Seg    |
| Cross Lake (0701-0002)                               | Ont 66-12 (portion 3)/P185         | MinorImpacts    |
| Crusoe Creek and tribs (0705-0028)                   | Ont 66-12-50                       | UnAssessed      |
| Crusoe Lake (0701-0048)                              | Ont 66-12-50-P225                  | UnAssessed      |
| Dead Creek and tribs (0701-0032)                     | Ont 66-12-19                       | MinorImpacts    |
| Decker Creek, Upper, and tribs (0706-0016)           | Ont 66-12-43-P212-28-17- 1         | NoKnownImpct    |
| Dryden Lake (0705-0042)                              | Ont 66-12-P296- 74- 4- 6-P318      | UnAssessed      |
| Duck Lake (0704-0025)                                | Ont 66-12-46-P222                  | MinorImpacts    |
| Dutch Hollow Brook and tribs (0706-0003)             | Ont 66-12-43-P212- 3               | MinorImpacts    |
| Dutcher, Francis Ponds (0703-0051)                   | Ont 66-11-P26- 9- 5-P34a,P35       | UnAssessed      |
| East Br Fish Creek, Lower, minor tribs (0703-0066)   | Ont 66-11-P26-24-14                | UnAssessed      |
| East Br Fish Creek, Upper, minor tribs (0703-0067)   | Ont 66-11-P26-24-14                | UnAssessed      |
| East Branch Limestone Creek and tribs (0703-0105)    | Ont 66-11-P26-37- 6- 2-(East Br)   | MinorImpacts    |
| East Syracuse Reservoir (0703-0110)                  | Ont 66-11-P26-37- 6-15- 1-P143a    | UnAssessed      |
| Emmons Brook, Upper, and tribs (0703-0084)           | Ont 66-11-P26-24-27                | UnAssessed      |
| Endfield Creek, Upper, and tribs (0705-0067)         | Ont 66-12-P296- 75-16- 4           | UnAssessed      |
| Enfield Creek, Lower, and tribs (0705-0065)          | Ont 66-12-P296- 75-16              | Need Verific    |
| Fairport Reservoirs (0704-0035)                      | Ont 66-12-52-23-43- 6..P263a,P263b | UnAssessed      |
| Fairville Creek and tribs (0704-0032)                | Ont 66-12-52-23- 8                 | UnAssessed      |
| Fall Brook and tribs (0703-0072)                     | Ont 66-11-P26-24-14- 5             | UnAssessed      |
| Fall Creek, Lower, and tribs (0705-0036)             | Ont 66-12-P296- 74                 | NoKnownImpct    |
| Fall Creek, Upper, and tribs (0705-0056)             | Ont 66-12-P296- 74                 | UnAssessed      |
| Fish Creek and minor tribs (0703-0059)               | Ont 66-11-P26-24                   | NoKnownImpct    |
| Fish Creek and tribs (0703-0018)                     | Ont 66-11- 2                       | UnAssessed      |
| Fish Creek and tribs (0704-0037)                     | Ont 66-12-52-23-45                 | UnAssessed      |
| Fish Kill, Upper, and tribs (0705-0066)              | Ont 66-12-P296- 75-16              | UnAssessed      |
| Flint Creek, Lower, and tribs (0704-0044)            | Ont 66-12-52..40                   | MinorImpacts    |
| Flint Creek, Upper, and tribs (0704-0006)            | Ont 66-12-52..40                   | MinorImpacts    |
| Florence Creek, Lower, and tribs (0703-0069)         | Ont 66-11-P26-24-14- 4             | UnAssessed      |
| Florence Creek, Upper, and tribs (0703-0070)         | Ont 66-11-P26-24-14- 4             | UnAssessed      |
| Furnace Creek and tribs (0703-0068)                  | Ont 66-11-P26-24-14- 2             | UnAssessed      |
| Ganargua Creek, Lower, and minor tribs (0704-0026)   | Ont 66-12-52-23                    | MinorImpacts    |
| Ganargua Creek, Upper, and minor tribs (0704-0013)   | Ont 66-12-52-23                    | MinorImpacts    |
| Geddes Brook and tribs (0702-0007)                   | Ont 66-12-12-P154- 6- 2            | Impaired Seg    |
| Gem Lake (0705-0049)                                 | Ont 66-12-69- 3-P367               | UnAssessed      |
| Gifford Lake (0703-0086)                             | Ont 66-11-P26-24-38a-P104          | UnAssessed      |
| Glen Creek and minor tribs (0705-0082)               | Ont 66-12-P369- 60                 | UnAssessed      |
| Gorton Pond (0703-0080)                              | Ont 66-11-P26-24-22- 7- 2-P90      | UnAssessed      |
| Great Brook and minor tribs (0704-0034)              | Ont 66-12-52-23-43                 | Impaired Seg    |
| Great Gully Creek and tribs (0705-0052)              | Ont 66-12-P296- 15                 | UnAssessed      |
| Green Lake (0703-0108)                               | Ont 66-11-P26-37- 6-14-P143        | UnAssessed      |
| Green Lake (0703-0111)                               | Ont 66-11-P26-37- 8-P147           | UnAssessed      |
| Grimes Creek and tribs (0704-0002)                   | Ont 66-12-52..P286-18- 2- 8        | Need Verific    |
| Grout Brook and tribs (0707-0001)                    | Ont 66-12-29-P193-55               | NoKnownImpct    |

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|--|------------------------------------|-----------------|
| Harbor Brook, Lower, and tribs (0702-0002)           | Ont 66-12-12-P154- 5               | Impaired Seg    |
| Harbor Brook, Upper, and tribs (0702-0012)           | Ont 66-12-12-P154- 5               | UnAssessed      |
| Hector Falls Creek and tribs (0705-0007)             | Ont 66-12-P369- 56                 | NoKnownImpct    |
| Hemlock Creek and tribs (0706-0018)                  | Ont 66-12-43-P212-28-29            | UnAssessed      |
| Hiawatha Lake, Woodland Reservoir (0702-0026)        | Ont 66-12-12-P154- 4-P156,P158     | UnAssessed      |
| Howland Island Game Refuge Ponds (0701-0045)         | Ont 66-12-45-P222a thru i          | UnAssessed      |
| Indian Creek and tribs (0705-0075)                   | Ont 66-12-P369- 14                 | UnAssessed      |
| Ithaca Reservoir (0705-0060)                         | Ont 66-12-P296- 75- 5-P340b        | UnAssessed      |
| Jamesville Reservoir (0703-0015)                     | Ont 66-11-P26-37- 6-P144           | UnAssessed      |
| Jennings Pond (0705-0064)                            | Ont 66-12-P296- 75-10-P349         | Need Verific    |
| Johns Creek, Upper, and tribs (0705-0079)            | Ont 66-12-P369- 59- 3a             | UnAssessed      |
| Junius Ponds (0704-0028)                             | Ont 66-12-52-18- P238,P240         | UnAssessed      |
| Kashong Creek and tribs (0705-0017)                  | Ont 66-12-P369-128                 | Need Verific    |
| Kasoag Lake (0703-0087)                              | Ont 66-11-P26-24-P109              | MinorImpacts    |
| Kendig Creek and tribs (0705-0024)                   | Ont 66-12-70                       | UnAssessed      |
| Keuka Lake (0705-0003)                               | Ont 66-12-P369-115-P388            | Impaired Seg    |
| Keuka Lake Inlet/Cold Brook and tribs (0705-0091)    | Ont 66-12-P369-115-P388-36         | NoKnownImpct    |
| Keuka Lake Outlet and tribs (0705-0020)              | Ont 66-12-P369-115                 | NoKnownImpct    |
| Kibbie Lake (0703-0054)                              | Ont 66-11-P26-10-P42               | UnAssessed      |
| Lake Como (0705-0029)                                | Ont 66-12-P296- 74-P333            | MinorImpacts    |
| Lake Neatahwanta (0701-0018)                         | Ont 66- 3-P9                       | Impaired Seg    |
| Lake Temalo (0703-0044)                              | Ont 66-11- 2-P17                   | UnAssessed      |
| Lake Treman (0705-0063)                              | Ont 66-12-P296- 75-10-P347a        | Need Verific    |
| Ley Creek and tribs (0702-0001)                      | Ont 66-12-12-P154- 3               | Impaired Seg    |
| Limestone Creek, Lower, and minor tribs (0703-0008)  | Ont 66-11-P26-37- 6- 2             | Impaired Seg    |
| Limestone Creek, Middle, and tribs (0703-0101)       | Ont 66-11-P26-37- 6- 2             | UnAssessed      |
| Limestone Creek, Upper, and tribs (0703-0106)        | Ont 66-11-P26-37- 6- 2-37          | UnAssessed      |
| Little River and tribs (0703-0078)                   | Ont 66-11-P26-24-22                | UnAssessed      |
| Little Salmon Creek and tribs (0705-0098)            | Ont 66-12-P296- 57-21              | NoKnownImpct    |
| Mack Pond (0703-0077)                                | Ont 66-11-P26-24-18..P86           | UnAssessed      |
| Mad River and tribs (0703-0085)                      | Ont 66-11-P26-24-28                | NoKnownImpct    |
| Marbletown Creek and tribs (0704-0003)               | Ont 66-12-52-23- 1                 | UnAssessed      |
| Marsh Creek and tribs (0704-0043)                    | Ont 66-12-52..35                   | UnAssessed      |
| Mill Creek and tribs (0705-0076)                     | Ont 66-12-P369- 28                 | NoKnownImpct    |
| Mill/Dresserville Creek and minor tribs (0706-0015)  | Ont 66-12-43-P212-28-17            | NoKnownImpct    |
| Minor Tribs to Barge Canal (0704-0019)               | Ont 66-12-52-23..(Barge Canal)-    | UnAssessed      |
| Minor Tribs to Canandaigua Lake, Eastern (0704-0048) | Ont 66-12-52..P286- 1 thru 17      | UnAssessed      |
| Minor Tribs to Canandaigua Lake, West (0704-0054)    | Ont 66-12-52..P286-19 thru 49      | UnAssessed      |
| Minor Tribs to Cayuga Lake, Eastern (0705-0051)      | Ont 66-12-P296- 1 thru 56 (sel.)   | UnAssessed      |
| Minor Tribs to Cayuga Lake, Southeastern (0705-0055) | Ont 66-12-P296- 58 thru 73 (sel.)  | UnAssessed      |
| Minor Tribs to Cayuga Lake, Southwest (0705-0068)    | Ont 66-12-P296- 76 thru 97 (sel.)  | UnAssessed      |
| Minor Tribs to Cayuga Lake, Western (0705-0070)      | Ont 66-12-P296- 99 thru 167 (sel.) | UnAssessed      |
| Minor Tribs to Clyde River (0704-0008)               | Ont 66-12-52- 1 thru 22 (selected) | Need Verific    |
| Minor Tribs to Keuka Lake, Eastern (0705-0090)       | Ont 66-12-P369-115-P388- 1 thru 35 | UnAssessed      |
| Minor Tribs to Keuka Lake, Northern (0705-0094)      | Ont 66-12-P369-115-P388-62 thru 69 | UnAssessed      |
| Minor Tribs to Keuka Lake, Western (0705-0092)       | Ont 66-12-P369-115-P388-37 thru 61 | UnAssessed      |
| Minor Tribs to Lower Senca River (0701-0043)         | Ont 66-12-44 thru 57 (selected)    | UnAssessed      |
| Minor Tribs to Lower Seneca River (0701-0030)        | Ont 66-12- 2 thru 11               | UnAssessed      |
| Minor Tribs to Lower Seneca River (0701-0031)        | Ont 66-12-13 thru 28               | UnAssessed      |
| Minor Tribs to Lower Seneca River (0701-0034)        | Ont 66-12-30 thru 42 (selected)    | UnAssessed      |
| Minor Tribs to Oneida Lake, Northeast (0703-0057)    | Ont 66-11-P26-16 thru 23 (select)  | NoKnownImpct    |
| Minor Tribs to Oneida Lake, Northwest (0703-0035)    | Ont 66-11-P26- 1 thru 14 (select)  | UnAssessed      |

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|--|-----------------------------------|-----------------|
| Minor Tribs to Oneida Lake, Southeast (0703-0092)    | Ont 66-11-P26-26 thru 32          | UnAssessed      |
| Minor Tribs to Oneida Lake, Southwest (0703-0098)    | Ont 66-11-P26-35 thru 43          | UnAssessed      |
| Minor Tribs to Oneida River (0703-0043)              | Ont 66-11- 1 thru 23 (selected)   | UnAssessed      |
| Minor Tribs to Onondaga Lake (0702-0022)             | Ont 66-12-12-P154-                | Impaired Seg    |
| Minor Tribs to Oswego River (0701-0023)              | Ont 66- 1 thru 10 (selected)      | UnAssessed      |
| Minor Tribs to Otisco Lake (0702-0030)               | Ont 66-12-12-P154- 6-P175-        | UnAssessed      |
| Minor Tribs to Owasco Lake (0706-0010)               | Ont 66-12-43-P212-                | MinorImpacts    |
| Minor Tribs to Seneca Lake, Eastern (0705-0073)      | Ont 66-12-P369- 1 thru 58 (sel.)  | UnAssessed      |
| Minor Tribs to Seneca Lake, Northwest (0705-0027)    | Ont 66-12-P369-116 thru 139       | UnAssessed      |
| Minor Tribs to Seneca Lake, Southwest (0705-0085)    | Ont 66-12-P369- 61 thru 114       | UnAssessed      |
| Minor Tribs to Skaneateles Lake (0707-0005)          | Ont 66-12-29-P193-                | UnAssessed      |
| Minor Tribs to Upper Seneca River (0705-0046)        | Ont 66-12-59 thru 70 (selected)   | UnAssessed      |
| Mitchell Hollow Creek and tribs (0705-0081)          | Ont 66-12-P369- 59- 6             | UnAssessed      |
| Montezuma National Wildlife Refuge (0705-0045)       | Ont 66-12 (portion 5a)/P293       | UnAssessed      |
| Mud Creek and tribs (0703-0046)                      | Ont 66-11-11                      | UnAssessed      |
| Mud Creek, Lower, and minor tribs (0704-0030)        | Ont 66-12-52-23 (Mud Creek)       | MinorImpacts    |
| Mud Creek, Upper, and tribs (0704-0031)              | Ont 66-12-52-23 (Mud Creek)       | UnAssessed      |
| Mud Lake (0701-0028)                                 | Ont 66- 6-1-P13                   | UnAssessed      |
| Mud Lake (0703-0074)                                 | Ont 66-11-P26-24-14- 9- 8-P77     | UnAssessed      |
| Mud Pond (0701-0044)                                 | Ont 66-12-44-P221                 | Need Verific    |
| Mud Pond (0702-0029)                                 | Ont 66-12-12-P154- 6- 5-P165      | UnAssessed      |
| Muskrat Creek and tribs (0701-0035)                  | Ont 66-12-35                      | UnAssessed      |
| NYS Barge Canal (portion 5) (0704-0020)              | Ont 66-12-52-23..(Barge Canal)    | Impaired Seg    |
| NYS Barge Canal (portion 6) (0703-0063)              | Ont 66-11-P26-24- 1 (Barge Canal) | UnAssessed      |
| NYS Barge Canal/Clyde River (portion 6) (0704-0017)  | Ont 66-12-52                      | UnAssessed      |
| NYS Barge Canal/Clyde River (portion 7) (0704-0027)  | Ont 66-12-52                      | MinorImpacts    |
| Naples Creek, Lower, and minor tribs (0704-0051)     | Ont 66-12-52..P286-18- 2          | Need Verific    |
| Naples/Eelpot Cr, Upper, and minor tribs (0704-0052) | Ont 66-12-52..P286-18- 2          | UnAssessed      |
| Newark Reservoir (0704-0045)                         | Ont 66-12-52..40-P273             | UnAssessed      |
| Ninemile Creek, Lower, and tribs (0702-0005)         | Ont 66-12-12-P154- 6              | Impaired Seg    |
| Ninemile Creek, Upper, and tribs (0702-0028)         | Ont 66-12-12-P154- 6              | UnAssessed      |
| North Pond (0703-0053)                               | Ont 66-11-P26- 9-18-1-P40         | UnAssessed      |
| Old Barge Canal and minor tribs (0705-0083)          | Ont 66-12-P369- 60- 1             | UnAssessed      |
| Old Erie Barge Canal (0703-0115)                     | Ont 66-11-P26-37-(Old Erie Canal) | UnAssessed      |
| Oneida City Reservoir (0703-0071)                    | Ont 66-11-P26-24-14- 4-P73        | UnAssessed      |
| Oneida Creek, Lower, and tribs (0703-0032)           | Ont 66-11-P26-25                  | MinorImpacts    |
| Oneida Creek, Upper, and tribs (0703-0090)           | Ont 66-11-P26-25                  | MinorImpacts    |
| Oneida Lake (0703-0001)                              | Ont 66-11-P26                     | MinorImpacts    |
| Oneida River, Main Stem (0703-0020)                  | Ont 66-11                         | MinorImpacts    |
| Onondaga Creek, Lower, and tribs (0702-0023)         | Ont 66-12-12-P154- 4              | Impaired Seg    |
| Onondaga Creek, Middle, and tribs (0702-0004)        | Ont 66-12-12-P154- 4              | Impaired Seg    |
| Onondaga Creek, Upper, and minor tribs (0702-0024)   | Ont 66-12-12-P154- 4              | MinorImpacts    |
| Onondaga Lake Outlet (0702-0020)                     | Ont 66-12-12                      | Impaired Seg    |
| Onondaga Lake, northern end (0702-0003)              | Ont 66-12-12-P154 (portion 1)     | Impaired Seg    |
| Onondaga Lake, southern end (0702-0021)              | Ont 66-12-12-P154 (portion 2)     | Impaired Seg    |
| Oswego River, Lower, Main Stem (0701-0006)           | Ont 66 (portion 2)                | Impaired Seg    |
| Oswego River, Lower, Main Stem (0701-0022)           | Ont 66 (portion 1)                | MinorImpacts    |
| Oswego River, Upper, Main Stem (0701-0021)           | Ont 66 (portion 3)                | Need Verific    |
| Otisco Lake (0702-0011)                              | Ont 66-12-12-P154- 6-P175         | MinorImpacts    |
| Otter Lake (0701-0004)                               | Ont 66-12-35-P197- 3-P198         | MinorImpacts    |
| Owasco Inlet, Lower, and minor tribs (0706-0002)     | Ont 66-12-43-P212-28              | MinorImpacts    |
| Owasco Inlet, Upper, and tribs (0706-0014)           | Ont 66-12-43-P212-28              | Impaired Seg    |

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|--|------------------------------------|-----------------|
| Owasco Lake (0706-0009)                          | Ont 66-12-43-P212                  | Impaired Seg    |
| Owasco Outlet, Lower, and tribs (0706-0008)      | Ont 66-12-43                       | MinorImpacts    |
| Owasco Outlet, Upper, and tribs (0706-0001)      | Ont 66-12-43                       | MinorImpacts    |
| Ox Creek and tribs (0701-0027)                   | Ont 66- 6                          | UnAssessed      |
| Paddys, Crooks and Mud Ponds (0701-0025)         | Ont 66- 2-P6,P7,P8                 | UnAssessed      |
| Paines Creek and tribs (0705-0053)               | Ont 66-12-P296- 27                 | UnAssessed      |
| Panther Lake (0703-0082)                         | Ont 66-11-P26-24-22-15-P94         | UnAssessed      |
| Parker Pond (0701-0036)                          | Ont 66-12-35-P197                  | Need Verific    |
| Pleasant Lake (0703-0047)                        | Ont 66-11-14a-P19                  | NoKnownImpct    |
| Plum Point Creek and tribs (0705-0089)           | Ont 66-12-P369-104                 | UnAssessed      |
| Point Rock Creek and tribs (0703-0073)           | Ont 66-11-P26-24-14- 9             | UnAssessed      |
| Pond Brook and tribs (0704-0004)                 | Ont 66-12-52-18                    | Need Verific    |
| Pratt Falls Creek, Upper, and tribs (0703-0103)  | Ont 66-11-P26-37- 6- 2- 8          | UnAssessed      |
| Putnam Brook and tribs (0701-0039)               | Ont 66-12-36- 1                    | NoKnownImpct    |
| Red Creek and tribs (0704-0015)                  | Ont 66-12-52-23-17                 | Need Verific    |
| Red Creek and tribs (0704-0033)                  | Ont 66-12-52-23-24                 | MinorImpacts    |
| Reeder Creek and tribs (0705-0074)               | Ont 66-12-P369- 6                  | UnAssessed      |
| Reservoir Creek, Upper, and tribs (0704-0053)    | Ont 66-12-52..P286-18- 2-10        | UnAssessed      |
| Rock Stream and tribs (0705-0086)                | Ont 66-12-P369- 91                 | NoKnownImpct    |
| Rocky Run and tribs (0704-0046)                  | Ont 66-12-52..46                   | UnAssessed      |
| Round Lake (0703-0112)                           | Ont 66-11-P26-37- 8-P147-1-P148    | UnAssessed      |
| Rush Creek, Upper, and tribs (0703-0109)         | Ont 66-11-P26-37- 6-15             | UnAssessed      |
| Salmon Creek, Lower, and tribs (0705-0097)       | Ont 66-12-P296- 57                 | MinorImpacts    |
| Salmon Creek, Upper (Big), and tribs (0705-0054) | Ont 66-12-P296- 57                 | MinorImpacts    |
| Saw Mill Creek and tribs (0705-0077)             | Ont 66-12-P369- 44                 | NoKnownImpct    |
| Schaffer Creek and tribs (0704-0039)             | Ont 66-12-52-23-51                 | UnAssessed      |
| Sconondoa Creek and tribs (0703-0003)            | Ont 66-11-P26-25- 6                | MinorImpacts    |
| Scriba Creek and tribs (0703-0050)               | Ont 66-11-P26- 9                   | NoKnownImpct    |
| Seneca Lake Inlet and minor tribs (0705-0078)    | Ont 66-12-P369- 59                 | UnAssessed      |
| Seneca Lake, Main Lake, Middle (0705-0021)       | Ont 66-12-P369 (portion 2)         | Threat(Poss)    |
| Seneca Lake, Main Lake, North (0705-0026)        | Ont 66-12-P369 (portion 1)         | NoKnownImpct    |
| Seneca Lake, Main Lake, South (0705-0014)        | Ont 66-12-P369 (portion 3)         | NoKnownImpct    |
| Seneca River, Lower, Main Stem (0701-0001)       | Ont 66-12 (portion 1)              | Impaired Seg    |
| Seneca River, Lower, Main Stem (0701-0003)       | Ont 66-12 (portion 4)              | UnAssessed      |
| Seneca River, Lower, Main Stem (0701-0008)       | Ont 66-12 (portion 2)              | Impaired Seg    |
| Seneca River, Lower, Main Stem (0701-0051)       | Ont 66-12 (portion 5)              | UnAssessed      |
| Seneca River, Upper, Main Stem (0705-0023)       | Ont 66-12 (portion 6)              | Need Verific    |
| Seneca River, Upper, Main Stem (0705-0044)       | Ont 66-12 (portion 7)              | UnAssessed      |
| Shequaga Creek and tribs (0705-0084)             | Ont 66-12-P369- 60- 1- 2           | UnAssessed      |
| Silver Creek and tribs (0705-0048)               | Ont 66-12-67                       | UnAssessed      |
| Six Mile Creek and tribs (0703-0042)             | Ont 66-11- 1                       | UnAssessed      |
| Sixmile Creek, Upper, and tribs (0705-0043)      | Ont 66-12-P296- 75- 5              | Need Verific    |
| Skaneateles Creek and tribs (0707-0003)          | Ont 66-12-29                       | Impaired Seg    |
| Skaneateles Lake (0707-0004)                     | Ont 66-12-29-P193                  | Threat(Poss)    |
| Slayton Pond (0701-0042)                         | Ont 66-12-40- 3-P207               | UnAssessed      |
| Smith Hollow Pond (0702-0031)                    | Ont 66-12-12-P154- 6-P175- 3-P176  | UnAssessed      |
| Snooks Pond, White Lake (0703-0102)              | Ont 66-11-P26-37- 6- 2- 6-P134,P13 | UnAssessed      |
| Spafford Creek and tribs (0702-0032)             | Ont 66-12-12-P154- 6-P175-16       | UnAssessed      |
| Stark Pond (0701-0041)                           | Ont 66-12-37-P206                  | UnAssessed      |
| Starkweather Pond (0703-0079)                    | Ont 66-11-P26-24-22- 2c-P88        | UnAssessed      |
| Sterling Pond (0704-0040)                        | Ont 66-12-52-23-52-P267            | UnAssessed      |
| Stewarts, Goodfellow Ponds (0703-0045)           | Ont 66-11- 2-P18,P18a              | UnAssessed      |

| <b>Waterbody/Segment (ID)</b>                       | <b>Water Index Number</b>       | <b>Category</b> |
|---|---------------------------------|-----------------|
| Stony Creek and tribs (0703-0065)                   | Ont 66-11-P26-24- 1- 8          | MinorImpacts    |
| Sucker Brook and tribs (0705-0047)                  | Ont 66-12-65                    | UnAssessed      |
| Sugar Creek, Lower, and tribs (0705-0018)           | Ont 66-12-P369-115-P388-62      | NoKnownImpct    |
| Sugar Creek, Upper, and tribs (0705-0093)           | Ont 66-12-P369-115-P388-62      | UnAssessed      |
| Sunset Lake (0703-0091)                             | Ont 66-11-P26-25-P120           | UnAssessed      |
| Taughannock Creek, Lower, and tribs (0705-0069)     | Ont 66-12-P296- 98              | Threatened      |
| Taughannock Creek, Upper, and tribs (0705-0013)     | Ont 66-12-P296- 98              | UnAssessed      |
| Teelins Pond (0703-0064)                            | Ont 66-11-P26-24- 1- 4-P57      | UnAssessed      |
| Trib to North Brook, Upper (0701-0040)              | Ont 66-12-36-10- 1              | UnAssessed      |
| Tribs to Cazenovia Lake (0703-0114)                 | Ont 66-11-P26-37-35-P153-       | UnAssessed      |
| Tribs to Cross Lake (0701-0029)                     | Ont 66-12 ..P185-               | UnAssessed      |
| Tribs to Crusoe Lake/Butler Creek (0701-0049)       | Ont 66-12-50-P225-              | UnAssessed      |
| Tribs to Duck Lake (0701-0046)                      | Ont 66-12-46-P222-              | UnAssessed      |
| Tribs to Fairport Reservoirs (0704-0036)            | Ont 66-12-52-23-43- 6..P263a/b- | UnAssessed      |
| Tribs to Kasoag Lake (0703-0088)                    | Ont 66-11-P26-24-P109-          | UnAssessed      |
| Tribs to Lake Neatahwanta (0701-0050)               | Ont 66- 3-P9-                   | UnAssessed      |
| Tribs to Parker Pond (0701-0037)                    | Ont 66-12-35-P197-              | UnAssessed      |
| Trumansburg Creek and tribs (0705-0071)             | Ont 66-12-P296-102              | UnAssessed      |
| Tuscarora Lake (0703-0022)                          | Ont 66-11-P26-37-47-P164        | NoKnownImpct    |
| Unnamed Trib, Upper, and tribs (0706-0017)          | Ont 66-12-43-P212-28-28         | UnAssessed      |
| Upper Murray Brook, Oneida Lake Trib (0703-0058)    | Ont 66-11-P26-22,23a            | NoKnownImpct    |
| Van Cleef Lake (0705-0072)                          | Ont 66-12 (portion 6a)/P366a    | UnAssessed      |
| Vandercamp Lake (0703-0055)                         | Ont 66-11-P26-12-P44            | UnAssessed      |
| Virgil Creek and tribs (0705-0057)                  | Ont 66-12-P296- 74-16           | MinorImpacts    |
| Waterhouse Creek and tribs (0701-0026)              | Ont 66- 4                       | MinorImpacts    |
| West Br Fish Creek, Lower and tribs (0703-0060)     | Ont 66-11-P26-24                | NoKnownImpct    |
| West Br Fish Creek, Middle, minor tribs (0703-0061) | Ont 66-11-P26-24                | UnAssessed      |
| West Br Fish Creek, Upper, and tribs (0703-0062)    | Ont 66-11-P26-24                | UnAssessed      |
| West Branch Limestone Creek and tribs (0703-0104)   | Ont 66-11-P26-37- 6- 2- 8       | UnAssessed      |
| West Branch Onondaga Creek and tribs (0702-0025)    | Ont 66-12-12-P154- 4-11         | Need Verific    |
| West River, Lower, and minor tribs (0704-0049)      | Ont 66-12-52..P286-18           | MinorImpacts    |
| West River, Upper, and tribs (0704-0050)            | Ont 66-12-52..P286-18           | UnAssessed      |
| Westcott Reservoir (0702-0027)                      | Ont 66-12-12-P154- 5-P158a      | UnAssessed      |
| Wilson/Burrell Creek and tribs (0705-0096)          | Ont 66-12-P369-133              | UnAssessed      |
| Wood Creek and minor tribs (0703-0012)              | Ont 66-11-P26-24- 1             | MinorImpacts    |
| Yawgers Creek and tribs (0705-0006)                 | Ont 66-12-P296- 4               | Need Verific    |