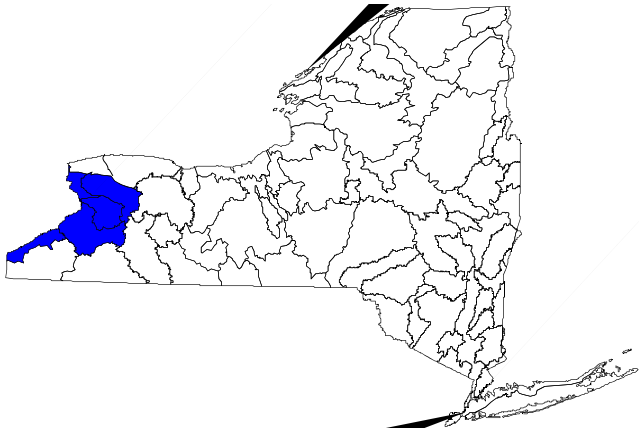
Bureau of Watershed Assessment and Research
Division of Water
NYS Department of Environmental Conservation

The 2002 Niagara River/Lake Erie Basin Waterbody Inventory and Priority Waterbodies List

Encompassing all or portions of
Allegany, Cattaraugus, Chautauqua,
Erie, Genesee, Niagara,
Orleans and Wyoming Counties



July 2003

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APPENDICES

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

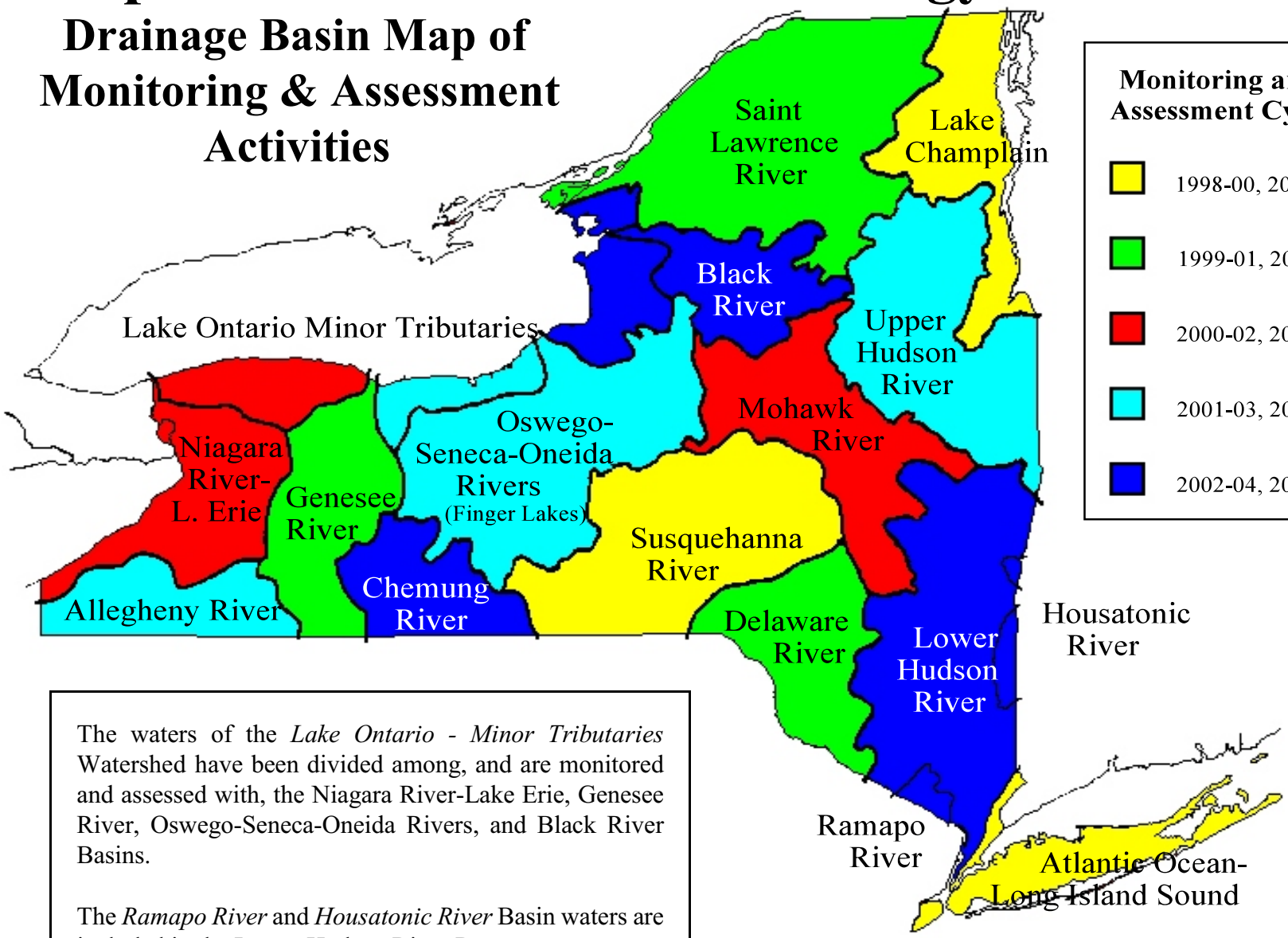
At the conclusion of the monitoring effort in a basin, the water quality data are evaluated to assess the support of specific water uses (water supply, public bathing, aquatic life, secondary recreation, etc). As was the case with the monitoring effort, the evaluation and assessment of data and subsequent 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***.

Comprehensive Assessment Strategy

Drainage Basin Map of Monitoring & Assessment Activities



The waters of the *Lake Ontario - Minor Tributaries* Watershed have been divided among, and are monitored and assessed with, the Niagara River-Lake Erie, Genesee River, Oswego-Seneca-Oneida Rivers, and Black River Basins.

The *Ramapo River* and *Housatonic River* Basin waters are included in the Lower Hudson River Report.

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 Segments: 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.).

Segments 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 Waterbody Segments: 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 Segments, Waters with Minor Impacts* and *Threatened Waterbody Segments* 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 inside and outside the Department – concerning the water quality of specific rivers, lakes and watersheds. And 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 Niagara River/Lake Erie Basin

Basin Description

The Niagara River/Lake Erie Basin is located in western New York State; in fact, Lake Erie and its outlet – the Niagara River – represent the western boundary of the state. At the point where this Niagara River/Lake Erie Basin empties into Lake Ontario, the larger drainage basin encompasses more than 265,000 square miles of the north central United States and south central Canada. The drainage area beyond the borders of New York State includes four of the five Great Lakes, as well as some of the largest, most urban/industrial cities in North America. Within the borders of New York State the basin drains approximately 2,380 square miles of northern Appalachian Plateau and lake shore lowlands. The New York State portion of the basin includes all of Erie County and portions of Niagara, Genesee, Wyoming, Cattaraugus and Chautauqua Counties.

The population of the Niagara River/Lake Erie Basin totals about 1,228,900 people (2000). The largest population centers are the cities of Buffalo (328,175) and Niagara Falls (61,840), and the surrounding suburban towns of Amherst (111,711), Cheektowaga (99,314) and Tonawanda (82,464). Outside these urban and suburban centers, the basin is largely rural and agricultural.

There are about 5,390 miles of rivers and streams (and canal) and 24 significant * lakes, ponds and reservoirs (covering 1,098 acres) in the basin. The basin also includes 92 miles of Great Lakes Shoreline (Lake Erie). The length of the main stem of the Niagara River between Lake Erie and Lake Ontario is about 36 miles. The largest tributaries to the Niagara or Lake Erie include Tonawanda Creek with 1,538 miles or 28% of basin stream miles, Cattaraugus Creek (1,435 miles, 27%) and Buffalo River (1006 miles, 19%). Of the lakes/reservoirs, the three largest (Clear Lake, Attica Reservoir and Lime Lake) represent about 46% of the total amount of lake acres in the basin.

Water Quality Issues and Problems

The primary water quality issues in the Niagara River-Lake Erie Drainage Basin are associated with the Great Lakes Areas of Concern (AOCs) and associated Remedial Action Plans (RAPs) and Lakewide Management Plans (LaMPs). These multi-jurisdictional water quality restoration and protection efforts originated in the 1980s with the International Joint Commission (IJC) Great Lakes Water Quality Board. Within the Niagara River-Lake Erie Drainage Basin, the focus of these efforts have been on the Niagara River RAP, Buffalo River RAP and also the Lake Erie LaMP. These are areas where pollutants seriously impair the beneficial uses of a waterbody and where the federal governments have committed to develop and implement the plans to restore and protect the uses.

Beyond these Great Lakes Areas of Concern, water quality issues in the basin are quite diverse. Various non-point source impacts contribute to use impacts throughout the basin. Not surprisingly, higher incidence of impacts occurs around the more urban areas of the basin. Point source impacts are generally limited to a few specific waterbody segments. Further review of the more significant water quality issues in the basin follows.

Niagara River Remedial Action Plan (RAP)

A Niagara River Remedial Action Plan was completed in September 1994, and a status report that updated remedial actions was published in June 2000. Specific priority activities and strategies in the RAP focus on stream water quality, inactive hazardous waste site remediation, contaminated river sediments; point source

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

control, fish and wildlife habitat improvements; and enhanced environmental monitoring activities.

Buffalo River Remedial Action Plan (RAP)

The Buffalo River RAP was developed through a partnership between the NYSDEC and the Buffalo River Citizens' Committee. The Remedial Action Plan was completed in November 1989; periodic Status Reports have been published since 1991 to update commitments, track implementation, and celebrate accomplishments. The most current Buffalo River RAP Status Report is dated July, 2002. Remedial activity efforts have been focused in six major areas: stream water quality monitoring, river bottom sediments, inactive hazardous waste sites, municipal and industrial wastewater treatment facilities, combined sewer overflows, and fish and wildlife habitat.

In October 2003, the Friends of the Buffalo Niagara Rivers (FBNR) received EPA funding to provide RAP management. The FBNR will manage project tracking and RAP coordination including the City of Buffalo's waterfront revitalization, the Buffalo Sewer Authority's CSO correction efforts and the U.S. Army Corp of Engineers (USACE) funded study of aquatic conditions.

Remedial Action Plans

The Great Lakes Remedial Action Plan (RAP) program originated in 1985 with the International Joint Commission (IJC) Great Lakes Water Quality Board and was formalized in 1987 amendments to the United States-Canada Great Lakes Water Quality Agreement. The Agreement calls for the federal governments, in cooperation with state and provincial governments, to ensure that RAPs incorporate a systematic and comprehensive ecosystem approach in restoring beneficial uses, and that the public is consulted in all actions undertaken pursuant to RAPs. The ecosystem approach accounts for the interactions among land, air, water, and all living things, including humans.

RAPs are pollution identification and abatement action plans that outline the necessary remedial activities to correct use impairments and document progress towards restoration. The RAP process begins with the identification of use impairments, sources, and causes based on 14 IJC indicators. The plans further identify remedial and preventative actions to restore and to protect beneficial uses, and finally seek to document and confirm the restoration

Lake Erie Lake Management Plan (LaMP)

The Great Lakes Water Quality Agreement and its amendments call for the development and implementation of Lakewide Management Plans (LaMPs), including one for Lake Erie. A binational Management Committee, co-chaired by USEPA Region 5 and Environment Canada, oversees the development and implementation of Lake Erie LaMP activities to restore and protect beneficial uses of the lake. Like the RAPs, the Lake Erie LaMP applies the ecosystem approach and involves the public through the Binational Public Forum to address water quality and natural resources management issues. The LaMP focuses on critical pollutants and both the near shore and open water ecosystems. In April 2004 an update of previous biennial Lake Erie LaMP reports was published which sets forth the current status of the use impairment indications and remedial actions. The LaMP workgroup and its subcommittees are working on implementation topics including: Ecosystems Objectives; Sources and Loads; Beneficial Use Impairment Assessments; Human Health; and, Public Involvement.

Fish Consumption Advisories

Fish consumption along the entirety of Lake Erie is impaired due to a NYS DOH health advisory that recommends women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. Fish consumption from other waters in the basin is also restricted. These waters include the Niagara River, NYS Barge Canal, Buffalo River and Harbor and Cayuga Creek. These advisories are the result of PCBs and Dioxin from toxic/contaminated sediments.

Urban/Industrial/CSO Runoff

Various recreational uses, aquatic life use support, and aesthetics in stretches of the urban waterways throughout the basin are significantly restricted by pollutants from various industrial, municipal, and commercial sources. The most significantly affected of these waterbodies are located in the Buffalo-Niagara Falls area. Urban storm runoff transports a variety of pollutants and debris into the waterways. In addition combined sewer overflows (CSOs) also convey pollutants to the Niagara River, Buffalo River, Lake Erie and smaller tributaries during wet-weather periods. Contaminated sediments, inactive hazardous waste sites and other impacts attributed to past/historic discharges also limit waterbody uses.

Streambank Erosion

General urbanization and development have infringed on the riparian zone of both rivers and lakes in the Niagara River/Lake Erie Basin making streambank erosion a significant concern. The increase in silt/ sediment in the waterbodies has resulted in impacts to either water supply, aquatic life use support or recreation for more than a quarter of the segments listed on the PWL.

Agricultural Activity

Considerable agricultural activity in the rural watersheds of the Niagara River/Lake Erie Basin has a significant impact on aquatic life use support and recreational uses of the waters. Agricultural runoff contributes nutrient and silt/sediment loads to the streams. Poor agricultural management practices, including permitting livestock unrestricted access to streams, improper manure application on fields, lack of silage leachate control, manure or milkhouse wastewater treatment facilities, intensively cultivated crop lands with little riparian buffer and fertilizer and pesticide application to fields in the absence of approved nutrient/pesticide management plans, have significant impacts on the water quality rivers and lakes in the basin. Just over a quarter of the river miles listed on the PWL as impaired list agriculture as a contributing source. Various state and local (county) agencies are working with the farming community to address these issues.

Failing and/or Inadequate On-site Septic Systems

Aquatic life use support and recreational uses for over 300 river miles and 200 acres of lakes throughout the basin are impacted by failing and/or inadequate on-site septic systems. Such conditions also raise obvious public health concerns as well. Efforts to address these problems are hindered by fiscal considerations. Correcting individual systems and/or establishing new sewer service for a larger neighborhood or community results in significant (often insurmountable) financial burden.

Groundwater Resources

Although groundwater resources are not specifically tracked through the WI/PWL, they are considered *Priority Waters* nonetheless. Ground water 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 Niagara River/Lake Erie Basin, the more significant threats to groundwater resources include abandoned or improperly plugged oil and gas wells; inactive hazardous waste sites; pesticide application; animal feeding operations; on-site wastewater treatment systems; and spills.

Niagara River/Lake Erie Basin Water Quality Assessment

The series of charts presented on the following pages provides an overall assessment of water quality conditions in the entire Niagara River/Lake Erie 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:

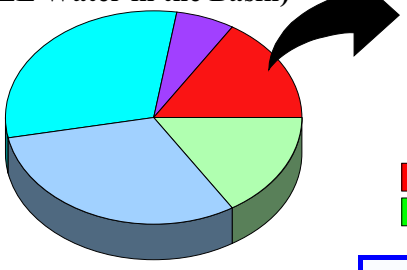
Precluded:	waters do not support appropriate uses,
Impaired:	waters frequently do not support appropriate uses,
Stressed:	waters support appropriate uses, but other water quality impacts are apparent, and
Threatened:	waters support uses and have no impacts, but activities threaten future use support.

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 Niagara River/Lake Erie 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.

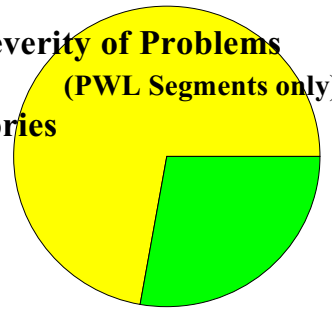
Rivers/Streams

Water Quality Assessment Categories
(for ALL Water 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)

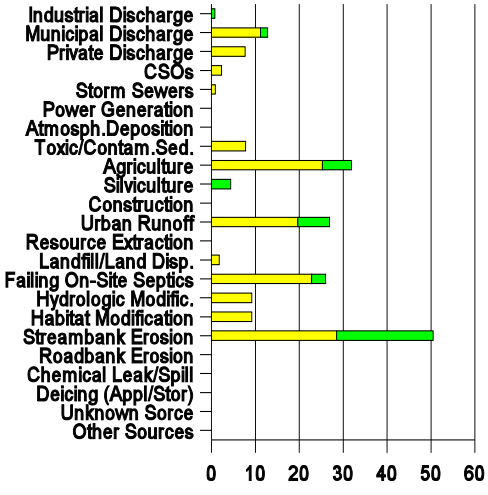


- Precluded
- Impaired
- Stressed
- Threatened

Niagara/Lk. Erie Basin

Total River Miles:	5389
Total PWL Miles:	1216

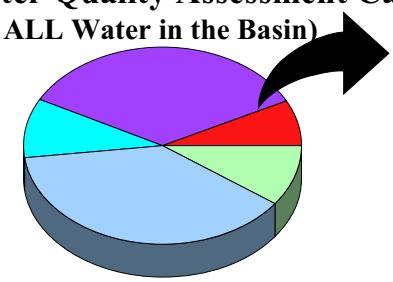
Major Sources - Priority Waterbodies



Percent of PWL Waters Affected

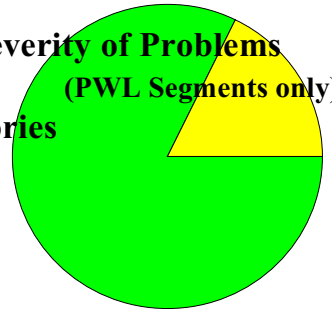
Lakes/Reservoirs

Water Quality Assessment Categories
(for ALL Water 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)

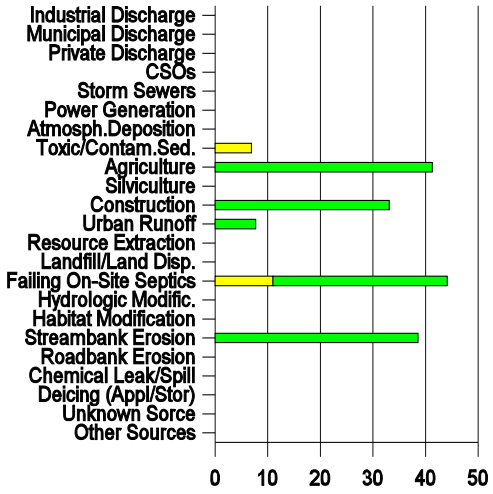


Precluded
Impaired
Stressed
Threatened

Niagara/Lk. Erie Basin

Total Lake Acres:	1098
Total PWL Acres:	465

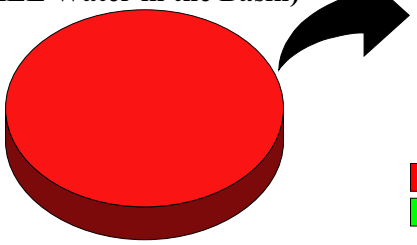
Major Sources - Priority Waterbodies



Percent of PWL Waters Affected

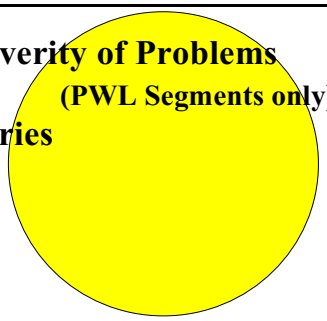
Gr. Lakes Shore

Water Quality Assessment Categories
(for ALL Water 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)

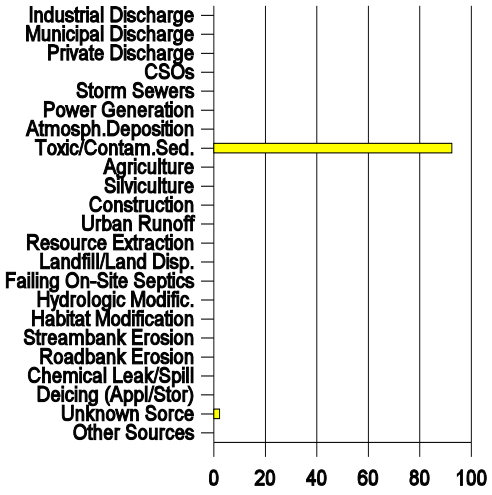


Precluded
Impaired
Stressed
Threatened

Niagara/Lk. Erie Basin

Total Shore Miles:	92
Total PWL Miles:	92

Major Sources - Priority Waterbodies



Percent of PWL Waters Affected

Basin Water Quality Summary

About one-fourth of the river miles in the Niagara River/Lake Erie Basin (1,216 miles) are listed on the Priority Waterbodies List as either not supporting uses or having minor impacts or threats to water quality. About one-fourth of the these miles are considered *Stressed* or *Threatened* waters that fully support appropriate uses, but with minor impacts/threats. About sixteen percent of basin river miles are *Impaired* and do not support appropriate uses.

There are seven lakes (about 42% of the total acreage in the basin) included on the PWL. Impacts to Delaware Park Pond (fish consumption) and Java Lake (recreational use) account for all the impaired lakes/reservoirs in the basin. Agriculture, contaminated sediments and failing on-site septic systems are the suspected sources for

these impairments. About 33% of the lake/reservoir acres in the basin are listed as having *Minor Impacts* (but that fully support appropriate uses) which are attributable to elevated nutrient and silt sediment levels.

All 92 miles of Great Lakes shoreline in the basin are listed as *Impaired* due to a fish consumption advisory for Lake Erie. The advisory is a result of toxic/contaminated sediments.

The 2002 Niagara River/Lake Erie Basin Waterbody Inventory/Priority Waterbodies List

This inventory of water quality information includes individual waterbody *Data Sheets* describing the water quality conditions in the Niagara River/Lake Erie 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 Niagara River/Lake Erie 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 Segments, Segments 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.

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

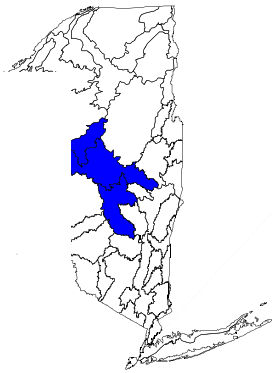
Note also that the inventory reflects the best available water quality information at the time of publication. Water quality information may be added or modified subsequent to the preparation of this edition of the Waterbody Inventory and Priority Waterbodies List. When water quality information is updated, 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.

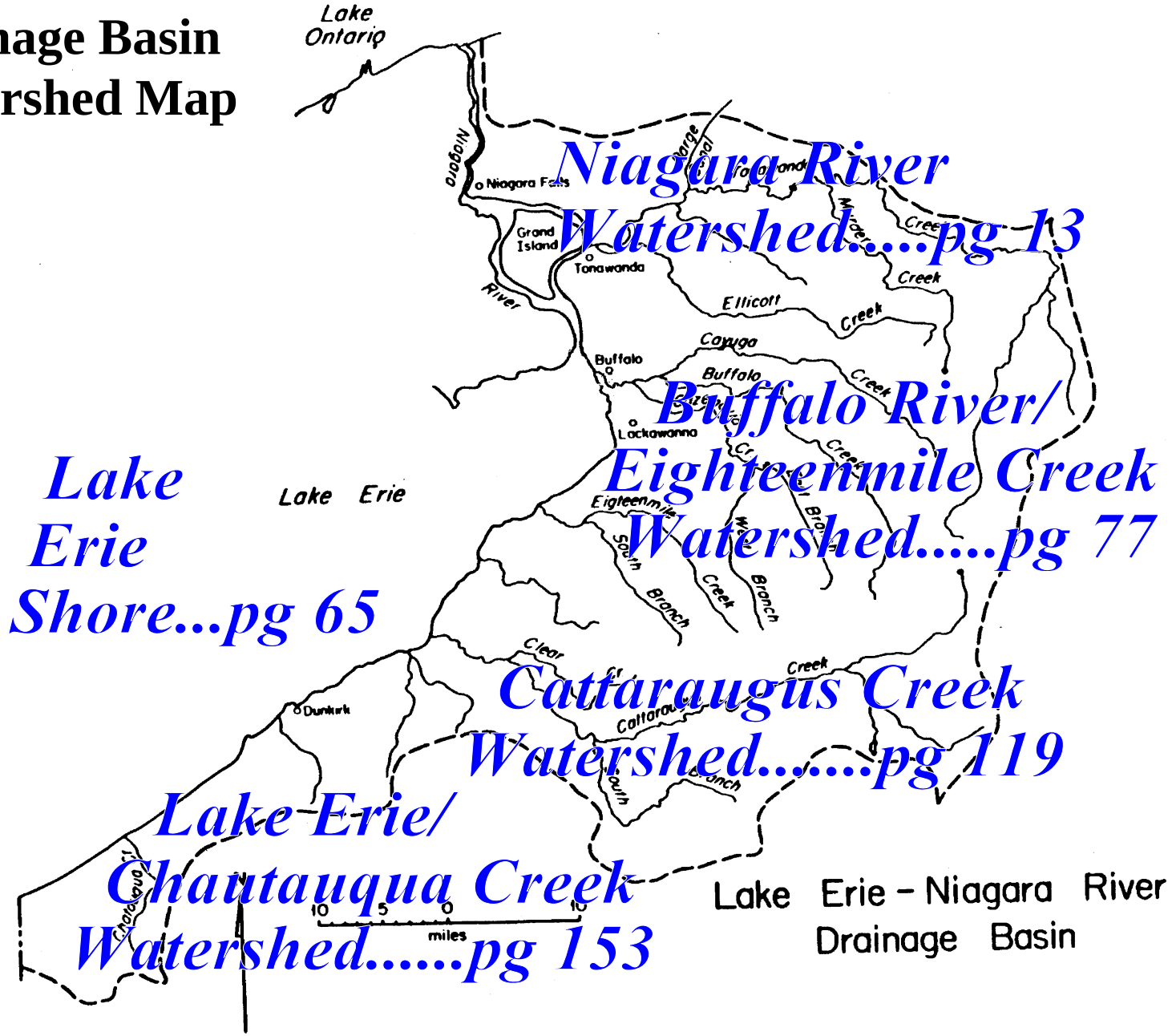
In addition to the more detailed data sheets, a *Summary Listing of Priority Waters* provides a brief overview of all ***Priority Waterbodies*** (i.e., *Impaired Segments, Segments with Minor Impacts* and/or *Threatened Waters*). This listing follows the Data Sheet Section of the report.

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 2

Niagara River/Lake Erie Drainage Basin Watershed Map





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Lake Erie Shore...pg 65

Cattaraugus Creek Watershed.....pg 119

Lake Erie/ Chautauqua Creek Watershed.....pg 153

Waterbody Inventory
for
The Niagara River Watershed

Water Index Number	Waterbody Segment	Category
Niagara River, Main Stem		
Ont 158 (portion 1)	Niagara River, Lower, Main Stem (0101-0027)	**Impaired Seg**
Ont 158 (portion 2)	Niagara River, Upper, Main Stem (0101-0006)	**Impaired Seg**
Ont 158 (portion 3)	Chippewa (West) Channel (0101-0028)	**Impaired Seg**
Ont 158 (portion 4)	Black Rock Canal (0101-0025)	**Impaired Seg**
Ont 158 G.I.-1 thru 6	Grand Island (all tribs to Niagara R) (0101-0011)	**Need Verific**
Tribs to Lower Niagara River, Lake Ontario to Tonawanda Creek		
Ont 158- 1 thru 5	Minor Tribs to Niagara River (0101-0029)	UnAssessed
Ont 158- 6	Gill Creek and tribs (0101-0002)	**Impaired Seg**
Ont 158- 6-P1a	Hyde Park Lake (0101-0030)	UnAssessed
Ont 158- 7 thru 11	Minor Tribs to Niagara River (0101-0031)	UnAssessed
Ont 158- 8	Cayuga Creek and minor tribs (0101-0001)	**Impaired Seg**
Ont 158- 8-1	Bergholtz Creek and tribs (0101-0004)	**Impaired Seg**
Tonawanda Creek Watershed		
Ont 158-12 (portion 1)	Tonawanda Creek, Lower, Main Stem (0102-0022)	**Impaired Seg**
Ont 158-12 (portion 1a)	NYS Barge Canal (portion 1) (0102-0044)	UnAssessed
Ont 158-12 (portion 2)	Tonawanda Creek, Middle, Main Stem (0102-0006)	**MinorImpacts**
Ont 158-12 (portion 3)	Tonawanda Creek, Middle, Main Stem (0102-0002)	**Impaired Seg**
Ont 158-12 (portion 4)	Tonawanda Creek, Upper, and minor tribs (0102-0003)	**Impaired Seg**
Ont 158-12- 1	Ellicott Creek, Lower, and tribs (0102-0018)	**Impaired Seg**
Ont 158-12- 1	Ellicott Creek, Upper, and tribs (0102-0024)	**Need Verific**
Ont 158-12- 2 thru 5 (selected)	Minor Tribs to Lower Tonawanda Creek (0102-0025)	UnAssessed
Ont 158-12- 3	Bull Creek and tribs (0102-0026)	UnAssessed
Ont 158-12- 6	Ransom Creek, Lower, and tribs (0102-0004)	**Impaired Seg**
Ont 158-12- 6	Ransom Creek, Upper, and tribs (0102-0027)	**Impaired Seg**
Ont 158-12- 7 thru 31 (selected)	Minor Tribs to Tonawanda Creek (0102-0028)	UnAssessed
Ont 158-12- 8	Mud Creek and tribs (0102-0029)	**NoKnownImpct**
Ont 158-12- 9	Beeman Creek and tribs (0102-0030)	**Impaired Seg**
Ont 158-12-11	Ledge Creek and minor tribs (0102-0012)	**Need Verific**
Ont 158-12-11-1	Murder Creek, Lower, and tribs (0102-0031)	**Impaired Seg**
Ont 158-12-11-1	Murder Creek, Upper, and tribs (0102-0032)	**Need Verific**
Ont 158-12-11-1-P13	Akron Reservoir (0102-0033)	UnAssessed
Ont 158-12-11-1-P13-	Tribs to Akron Reservoir (0102-0034)	UnAssessed

...The Niagara River Watershed

Water Index Number	Waterbody Segment	Category
Tonawanda Creek Watershed (con't)		
Ont 158-12-20-P15	Divers Lake (0102-0035)	UnAssessed
Ont 158-12-28	Bowen Brook and tribs (0102-0036)	**Impaired Seg**
Ont 158-12-32	Little Tonawanda Creek, Lower, and tribs (0102-0001)	**Impaired Seg**
Ont 158-12-32	Little Tonawanda Creek, Upper, and tribs (0102-0037)	UnAssessed
Ont 158-12-41	Tannery Brook and tribs (0102-0038)	UnAssessed
Ont 158-12-46	Crow Creek and tribs (0102-0023)	**NoKnownImpct**
Ont 158-12-46-P20	Attica Reservoir (0102-0039)	**MinorImpacts**
Ont 158-12-46-P20a	Attica Water Supply Reservoir (0102-0040)	UnAssessed
Ont 158-12-66	Stony Brook and tribs (0102-0041)	UnAssessed
Ont 158-12-77	East Fork and tribs (0102-0042)	**NoKnownImpct**
Ont 158-12-77-3-P20b	Faun Lake (0102-0043)	**NoKnownImpct**
Tribs to Upper Niagara, Tonawanda Creek to Lake Erie		
Ont 158-13	Two Mile Creek and tribs (0101-0005)	**Impaired Seg**
Ont 158-14	unnamed trib to Niagara River (0101-0032)	UnAssessed
Ont 158-15	Scajaquada Creek, Lower, and tribs (0101-0023)	**Impaired Seg**
Ont 158-15	Scajaquada Creek, Middle, and tribs (0101-0033)	UnAssessed
Ont 158-15	Scajaquada Creek, Upper, and tribs (0101-0034)	UnAssessed
Ont 158-15-P25	Delaware Park Pond (0101-0026)	**Impaired Seg**

Niagara River, Lower, Main Stem (0101-0027) Impaired Seg

Waterbody Location Information

Revised: 02/15/2005

Water Index No: Ont 158 (portion 1)
Hydro Unit Code: 04120104/110 **Str Class:** A-Spcl
Waterbody Type: River
Waterbody Size: 13.9 Miles
Seg Description: from Lake Ontario to Niagara Falls

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: LEWISTON (I-04-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
FISH CONSUMPTION	Impaired	Known
HABITAT/HYDROLGY	Impaired	Suspected

Type of Pollutant(s)

Known: PRIORITY ORGANICS (dioxin), PRIORITY ORGANICS (PCBs), PESTICIDES (mirex)
Suspected: - - -
Possible: Nonpriority Organics (PAHs)

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT (Lk Ontario)
Suspected: HABITAT MODIFICATION
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 2b,3a (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in this portion of the Niagara River is impaired due to a NYS DOH health advisory that recommends restricting consumption of some species of fish due to elevated PCB, Mirex and Dioxin levels. Historical discharges resulting in contaminated river sediments and inactive hazardous waste sites are considered to be the likely source of these toxics. Shoreline development, bulkheading, dredging and other stream modifications impact the habitat along the river.

A NYS DOH health advisory recommends eating no white perch taken from the Niagara River (below the Falls) because of elevated PCB, Mirex and Dioxin levels. Consumption of smallmouth bass should be limited to no more than one meal per month due to PCB levels. The contaminant sources are primarily thought to be sediments attributed to inactive hazardous waste sites and historical discharges. Fish consumption in the Lower Niagara is also restricted due to a NYS DOH health advisory for Lake Ontario that applies to the first impassable fish barrier (Niagara Falls). The advisory recommends eating no American eel, channel catfish, carp, chinook salmon, and larger lake trout (> 25 inches) and brown trout (>20 inches). Consumption of white sucker, rainbow trout, smaller lake and brown trout, and larger coho salmon (>25 inches) should be limited to no more than one meal per month. These advisories are a result of elevated PCBs, mirex and dioxin in Lake Ontario sediments. (2004-05 NYS DOH Health Advisories, October 2004).

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring of the Niagara River in Fort Niagara is conducted annually at the US Coast Guard Dock. 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. In addition to water column chemistry, this Intensive Network sampling includes sediment assessment, macroinvertebrate tissue analysis and toxicity testing, as well as macroinvertebrate community analysis (see below). (DEC/DOW, BWAR/RIBS, April 2003)

At the Youngstown site, water quality was assessed as slightly impacted, based on 2000 macroinvertebrate multiplate sampling. Samples were dominated by midges and scuds. The invertebrate communities were similar to previous collections at this site since 1982.

The Niagara River is subject to a joint US-Canadian Niagara River Toxics Management Plan to reduce toxic contributions to the basin. The Niagara River from its mouth at Lake Ontario to Smokes Creek near the southern end of Buffalo Harbor has been designated an International Joint Commission (IJC) Area of Concern. Past municipal and industrial discharges, waste disposal sites and urban/storm runoff have long been a source of contaminants to the river. The history of development along the river has also changed the original shoreline, affecting fish and wildlife habitat. A Remedial Action Plan (RAP) document to address use impairments, sources, existing remediation programs and recommendations for future remedial strategies, was completed in 1994. The RAP identifies five specific use impairments. The major impairment is restrictions of fish and wildlife consumption. Restrictions of dredging activities, fish tumors and other deformities, degradation of benthos in localized near-shore areas, and loss of fish & wildlife habitat are the other use impairments identified in the RAP. Most recently the combined committee of the Friends of the Buffalo/Niagara Rivers assists the NYSDEC on implementation of the RAP. Recently, Clean Water/Clean Air Bond Act funding of $1.0 million was committed to a habitat restoration project for Strawberry Island. (DEC/DOW, BWAM and Region 9, February 2005)

The Niagara River is listed on the 2004 Section 303(d) List for PAHs. Although technical staff at both USEPA and NYSDEC have expressed concerns about the quality of the data and/or the interpretation of the results leading to this listing, NYSDEC listed this water on Part 3a - Waterbodies Segments Requiring Verification of Impairment of the List due to various PAHs, with the following footnote: "Due to analytic limitations, the treatment of non-detect results in the data evaluation, and other data evaluation and quality assurance/quality control issues, additional monitoring and verification of PAHs in the river are necessary to develop a TMDL."

The greatest concern regarding the quality of the PAH data is the variability and likely contamination that occurs when sampling PAHs. NYS's variability and contamination concerns for PAHs are illustrated by the recent large-scale multi-agency PAH monitoring effort in the NY/NJ Harbor, an independent entity (Booz Allen Hamilton) conducted an extensive data quality evaluation. While 97% of PCB results were characterized as being acceptable without qualification, only 10% of the PAH data were so characterized. The remaining 90% of the PAH data were considered to have aspects of the analysis that were absent or outside of acceptable bounds. Field blanks should generally be on the order of at least 5 times lower in concentration than actual samples. In the NY/NJ Harbor effort, the average PAH concentration was 32 ng/L and the average equipment blank was 15 ng/L. This is considered an unacceptable margin.

Also regarding PAHs, recent (2002/01) Niagara River Toxics Management Plan data actually show that the concentrations of PAHs decline from upstream to downstream sampling sites, suggesting that the PAH load is coming from Lake Erie. Reviewing the previous year's sampling (1999/2000) would suggest that significant improvement in the river occurred. Given that the available data can be interpreted as either showing significant improvement or unacceptable analytic/sampling variability, further complicates the assessment of the river.

This segment is also included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the main stem of the Niagara River and all bays, arms and inlets of the river between Lake Ontario and the Niagara Falls.

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Niagara River, Upper, Main Stem (0101-0006) Impaired Seg

Waterbody Location Information

Revised: 04/22/2005

Water Index No: Ont 158 (portion 2)
Hydro Unit Code: 04120104/100 **Str Class:** A-Spcl
Waterbody Type: River
Waterbody Size: 21.6 Miles
Seg Description: from Niagara Falls to Lake Erie

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: NIAGARA FALLS (I-04-3)

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	Suspected
HABITAT/HYDROLGY	Impaired	Suspected

Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBs)
Suspected: Water Level/Flow, Restricted Passage
Possible: Nonpriority Organics (PAHs)

Source(s) of Pollutant(s)

Known: HABITAT MODIFICATION, TOX/CONTAM. SEDIMENT
Suspected: LANDFILL/LAND DISP., Comb. Sewer Overflow, Urban Runoff
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 2b,3a (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in this portion of the Niagara River is impaired due to a NYS DOH health advisory that recommends restricting consumption of some species of fish due to elevated PCB levels. Historical discharges resulting in contaminated river sediments and inactive hazardous waste sites are considered to be the likely source of these toxics. Urban runoff and CSOs contribute pollutants to the river. Shoreline development, bulkheading, dredging and other stream modifications impact the habitat along the river.

A NYS DOH health advisory recommends eating no more than one meal per month of carp because of elevated PCB levels. The sources of PCBs are primarily thought to be contaminated sediments attributed to inactive hazardous waste sites and historical discharges. (2002-03 NYS DOH Health Advisories, October 2004).

The Niagara River is subject to a joint US-Canadian Niagara River Toxics Management Plan to reduce toxic contributions to the basin. The Niagara River from its mouth at Lake Ontario to Smokes Creek near the southern end of Buffalo Harbor has been designated an International Joint Commission (IJC) Area of Concern. Past municipal and industrial discharges, waste disposal sites and urban/storm runoff have long been a source of contaminants to the river. Municipal CSOs which

discharge to the Niagara and other tribs in the area have been identified as needing additional control measures. The history of development along the river has also changed the original shoreline, affecting fish and wildlife habitat. A Remedial Action Plan (RAP) document to address use impairments, sources, existing remediation programs and recommendations for future remedial strategies, was completed in 1994. The RAP identifies five specific use impairments. The major impairment is restrictions of fish and wildlife consumption. Restrictions of dredging activities, fish tumors and other deformities, degradation of benthos in localized near-shore areas, and loss of fish & wildlife habitat are the other use impairments identified in the RAP. Most recently the combined committee of the Friends of the Buffalo/Niagara Rivers assists the NYSDEC on implementation of the RAP. Recently, Clean Water/Clean Air Bond Act funding of $1.0 million was committed to a habitat restoration project for Strawberry Island. (DEC/DOW, BWAM and Region 9, February 2005)

The Niagara River is listed on the 2004 Section 303(d) List for PAHs. Although technical staff at both USEPA and NYSDEC have expressed concerns about the quality of the data and/or the interpretation of the results leading to this listing, NYSDEC listed this water on Part 3a - Waterbodies Segments Requiring Verification of Impairment of the List due to various PAHs, with the following footnote: "Due to analytic limitations, the treatment of non-detect results in the data evaluation, and other data evaluation and quality assurance/quality control issues, additional monitoring and verification of PAHs in the river are necessary to develop a TMDL."

The greatest concern regarding the quality of the PAH data is the variability and likely contamination that occurs when sampling PAHs. NYS's variability and contamination concerns for PAHs are illustrated by the recent large-scale multi-agency PAH monitoring effort in the NY/NJ Harbor, an independent entity (Booz Allen Hamilton) conducted an extensive data quality evaluation. While 97% of PCB results were characterized as being acceptable without qualification, only 10% of the PAH data were so characterized. The remaining 90% of the PAH data were considered to have aspects of the analysis that were absent or outside of acceptable bounds. Field blanks should generally be on the order of at least 5 times lower in concentration than actual samples. In the NY/NJ Harbor effort, the average PAH concentration was 32 ng/L and the average equipment blank was 15 ng/L. This is considered an unacceptable margin.

Also regarding PAHs, recent (2002/01) Niagara River Toxics Management Plan data actually show that the concentrations of PAHs decline from upstream to downstream sampling sites, suggesting that the PAH load is coming from Lake Erie. Reviewing the previous year's sampling (1999/2000) would suggest that significant improvement in the river occurred. Given that the available data can be interpreted as either showing significant improvement or unacceptable analytic/sampling variability, further complicates the assessment of the river.

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the main stem of the Niagara River from the Niagara Falls to the Peace Bridge at Lake Erie, and all bays, arms and inlets; except Black Rock Canal and Chippewa (West) Channel, which are listed separately.

Chippewa (West) Channel (0101-0028) Impaired Seg

Waterbody Location Information

Revised: 02/15/2005

Water Index No: Ont 158 (portion 3)
Hydro Unit Code: 04120104/100 **Str Class:** A-Spcl
Waterbody Type: River
Waterbody Size: 12.8 Miles
Seg Description: entire channel (in NYS)

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: NIAGARA FALLS (I-04-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT
Suspected: LANDFILL/LAND DISP.
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Chippewa (west) Channel is impaired due to a NYS DOH health advisory for the Niagara River that recommends restricting consumption of some species of fish due to elevated PCB levels. Historical discharges resulting in contaminated river sediments and inactive hazardous waste sites are considered to be the likely source of these toxics.

A NYS DOH health advisory recommends eating no more than one meal per month of carp because of elevated PCB levels. The sources of PCBs are primarily thought to be contaminated sediments attributed to inactive hazardous waste sites and historical discharges. (2002-03 NYS DOH Health Advisories, October 2004).

The Niagara River, including the channel, is subject to a joint US-Canadian Niagara River Toxics Management Plan to reduce toxic contributions to the basin. The Niagara River from its mouth at Lake Ontario to Smokes Creek near the southern end of Buffalo Harbor has been designated an International Joint Commission (IJC) Area of Concern. Past municipal and industrial discharges, waste disposal sites and urban/storm runoff have long been a source of contaminants to the river. The history of development along the river has also changed the original shoreline, affecting fish and wildlife habitat. A Remedial Action Plan (RAP) document to address use impairments, sources, existing remediation programs and recommendations for future remedial strategies, was completed in 1994. The RAP identifies five specific use impairments. The major impairment is restrictions of fish and wildlife consumption. Restrictions on dredging activities,

fish tumors and other deformities, degradation of benthos in localized near-shore areas, and loss of fish & wildlife habitat are the other use impairments identified in the RAP.

The segment includes the portion of the channel along the south and west shore of Grand Island, within NYS.

Black Rock Canal (0101-0025) Impaired Seg

Waterbody Location Information

Revised: 02/15/2005

Water Index No: Ont 158 (portion 4)
Hydro Unit Code: 04120104/100 **Str Class:** C
Waterbody Type: River
Waterbody Size: 1.0 Miles
Seg Description: entire canal

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: BUFFALO NORTHEAST (J-05-2)

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	Possible
HABITAT/HYDROLGY	Impaired	Suspected

Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBs)
Suspected: - - -
Possible: Nonpriority Organics (PAHs)

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT
Suspected: HABITAT MODIFICATION, LANDFILL/LAND DISP.
Possible: Comb. Sewer Overflow, Urban Runoff

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Black Rock Canal is impaired due to a NYS DOH health advisory for the Niagara River that recommends restricting consumption of some species of fish due to elevated PCB levels. Historical discharges resulting in contaminated river sediments and inactive hazardous waste sites are considered to be the likely source of these toxics.

A NYS DOH health advisory recommends eating no more than one meal per month of carp because of elevated PCB levels. The sources of PCBs are primarily thought to be contaminated sediments attributed to inactive hazardous waste sites and historical discharges. (2002-03 NYS DOH Health Advisories, October 2004).

The Niagara River, including the canal, is subject to a joint US-Canadian Niagara River Toxics Management Plan to reduce toxic contributions to the basin. The Niagara River from its mouth at Lake Ontario to Smokes Creek near the southern end of Buffalo Harbor has been designated an International Joint Commission (IJC) Area of Concern. Past municipal and industrial discharges, waste disposal sites and urban/storm runoff have long been a source of contaminants to the river. The history of development along the river has also changed the original shoreline, affecting fish and wildlife habitat. A Remedial Action Plan (RAP) document to address use impairments, sources, existing remediation programs

and recommendations for future remedial strategies, was completed in 1994. The RAP identifies five specific use impairments. The major impairment is restrictions of fish and wildlife consumption. Restrictions on dredging activities are the result of contaminated sediments in the canal that prevent the open lake disposal of dredge material. Fish tumors and other deformities, degradation of benthos in localized near-shore areas, and loss of fish & wildlife habitat are the other use impairments identified in the RAP.

This segment includes the waters east of Squaw Island and Bird Island Pier.

Grand Island (all tribs to Niagara R) (0101-0011) Need Verific

Waterbody Location Information

Revised: 04/29/2003

Water Index No: Ont 158 G.I.-1 thru 6
Hydro Unit Code: 04120104.100 **Str Class:** B
Waterbody Type: River
Waterbody Size: 53.7 Miles
Seg Description: total length of all Grand Island tribs to Niagara River

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: TONAWANDA WEST (I-05-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Aquatic Life	Stressed	Possible
Habitat/Hydrolgy	Threatened	Known

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: URBAN RUNOFF
Possible: Construction, Hydro Modification

Resolution/Management Information

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

Further Details

Natural resources (fishery) habitat in the tribs of Grand Island are threatened by elevated stream temperatures, silt/sediment and other nonpoint inputs related to suburban/urban development in surrounding primarily residential areas. The major tributary streams of Grand Island have notable northern pike runs. These same development impacts may also affect aquatic life support in the tribs.

A biological (macroinvertebrate) assessment of Grand Island tribs was attempted in 2000, but stream flow, depth and substrate was unsuitable for this type of sampling.

This segment includes the total length of all tribs to the Niagara River on Grand Island. Tribs within this segment, including Big Burnt Ship Creek (-1*), Gun Creek (-2) and Spicer Creek (-3), Woods Creek, Big Gun Creek, are Class B.

Gill Creek and tribs (0101-0002) Impaired Seg

Waterbody Location Information

Revised: 04/29/2003

Water Index No: Ont 158- 6
Hydro Unit Code: 04120104/110 **Str Class:** C
Waterbody Type: River
Waterbody Size: 13.8 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: NIAGARA FALLS (I-04-3)

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
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: Aesthetics (debris)
Suspected: UNKNOWN TOXICITY, Priority Organics (dioxin)
Possible: Pesticides

Source(s) of Pollutant(s)

Known: URBAN RUNOFF
Suspected: TOX/CONTAM. SEDIMENT
Possible: Landfill/Land Disp., Municipal, Storm Sewers

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 1 (High Priority for TMDL Development by NYSDEC)

Further Details

Aquatic life support and recreational uses in Gill Creek are impaired and aesthetics are significantly impacted by various toxic and other contaminants from historic/past discharges, contaminated sediments, municipal/industrial inputs and other urban nonpoint sources to the stream.

A biological (macroinvertebrate) assessment of Gill Creek in Niagara Falls (at Route 384) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated that municipal/industrial inputs were the primary cause of impact. (DEC/DOW, BWAR/SBU, April 2003)

The area around Gill Creek has been subject to a number of remedial activities. Most of the remediation work, including the removal of PCB contaminated sediment in the creek and tribs, was completed in the 1980s. Post remedial sampling indicated a significant reduction in contaminant levels in fish. A previous fish consumption advisory for Gill Creek (eat none, all species, due to PCBs, dioxin) was lifted in 1999. (Registry of Inactive Hazardous Waste Disposal Sites in NYS, Vol 9, DEC/DER, April 2002)

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters.

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

Cayuga Creek and minor tribs (0101-0001) Impaired Seg

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158- 8
Hydro Unit Code: 04120104/110 **Str Class:** C
Waterbody Type: River
Waterbody Size: 21.8 Miles
Seg Description: entire stream and selected tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: TONAWANDA WEST (I-05-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
FISH CONSUMPTION	Impaired	Known
AQUATIC LIFE	Impaired	Known
RECREATION	Impaired	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: PRIORITY ORGANICS (dioxin), Metals (nickel, zinc), Pesticides (DDD/DDE)
Suspected: Algal/Weed Growth
Possible: - - -

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT, URBAN RUNOFF
Suspected: - - -
Possible: Landfill/Land Disp., Storm Sewers

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption, aquatic life support and recreational uses in Cayuga Creek are impaired and aesthetics are significantly impacted by various toxic, metals and other contaminants from historic/past discharges, contaminated sediments, municipal/industrial inputs and other urban nonpoint sources to the stream.

Fish consumption in Cayuga Creek is impaired due to a NYS DOH health advisory that recommends eating no fish of any species because of elevated dioxin levels. The sources of dioxin are contaminated sediments attributed to inactive hazardous waste sites and historical discharges. (2002-03 NYS DOH Health Advisories, April 2003).

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network (mini-study) monitoring of Cayuga Creek in Niagara Falls (at Route 62) was conducted in 2001. The focus of the limited mini-study was to re-evaluate/confirm continuing poor water quality in the stream. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). The parameters of concern in the water column include iron, zinc and total dissolved solids. Toxicity testing revealed no significant mortality of reproductive

impairment. Due to site limitations, bottom sediment sampling was conducted upstream and Route 182. In sediments, zinc and 6 PAHs were found at level exceeding their respective Probable Effects Level - levels at which adverse effects are expected to occur. Four metals and four PAHs exceed Threshold Effects Levels - levels at which adverse effect occasionally occur - and are considered to be of concern. (DEC/DOW, BWAR/RIBS, April 2003)

A biological (macroinvertebrate) assessment of Cayuga Creek in Niagara Falls (at Route 182) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated that toxic inputs were the primary cause of impact. The macroinvertebrate fauna was dominated by tolerant sow bugs and riffle beetles. Specific conductance was high at this site, typical of urban streams affected by nonpoint urban runoff. Macroinvertebrate tissue samples collected in 2001 also show significantly high levels of DDE/DDD, Mirex, nickel and zinc. (DEC/DOW, BWAR/SBU, April 2003)

The area around Cayuga Creek has been subject to a number of remedial activities, including remediation at the Hooker Chemical Love Canal site. Most of the remediation work, including the removal of contaminated sediment in the creek and tribs, was completed in the 1980s. Post remedial sampling indicated a significant reduction in dioxin levels in young-of-the-year fish. Sampling to monitor contaminant levels in fish is continuing. (Registry of Inactive Hazardous Waste Disposal Sites in NYS, Vol 9, DEC/DER, April 2002)

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C for the entire reach. Tribs to this reach/segment are also Class C. Bergholtz Creek (-1) is listed separately.

Bergholtz Creek and tribs (0101-0004) Impaired Seg

Waterbody Location Information

Revised: 04/29/2003

Water Index No: Ont 158- 8-1
Hydro Unit Code: 04120104/110 **Str Class:** C
Waterbody Type: River
Waterbody Size: 33.1 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: TONAWANDA WEST (I-05-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
FISH CONSUMPTION	Impaired	Known
AQUATIC LIFE	Impaired	Known
RECREATION	Impaired	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBs)
Suspected: NUTRIENTS (phosphorus), PATHOGENS, Metals, Pesticides
Possible: - - -

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT, URBAN RUNOFF
Suspected: - - -
Possible: Landfill/Land Disp., Municipal, Storm Sewers

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 1,2b (High Priority for TMDL Development by NYSDEC)

Further Details

Fish consumption, aquatic life support and recreational uses in Bergholtz Creek are impaired and aesthetics are significantly impacted by various toxic and other contaminants from historic/past discharges, contaminated sediments, municipal/industrial inputs and other urban nonpoint sources to the stream.

A fish consumption advisory recommending eating no fish of any species is in place for Cayuga Creek. This advisory extends into Bergholtz Creek, a trib of Cayuga, up to the first impassible barrier. (2002-03 NYS DOH Health Advisories and DEC/FWMR, Habitat, October 2002)

A biological (macroinvertebrate) assessment of Bergholtz Creek in Niagara Falls (at Williams Road) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Organic wastes were the likely source of impact, as determined by Impact Source Determination. The fauna was dominated by sewage-tolerant sowbugs. (DEC/DOW, BWAR/SBU, April 2003)

The area around Cayuga and Bergholtz Creek has been subject to a number of remedial activities. Most of the remediation work, including the removal of contaminated sediment in Bergholtz and Black Creeks, was completed in the 1980s. Post remedial sampling indicated a significant reduction in dioxin levels in young-of-the-year fish. Sampling to monitor contaminant levels in fish is continuing. (Registry of Inactive Hazardous Waste Disposal Sites in NYS, Vol 9, DEC/DER, April 2002)

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters due to urban runoff sources and a fish consumption advisory.

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 (-1), are also Class C.

Tonawanda Creek, Lower, Main Stem (0102-0022) Impaired Seg

Waterbody Location Information

Revised: 05/02/2003

Water Index No: Ont 158-12 (portion 1)
Hydro Unit Code: 04120104/080 **Str Class:** C
Waterbody Type: River
Waterbody Size: 12.3 Miles
Seg Description: from mouth to NYS Barge Canal in Pendleton

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: TONAWANDA EAST (I-05-3)

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	Suspected
Recreation	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT, Urban Runoff
Suspected: Streambank Erosion, Storm Sewers
Possible: Landfill/Land Disp., Municipal

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Medium
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in this portion of Tonawanda Creek is impaired by toxic organics contamination attributed to historic/past discharges and contaminated sediments. Aquatic life support and recreational uses are thought to experience minor impacts due to silt/sediment loadings and nutrient levels from municipal discharges and various nonpoint sources. However sampling in the specific reach has not been conducted recently and conditions need to be verified.

Fish consumption in the western NYS Barge Canal (from Lockport to the Niagara River, including Lower Tonawanda Creek) is impaired due to a NYS DOH health advisory that recommends eating no more than one meal per month of carp because of PCB levels. The sources of PCBs are contaminated sediments likely attributed to historic/past discharges. (2002-03 NYS DOH Health Advisories, April 2003).

Biological (macroinvertebrate) assessment of the lower reach of Tonawanda Creek have not been conducted since 1981. At that time water quality was assessed as slightly impacted at both North Tonawanda and at Pendleton. Conditions at both sites represented a significant improvement over conditions in the mid-1970s. In the lower end of the reach the improvement was attributed to water quality improvement in the Niagara River, which feeds the Tonawanda Creek/Barge

Canal during the navigation season. Improved water quality in the upper end of the reach was attributed to WWTP upgrades at the Amherst (T) facility. (Twenty Year Trends, DEC/DOW, BWAR/SBU, 1993)

Biological sampling of the creek in Millersport (at Route 78) just above the reach was conducted in 2000. Sampling results at this site indicated non-impacted water quality conditions, with a good diversity of clean-water mayflies, stoneflies, and caddisflies. These sampling results may represent an improvement at the sampling site, and may suggest possible improvement in the downstream reach. However the character of the creek at this site is different than the canal reach of the lower creek and independent sampling, assessment and verification of conditions is needed. (DEC/DOW, BWAR/SBU, April 2003)

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the portion of the stream from the mouth in Tonawanda to the NYS Barge Canal in Pendleton. The waters of this portion of the stream are Class C. This section of the stream/canal receives flow from the Niagara River during the navigation season, and from Tonawanda Creek during the winter months.

Tonawanda Creek, Middle, Main Stem (0102-0006) MinorImpacts

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158-12 (portion 2)
Drain Basin: Lake Erie-Niagara River
Hydro Unit Code: 04120104/ **Str Class:** B
Niagara River
Waterbody Type: River
Reg/County: 9/Niagara Co. (32)
Waterbody Size: 50.1 Miles
Quad Map: CLARENCE CENTER (I-06-4)
Seg Description: from NYS Barge Canal to East Pembroke

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

Type of Pollutant(s)

Known: SILT/SEDIMENT
Suspected: Nutrients
Possible: Priority Organics (PAHs), Thermal Changes

Source(s) of Pollutant(s)

Known: STREAMBANK EROSION
Suspected: Agriculture
Possible: Failing On-Site Syst, Tox/Contam. Sediment

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 and recreational uses in this portion of Tonawanda Creek are affected by silt/sediment loads, nutrient and other nonpoint inputs from streambank erosion, agricultural activities. While these various nonpoint sources are of some concern, there are no significant specific impairments to water uses of this portion of the stream. Some impact and threat to natural resources (fishery) support in the stream have also been noted.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Tonawanda Creek in Rapids, Niagara County, (at Rapids Road) was conducted in 2001. This sampling site is located on the Niagara Erie County line approximately 20 miles above the confluence of the creek and the Erie Barge Canal. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Parameters of concern in the water column include iron, aluminum and dissolved oxygen. Water column toxicity testing results showed no significant mortality or reproductive impacts. Sediment sampling revealed no contaminants exceeding probable effects levels. However cadmium, benzo(a)anthracene, chlordane and DDT and its metabolites were found to be above threshold effects levels and are of possible concern. PCBs were found to be below threshold effects levels and are unlikely to cause adverse biological effects to sediment-dwelling organisms. (DEC/DOW, BWAR/RIBS, April 2005)

Biological (macroinvertebrate) assessments of Tonawanda Creek in Millersport (at Route 78) and in Rapids (at Rapids Road) were conducted in 2000. Field assessment of the Millersport sample indicated non-impacted water quality conditions, with a good diversity of clean-water mayflies, stoneflies, and caddisflies. This may represent an improvement from slightly impacted conditions noted in 1988, but this conclusion needs verification, as the 2000 sample was not processed in the lab. Additionally, this sample was from a high-flow year, and is likely not representative of typical flow conditions. The sample collected in 2001 in from Rapids, 3 miles upstream, resulted in an assessment of slight impact. The Rapids site was also assessed as slightly impacted in 1993 and 1994. Based on these data, the creek at Millersport is considered to likely be slightly impacted as well. (DEC/DOW, BWAR/SBU, April 2002)

Sediment from streambank erosion is thought to threaten a productive warm water fishery habitat. The segment contains a high diversity of freshwater mussels including some rare species. A New York State Threatened species, the long eared sunfish has also been identified in the segment. (DEC/FWMR, 1996)

Nonpoint source impacts, particularly those related to wet-weather events, have been sited as concerns by local agencies. Several small communities along the creek have no central waste collection/treatment facilities, raising concerns about impacts from failing and/or inadequate on-site septic systems. (Genesee County WQCC/SWCD, May 2002)

This segment includes the portion of the stream from the NYS Barge Canal in Pendleton to the Dam in East Pembroke. The waters of this portion of the stream are Class B.

Tonawanda Creek, Middle, Main Stem (0102-0002) Impaired Seg

Waterbody Location Information

Revised: 05/02/2003

Water Index No: Ont 158-12 (portion 3)
Hydro Unit Code: 04120104/020 **Str Class:** C
Waterbody Type: River
Waterbody Size: 10.9 Miles
Seg Description: from East Pembroke to Batavia

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 8/Genesee Co. (19)
Quad Map: OAKFIELD (I-07-3)

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
Aesthetics	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: STREAMBANK EROSION, STORM SEWERS, URBAN RUNOFF
Suspected: Agriculture, Municipal (Batavia WWTP), Failing On-Site Syst (East Pembroke)
Possible: Landfill/Land Disp.

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: 3a ()

Further Details

Aquatic life support and recreational uses in this portion of Tonawanda Creek are impacted by municipal/industrial inputs. Silt/sediment loads, nutrients and inputs from streambank erosion, agricultural activity and other nonpoint sources also contribute to water quality impacts.

A biological (macroinvertebrate) assessment of Tonawanda Creek in Batavia (at Lyons Street) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. The primary causes of the impact were determined to by municipal/industrial inputs and nutrient enrichment. This site is located downstream of the Batavia WWTP discharge. Water quality conditions remains similar to that found in 1992, following the 1990 upgrade of the WWTP. Prior to the WWTP upgrade, the stream was assessed as severely impacted. (DEC/DOW, BWAR/SBU, July 2002)

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Tonawanda Creek downstream in Rapids, Niagara County, (at Rapids Road) was conducted in 2001. This sampling site is located on the Niagara Erie County line approximately 20 miles above the confluence of the creek and the Erie Barge Canal. Sampling of the water

column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Parameters of concern in the water column include iron, aluminum and dissolved oxygen. Water column toxicity testing results showed no significant mortality or reproductive impacts. Sediment sampling revealed no contaminants exceeding probable effects levels. However cadmium, benzo(a)anthracene, chlordane and DDT and its metabolites were found to be above threshold effects levels and are of possible concern. PCBs were found to be below threshold effects levels and are unlikely to cause adverse biological effects to sediment-dwelling organisms. (DEC/DOW, BWAR/RIBS, April 2005)

Although the Batavia WWTP discharge has some impact on water quality in the Tonawanda Creek receiving water, discharge sampling results show the facility to be regularly meeting it SPDES permit limits. Some elevated phosphorus levels occurred during the winter of 2002-03, however this appears to have been due to exceptionally low temperature (alum additive did not form precipitate) and operation improved as temperatures rose. The nature of the treatment facility may also have some bearing on the biological assessment. The Batavia WWTP uses polishing wetlands as the final phase of its innovative treatment process. Downstream macroinvertebrate communities now resemble those typically found below lake outlets. (DEC/DOW, Region 9, April 2003)

Nonpoint source impacts such as streambank erosion, agricultural runoff and particularly those related to wet-weather events (urban runoff, storm sewers in Batavia) are significant sources of impacts to the creek. Several small communities along the creek have no central waste collection/treatment facilities, raising concerns about impacts from failing and/or inadequate on-site septic systems. There are particular concerns regarding on-site systems serving East Pembroke, which have some history of failures. (Genesee County WQCC/SWCD, May 2002)

This segment is included on Part 3a (needing verification of impairment) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the portion of the stream from the dam in East Pembroke to the water supply dam in Batavia, including Gouinlocks Pond (P16). The waters of this portion of the stream are Class C.

Tonawanda Creek, Upper, and minor tribs (0102-0003) Impaired Seg

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158-12 (portion 4)
Hydro Unit Code: 04120104/020 **Str Class:** A
Waterbody Type: River
Waterbody Size: 254.9 Miles
Seg Description: stream and selected tribs, above Batavia

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 8/Genesee Co. (19)
Quad Map: BATAVIA SOUTH (J-08-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
WATER SUPPLY	Impaired	Known
Aquatic Life	Stressed	Known
Recreation	Stressed	Known

Type of Pollutant(s)

Known: SILT/SEDIMENT, Nutrients
Suspected: D.O./Oxygen Demand, Thermal Changes
Possible: - - -

Source(s) of Pollutant(s)

Known: AGRICULTURE, STREAMBANK EROSION
Suspected: Hydro Modification, Municipal (Attica WWTP), Storm Sewers
Possible: Failing On-Site Syst

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: 3a ()

Further Details

Water supply use in this portion of Tonawanda Creek is impaired by silt/sediment loads, while aquatic life support and recreational uses are affected by nutrient and other nonpoint inputs from streambank erosion, agricultural activities. Impacts due to municipal discharges were also evident. Natural resources (fishery) and hydrologic impacts have also been cited as problems.

The water supply for Batavia is normally withdrawn from Tonawanda Creek. However, during wet weather the creek becomes very turbid and the City then switches to a groundwater well until the creek clears up. Agricultural practices and streambank erosion are the source of the silt/sediment loads. Riparian vegetation has been removed through natural streambank erosion, and has also resulted in a general warming of the stream. DEC Fisheries staff indicate that the stream supports a very limited warm water fishery; but trout are no longer supported. (DEC/DOW and DFWMR, Region 8, April 2003)

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Tonawanda Creek in Earls, Wyoming County, (at Eck Road) was conducted in 2001. This sampling location is approximately 95 miles above the

confluence of the creek and the Erie Barge Canal and is considered a background site. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). The only identified parameter of concern is iron, which is considered to be naturally occurring and not a source of water quality impacts. Toxicity testing of the water column showed not significant mortality or reproductive impacts. Bottom sediment sampling results revealed one PAH (dibenzo(a,h)anthracene) to be the only substance to exceed the Threshold Effects level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Tonawanda Creek were conducted in Attica (at Stroh Road) in 2000 and in Earls (at Eck Road) in 2000 and 2001. At both sites, water quality was assessed as slightly impacted. Organic wastes were identified as the cause of the impact below Attica. This impact is likely a result of the Attica (V) WWTP discharge. In Earls the cause was determined to be a result of nutrient enrichment. A 1992 macroinvertebrate survey found water quality upstream of the Batavia STP to be slightly impacted; nonpoint nutrient sources were the likely cause of the impact. (DEC/DOW, RIBS/SBU, April 2003)

Sand/salt storage and application, and storm sewer discharges to the creek have also been identified by local/county agencies as contributing to water quality problems. Log and debris cause jams in the creek and frequently results in flooding. A flood control project to control peak flows is being planned. (Genesee County WQCC/SWCD, May 2002)

This segment is included on Part 3a (needing verification of impairment) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the portion of the stream and selected/smaller tribs above the water supply dam in Batavia. The waters of the stream are Class A. Tribs to this reach/segment, including Perry Brook (-78), are primarily Class A, A(T),A(TS). Tannery Brook (-41), Crow Creek (-46), Stony Brook (-66) and East Fork (-77) are listed separately.

Ellicott Creek, Lower, and tribs (0102-0018) Impaired Seg

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158-12- 1
Hydro Unit Code: 04120104/080 **Str Class:** B
Waterbody Type: River
Waterbody Size: 112.1 Miles
Seg Description: stream and tribs, from mouth to Alden

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: TONAWANDA EAST (I-05-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Fish Consumption	Stressed	Possible
AQUATIC LIFE	Impaired	Suspected
Recreation	Stressed	Known
Aesthetics	Stressed	Possible

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: URBAN RUNOFF
Suspected: HABITAT MODIFICATION, HYDRO MODIFICATION, MUNICIPAL, Agriculture, Tox/Contam. Sediment, Storm Sewers
Possible: Industrial, Failing On-Site Syst

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 3a ()

Further Details

Aquatic life support and corresponding recreational uses (fishing) in Ellicott Creek are affected by nutrient and other urban/suburban nonpoint source inputs. Impacts from municipal/industrial sources have been indentified in the lower reach of the creek. Hydrologic and habitat modifications (water withdrawals, channelization) are also thought to contribute to water quality impacts in the stream.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network (mini-study) monitoring of Ellicott Creek in Amherst, Erie County, (at Route 324/Sheridan Drive) was conducted in 2001. This sampling location is approximately 10 miles above the confluence of the creek and Tonawanda Creek. The focus of the limited mini-study was to re-sample this previous RIBS site to evaluate if conditions had changed since the 1993-94 sampling effort. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed total dissolved solids to be the only parameter of concern. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Bottom sediment sampling results revealed chlordane

to be exceeding the Probable Effects Level - a level at which adverse impacts are expected. Eight PAHs and DDT and its metabolites were found to be above Threshold Effects level - levels at which adverse impacts occasionally occur. PCB and metals were found to be below TELs. (DEC/DOW, BWAR/RIBS, January 2005)

A biological (macroinvertebrate) survey of Ellicott Creek at multiple sites between Amherst to Alden was conducted in 2001. Sampling results indicated water quality conditions ranged between slightly and moderately impacted. Most of the impact is in the lower portion of the creek in Amherst. A site upstream of Bowmansville was assessed as moderately impacted in the 2001 sampling, but poor habitat may be partially responsible for that assessment. The Sheridan Avenue site between Williamsville and Amherst was clearly moderately impacted in the 1993 and 1994 samples, and again in 2001. The sampling in 2000, a high-flow year, yielded only slight impact at this site, with 2 species of mayflies found. Nonpoint source runoff is considered to be the major cause of impact, with municipal/industrial inputs indicated for the lower portion of the stream. Fish sampling at 7 sites in 2001 showed similar trends as the macroinvertebrates. (Ellicott Creek Biological Assessment Report, DEC/DOW, RIBS/SBU, March 2002)

Though streams with potential trout habitat are rare in northern Erie County, some exist in the upper reaches of the Ellicott Creek Watershed. These waters are less affected by urban/suburban nonpoint runoff, but agricultural sources and cattle access to streams contribute to silt/sediment loads and expose the stream to thermal warming. Dorsch Creek (-16) has been upgraded to C(T) and has considerable potential for trout habitat. A riparian corridor management plan has been discussed by DEC Fisheries staff and could produce beneficial results for this tributary. (DEC/FWMR, Region 9, 1998)

This segment is included on Part 3a (needing verification of impairment) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the portion of the stream and all tribs from the mouth to trib -17 near Alden. The waters of the stream are Class C from the mouth to trib -1 and Class B for the remainder of the reach. Tribs to this reach/segment, including Dorsch Creek (-16), are primarily Class C; with some portions designated B and C(T).

Ellicott Creek, Upper, and tribs (0102-0024) Need Verific

Waterbody Location Information

Revised: 05/02/2003

Water Index No: Ont 158-12- 1
Hydro Unit Code: 04120104/080 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 112.1 Miles
Seg Description: stream and tribs, above Alden

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: CORFU (J-07-1)

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: SILT/SEDIMENT
Possible: Nutrients, Salts

Source(s) of Pollutant(s)

Known: - - -
Suspected: AGRICULTURE
Possible: Deicing (stor/appl)

Resolution/Management Information

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

Further Details

Aquatic life support and corresponding recreational uses (fishing) may be affected by agricultural activity, streambank erosion and various other nonpoint sources. Deicing practices may also contribute to water quality concerns.

Silt/sediment from streambank erosion and agricultural runoff increases turbidity in the creek. There are also concerns regarding a large dairy operation (CAFO) in the watershed that does not have adequate waste storage capacity. Runoff from sand/salt storage facilities and from the Six Flags Darien Lakes Amusement Park have also been cited as water quality concerns. (Genesee County WQCC/SWCD, May 2002)

This segment includes the portion of the stream and all tribs above trib -17. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Spring/Peck Creek (-18) and Crooked Brook (-21), are primarily Class C, C(T); with some headwaters designated Class B.

Ransom Creek, Lower, and tribs (0102-0004) Impaired Seg

Waterbody Location Information

Revised: 05/05/2003

Water Index No:	Ont 158-12- 6			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120104/070	**Str Class:**	C		Niagara River
Waterbody Type:	River			**Reg/County:**	9/Erie Co. (15)
Waterbody Size:	49.5 Miles			**Quad Map:**	CLARENCE CENTER (I-06-4)
Seg Description:	stream and tribs, from mouth to Got Creek				

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
Aesthetics	Stressed	Known

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known:	FAILING ON-SITE SYST (Clarence Hollow), PRIVATE/COMM/INST
Suspected:	Urban Runoff
Possible:	- - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** High
TMDL/303d Status: 1 (High Priority for TMDL Development by NYSDEC)

Further Details

Aquatic life support, recreational uses and aesthetics of this portion of Ransom Creek are impaired by residential sewage discharges from failing and/or inadequate on-site septic systems in the hamlet of Clarence Hollow.

This stream has a long history of impacts due to septic discharges. In 1975 the Erie County Dept. of Environmental Quality conducted an extensive survey of Ransom Creek and identified sewage discharges in the Hamlets of Clarence Hollow, Clarence Center and Swormville. Since then sewage systems have been built to resolve on-site septic system problems in all but the Hamlet of Clarence Hollow. In 1988 the residents of Clarence voted down a community sanitary sewer system. In July 1988, the County Dept. of Environment and Planning received a petition from 200 Clarence residents regarding the quality of the creek water. They asked for a comprehensive study to identify health hazards. In 1991, Regional Water staff conducted stream sampling as well as sanitary surveys of many household septic systems in Clarence Hollow. WQ standard violations were documented in the creek. A majority of the 500 homes and businesses were found to have unsatisfactory septic systems. The Town is under a DEC Consent Order to identify a cost-effective community-wide solution (sewers). The community was awarded $1.5 million in CW/CA Bond Act funding. Bids were recently received for the first phase of sanitary sewer construct, with construction to begin in 2003. Additional federal

funds were also awarded to this project. (DEC/DOW, Region 9, March 2003)

A biological (macroinvertebrate) assessment of Ransom Creek in Swormville (at Miles Road) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated that organic and toxic inputs were the likely causes of impact. A site on Black Creek (-3) in Swormville (at Smith Road) was also sampled and assessed as moderately impacted, by municipal/industrial inputs. A few mayflies and caddisflies were found, but most of the fauna was dominated by pollution-tolerant crustaceans. Although these assessments are based on limited sampling, it appears that the previously documented impacts due to sewage inputs have not been entirely remediated. (DEC/DOW, BWAR/SBU, April 2003)

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters due to impacts from inadequate/failing on-site septic systems.

Source of information: Regional Water and Central Office This segment includes the portion of the stream and all tribs from the mouth to Got Creek (-4). The waters of the stream are Class C. Tribs to this reach/segment, including Black Creek (-3), are Class C. Got Creek is listed with the Upper Ransom Creek segment.

Ransom Creek, Upper, and tribs (0102-0027) Impaired Seg

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158-12- 6
Hydro Unit Code: 04120104/070 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 44.2 Miles
Seg Description: stream and tribs, above/including Got Creek

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: CLARENCE CENTER (I-06-4)

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
Aesthetics	Stressed	Known

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: FAILING ON-SITE SYST (Clarence Hollow), PRIVATE/COMM/INST
Suspected: Urban Runoff
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** High
TMDL/303d Status: 1 (High Priority for TMDL Development by NYSDEC)

Further Details

Aquatic life support, recreational uses and aesthetics of this portion of Ransom Creek are impaired by residential sewage discharges from failing and/or inadequate on-site septic systems in the hamlet of Clarence Hollow.

This stream has a long history of impacts due to septic discharges. In 1975 the Erie County Dept. of Environmental Quality conducted an extensive survey of Ransom Creek and identified sewage discharges in the Hamlets of Clarence Hollow, Clarence Center and Swormville. Since then sewage systems have been built to resolve on-site septic system problems in all but the Hamlet of Clarence Hollow. In 1988 the residents of Clarence voted down a community sanitary sewer system. In July 1988, the County Dept. of Environment and Planning received a petition from 200 Clarence residents regarding the quality of the creek water. They asked for a comprehensive study to identify health hazards. In 1991, Regional Water staff conducted stream sampling as well as sanitary surveys of many household septic systems in Clarence Hollow. WQ standard violations were documented in the creek. A majority of the 500 homes and businesses were found to have unsatisfactory septic systems. The Town is under a DEC Consent Order to identify a cost-effective community-wide solution (sewers). The community was awarded $1.5 million in CW/CA Bond Act funding. Bids were recently received for the first phase of sanitary sewer construct, with construction to begin in 2003. Additional federal

funds were also awarded to this project. (DEC/DOW, Region 9, March 2003)

A biological (macroinvertebrate) assessment of Ransom Creek in Swormville (at Miles Road) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated that organic and toxic inputs were the likely causes of impact. A site on Got Creek (-4) in Swormville (at North French Road) was also sampled and assessed as moderately impacted, likely by organic wastes. The fauna was heavily dominated by sewage-tolerant worms, and scuds. The substrate at this site was predominantly mud, and the data were analyzed using criteria for sandy streams and for soft sediments. Although these assessments are based on limited sampling, it appears that the previously documented impacts due to sewage inputs have not been entirely remediated. (DEC/DOW, BWAR/SBU, April 2003)

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Ransom Creek in Clarence, Erie County, (at Connor Road) was conducted in 1987-88. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed total and fecal coliform, as well as dissolved oxygen and iron to be parameter(s) of concern. Macroinvertebrate sampling revealed moderately impacted conditions indicative of sewage discharges. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAR/RIBS, 1989)

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters due to impacts from inadequate/failing on-site septic systems.

This segment includes the portion of the stream and all tribs above and including Got Creek (-4). The waters of the stream are Class C(T). Tribs to this reach/segment, including Got Creek (-4), are Class C(T).

Mud Creek and tribs (0102-0029) NoKnownImpct

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158-12- 8
Hydro Unit Code: 04120104/060 **Str Class:** C
Waterbody Type: River
Waterbody Size: 113.4 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Niagara Co. (32)
Quad Map: CLARENCE CENTER (I-06-4)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Mud Creek in Millersport (at Transit Road) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. No riffle habitat was available to sample, but some caddisflies and mayflies were found to be present. The sample was field-assessed and not further processed in the laboratory. Despite these conditions, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment are primarily Class C; with two tribs (-1, -2) designated Class B.

Beeman Creek and tribs (0102-0030) Impaired Seg

Waterbody Location Information

Revised: 05/07/2003

Water Index No: Ont 158-12- 9
Hydro Unit Code: 04120104/050 **Str Class:** C
Waterbody Type: River
Waterbody Size: 43.7 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: WOLCOTTSVILLE (I-06-3)

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: - - -
Suspected: D.O./OXYGEN DEMAND, NUTRIENTS (phosphorus), PATHOGENS
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: FAILING ON-SITE SYST

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 3b ()

Further Details

Aquatic life support and recreational uses are impaired in Beeman Creek. Additional sampling is necessary to determine the specific source of the problems. Failing and/or inadequate on-site septic systems are a possible cause. Such problems have been documented in other similar nearby streams (Ransom Creek).

A biological (macroinvertebrate) assessment of Beeman Creek in Wolcottsburg (at Rapids Road) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated municipal/industrial inputs to be the likely source. The fauna was dominated by caddisflies and scuds. (DEC/DOW, BWAR/SBU, April 2003)

This segment is included on Part 3b (needing verification of cause/pollutants) of the NYS 2004 Section 303(d) List of Impaired Waters due to suspected impacts from inadequate/failing on-site septic systems.

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.

Ledge Creek and minor tribs (0102-0012) Need Verific

Waterbody Location Information

Revised: 05/07/2003

Water Index No: Ont 158-12-11
Hydro Unit Code: 04120104/040 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 28.2 Miles
Seg Description: entire stream and selected tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: WOLCOTTSVILLE (I-06-3)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: AGRICULTURE, STREAMBANK EROSION, Roadbank Erosion

Resolution/Management Information

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

Further Details

Aquatic life support in Ledge Creek may by affected by various nonpoint sources. Agricultural activity, roadway runoff and streambank erosion are possible sources of silt/sediment loads and other inputs. The county is working with the owner of a small farm in the watershed to address wet-weather runoff issues. (Genesee County WQCC/SWCD, May 2002)

These possible impacts need to be verified.

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C(T). Tribs to this reach/segment, including Quarry Spring Run (-2), are Class C(T). Murder Creek (-1) is listed separately.

Murder Creek, Lower, and tribs (0102-0031) Impaired Seg

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158-12-11-1
Hydro Unit Code: 04120104/040 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 76.2 Miles
Seg Description: stream and tribs, from mouth to Corfu

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: WOLCOTTSVILLE (I-06-3)

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: - - -
Suspected: D.O./OXYGEN DEMAND, NUTRIENTS (phosphorus), PATHOGENS
Possible: Salts, Silt/Sediment

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: FAILING ON-SITE SYST, Agriculture, Deicing (stor/appl), Streambank Erosion

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 3b ()

Further Details

Aquatic life support and recreational uses are impaired in this portion of Murder Creek. Additional sampling is necessary to determine the specific source of the problems. Failing and/or inadequate on-site septic systems are a possible cause. Such problems have been documented in other similar nearby streams (Ransom Creek).

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Murder Creek in Newstead, Erie County, (at Route 93) was conducted in 2001. This sampling location is 4.2 miles above the confluence with Ledge Creek. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed total dissolved solids to be the only parameter of concern. Toxicity testing of the water column showed no statistically significant mortality or reproductive impacts. However one sample (August 16, 2001) showed very low reproduction and only 50% survival. Bottom sediment sampling results revealed some metals (cadmium, zinc), PAHs and PCBs to be exceeding the Threshold Effects level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Lower Murder Creek were conducted in 2000 and 2001. Water quality was assessed as moderately-impacted at a site in Pembroke, based on 2000 macroinvertebrate sampling. Impact Source

Determination indicated that municipal/industrial inputs of a toxic nature were the likely cause of impact. Further downstream at Swifts Mills, slightly impacted water quality was assessed for this site, based on macroinvertebrate sampling in 1994, 2000, and 2001. An earlier sampling at this site in 1993 indicated moderate impact from nonpoint source nutrient enrichment and municipal/industrial inputs, but the current assessment for this site is slightly impacted. (DEC/DOW, BWAR/SBU, April 2003)

Homes in the hamlet of Pembroke are served by on-site septic systems. Other possible sources of impacts include agricultural activity, streambank erosion, and roadway runoff. The town of Pembroke maintains an uncovered salt/sand storage facility that drains into a trib of the creek. Development along the Pembroke Thruway interchange is also a concern. (Genesee County, WQCC/SWCD, May 2002)

This segment is included on Part 3b (needing verification of cause/pollutants) of the NYS 2004 Section 303(d) List of Impaired Waters due to suspected impacts from inadequate/failing on-site septic systems.

This segment includes the portion of the stream and all tribs from the mouth to/including trib -7 in Corfu. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Beaver Meadow Brook (-1), are primarily Class C; with some tribs (-3, -7) designated Class B.

Murder Creek, Upper, and tribs (0102-0032) Need Verific

Waterbody Location Information

Revised: 05/07/2003

Water Index No: Ont 158-12-11-1
Hydro Unit Code: 04120104/040 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 106.2 Miles
Seg Description: stream and tribs, above Corfu

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 8/Genesee Co. (19)
Quad Map: CORFU (J-07-1)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: AGRICULTURE, STREAMBANK EROSION, Roadbank Erosion

Resolution/Management Information

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

Further Details

Aquatic life support in this portion of Murder Creek may by affected by various nonpoint sources. Agricultural activity, roadway runoff and streambank erosion are possible sources of silt/sediment loads and other inputs. The county has identified several dairy operations (some CAFOs) as having inadequate waste storage capability and/or runoff control. (Genesee County WQCC/SWCD, May 2002)

These possible impacts need to be verified.

This segment includes the portion of the stream and all tribs above trib -7 in Corfu. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Huron Creek (-9), are primarily Class C; with some tribs (-14, -15) designated Class B.

Bowen Brook and tribs (0102-0036) Impaired Seg

Waterbody Location Information

Revised: 05/07/2003

Water Index No: Ont 158-12-28
Hydro Unit Code: 04120104/020 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 60.8 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 8/Genesee Co. (19)
Quad Map: ALEXANDER (J-07-2)

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: - - -
Suspected: D.O./OXYGEN DEMAND, NUTRIENTS (phosphorus), Pathogens
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: FAILING ON-SITE SYST

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: 3b ()

Further Details

Aquatic life support and recreational uses are impaired in this portion of Bowen Brook. Additional sampling is necessary to determine the specific source of the problems. Failing and/or inadequate on-site septic systems are a possible cause. Such problems have been documented in other similar nearby streams (Ransom Creek).

A biological (macroinvertebrate) assessment of Bowen Brook in Alexander (at Pike Road) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Organic wastes were the likely source of impact, as determined by Impact Source Determination. The fauna was heavily dominated by pollution-tolerant sowbugs. (DEC/DOW, BWAR/SBU, April 2003)

This segment is included on Part 3b (needing verification of cause/pollutants) of the NYS 2004 Section 303(d) List of Impaired Waters due to suspected impacts from inadequate/failing on-site septic systems.

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment are primarily Class C; with some tribs (-1, -5) designated Class B.

Little Tonawanda Creek, Lower, and tribs (0102-0001) Impaired Seg

Waterbody Location Information

Revised: 05/07/2003

Water Index No:	Ont 158-12-32			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120104/020	**Str Class:**	A		Niagara River
Waterbody Type:	River			**Reg/County:**	8/Genesee Co. (19)
Waterbody Size:	52.8 Miles			**Quad Map:**	BATAVIA SOUTH (J-08-1)
Seg Description:	stream and tribs, from mouth to Linden				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
WATER SUPPLY	Impaired	Known
Public Bathing	Stressed	Known
Recreation	Stressed	Known

Type of Pollutant(s)

Known:	SILT/SEDIMENT, Nutrients
Suspected:	D.O./Oxygen Demand
Possible:	Salts

Source(s) of Pollutant(s)

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

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: 3a ()

Further Details

Water supply use is impaired and public bathing and other recreational uses in Little Tonawanda Creek are affected by silt/sediment loads and occasional high turbidity. While various nonpoint sources such as streambank erosion and agricultural activity in the area are of some concern, there are no significant specific impairments to water uses of this portion of the stream. As is the case in much of this watershed, elevated silt and sediment loads in the creek are common (particularly after rain events) and can impact aquatic habitat and recreational uses to some degree. However, much of the sediment loading is considered to be natural, a result of highly erodible soils throughout the basin.

The water supply for Batavia is normally withdrawn from Tonawanda Creek, just below this trib. However, during wet weather the creek becomes very turbid and the City then switches to a groundwater well until the creek clears up. Agricultural practices and streambank erosion are the source of the silt/sediment loads. Riparian vegetation has been removed through natural streambank erosion, and has also resulted in a general warming of the stream. DEC Fisheries staff indicate that the stream supports a very limited warm water fishery; but trout are no longer supported. (DEC/DOW and DFWMR, Region 8, April 2003)

A biological (macroinvertebrate) assessment of Little Tonawanda Creek in East Alexander (at Creek Road) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was the likely source of impact. (DEC/DOW, BWAR/SBU, April 2003)

This segment is included on Part 3a (needing verification of impairment) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the portion of the stream and all tribs from the mouth to the small unnamed pond (P16d) in Linden. The waters of this portion of the stream are Class A,A(T). Tribs to this reach/segment are Class A.

Crow Creek and tribs (0102-0023) NoKnownImpct

Waterbody Location Information

Revised: 05/07/2003

Water Index No: Ont 158-12-46
Hydro Unit Code: 04120104/020 **Str Class:** A
Waterbody Type: River
Waterbody Size: 22.3 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Wyoming Co. (61)
Quad Map: ATTICA (J-07-3)

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:**
TMDL/303d Status: n/a ()

Further Details

Crow Creek and its three reservoirs serve as the public water supply for the Village of Attica. The village has monitored water quality and no serious problems currently exist.

This segment includes the entire stream and all tribs. The waters of the stream are Class A. Tribs to this reach/segment are also Class A. The Attica Reservoirs (P20, P20a) are listed separately.

Attica Reservoir (0102-0039) MinorImpacts

Waterbody Location Information

Revised: 01/12/2004

Water Index No: Ont 158-12-46-P20
Hydro Unit Code: 04120104/020 **Str Class:** A
Waterbody Type: Lake(R)
Waterbody Size: 12.8 Acres
Seg Description: entire reservoir

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Wyoming Co. (61)
Quad Map: ATTICA (J-07-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Stressed	Possible
Public Bathing	Stressed	Known
Recreation	Stressed	Known

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus), Problem Species (Eurasian milfoil)
Suspected: - - -
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/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: n/a ()

Further Details

Drinking water supply, public bathing, and recreational (fishing, boating) uses in Attica reservoir are affected by excessive weed growth and algal growth. Sources of nutrients and other nonpoint source inputs are thought to be related to agricultural activity in the watershed.

Attica Reservoir was included in the 2001 Lake Classification and Inventory study effort. Results of this study indicate elevated phosphorus levels that are likely to impact bathing/recreation uses. There was insufficient data to evaluate the impact of these conditions on the drinking water supply use. Rooted aquatic plants that grow to the surface of the lake were noted. Cornell University researchers have documented Eurasian milfoil in the lake. (DEC/DOW, BWM/Lake Services, April 2003)

East Fork and tribs (0102-0042) NoKnownImpct

Waterbody Location Information

Revised: 05/07/2003

Water Index No: Ont 158-12-77
Hydro Unit Code: 04120104/020 **Str Class:** A
Waterbody Type: River
Waterbody Size: 49.3 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Wyoming Co. (61)
Quad Map: JOHNSONBURG (K-07-2)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of East Fork of Tonawanda Creek in Johnsonburg (at Route 98) was conducted in 2000. Sampling results indicated non-impacted water quality conditions. The fauna was dominated by clean-water mayflies and caddisflies. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the entire stream and all tribs. The waters of the stream are Class A from the mouth to Engine Creek (-2), and Class A(TS) for the remainder of the reach. Tribs to this reach/segment, including Engine Creek (-2), are Class A, A(T), A(TS).

Faun Lake (0102-0043) NoKnownImpct

Waterbody Location Information

Revised: 05/07/2003

Water Index No: Ont 158-12-77-3-P20b
Hydro Unit Code: 04120104/020 **Str Class:** C
Waterbody Type: Lake
Waterbody Size: 44.7 Acres
Seg Description: entire lake

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Wyoming Co. (61)
Quad Map: JOHNSONBURG (K-07-2)

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:**
TMDL/303d Status: n/a ()

Further Details

Faun Lake was included in the 2001 Lake Classification and Inventory study effort. Results of this study indicate no evidence of water quality problems and conditions appear to be adequate to support recreational uses of the lake. (DEC/DOW, BWM/Lake Services, April 2003)

Two Mile Creek and tribs (0101-0005) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-13
Hydro Unit Code: 04120104/010 **Str Class:** B
Waterbody Type: River
Waterbody Size: 7.3 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: TONAWANDA WEST (I-05-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: AESTHETICS (odors, floatables), D.O./OXYGEN DEMAND, PATHOGENS
Suspected: Nutrients, Priority Organics
Possible: - - -

Source(s) of Pollutant(s)

Known: COMB. SEWER OVERFLOW, MUNICIPAL (Kenmore, Tonawanda(T)), Urban Runoff
Suspected: Industrial, Tox/Contam. Sediment, Storm Sewers
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DEC/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 1 (High Priority for TMDL Development by NYSDEC)

Further Details

Public bathing, aquatic life support, recreational uses and aesthetics of Two Mile Creek are impaired by wet weather overflows from inadequate sewer collection systems and CSOs and resulting low dissolved oxygen, odors and floatables. Industrial inputs, oil spills, urban and stormwater runoff also contribute to poor water quality of the stream.

A biological (macroinvertebrate) assessment of Two Mile Creek in Tonawanda (at Fletcher Road) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Organic wastes were the likely cause of impact. The fauna was dominated by midges and sewage-tolerant black flies, and a dissolved oxygen level of 3.8 mg/l was measured. (DEC/DOW, BWAR/SBU, April 2003)

The Village of Kenmore and Town of Tonawanda are both under Consent Orders to correct sewer system inadequacies. Kenmore has a sump pump program to inspect and disconnect flow from the sanitary sewer in place. The Village is moving ahead on SSO abatement projects. Tonawanda has a large number of SSOs. The date for their submitting of an action plan to address SSOs has been extended to May 2005. (DEC/DOW, BWC and Region 9, February 2005)

Sediment contamination was noted in the Niagara River Toxics Management Plan reports. (DEC/DOW, Reg 9, April 2003)

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters due to CSOs and municipal sources.

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

Scajaquada Creek, Lower, and tribs (0101-0023) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-15
Hydro Unit Code: 04120104/010 **Str Class:** B
Waterbody Type: River
Waterbody Size: 3.2 Miles
Seg Description: stream and tribs, from mouth to Main Street in Buffalo

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO NORTHWEST (J-05-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
PUBLIC BATHING	Impaired	Known
AQUATIC LIFE	Impaired	Known
RECREATION	Impaired	Known
Habitat/Hydrolgy	Stressed	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: AESTHETICS (odors, floatables), D.O./OXYGEN DEMAND, PATHOGENS, Silt/Sediment
Suspected: Nutrients, Priority Organics
Possible: Salts

Source(s) of Pollutant(s)

Known: COMB. SEWER OVERFLOW, URBAN RUNOFF, Habitat Modification
Suspected: Hydro Modification, Tox/Contam. Sediment, Storm Sewers
Possible: Chemical Leak/Spill, Landfill/Land Disp., Streambank Erosion

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 1 (High Priority for TMDL Development by NYSDEC)

Further Details

Public bathing, aquatic life support, recreational uses and aesthetics of Scajaquada Creek are impaired by CSOs, wet weather sewer collection systems overflows and resulting low dissolved oxygen, odors and floatables. Industrial inputs, hazardous waste site impacts, roadway runoff, urban and stormwater runoff also contribute to poor water quality of the stream.

A biological (macroinvertebrate) assessment of Scajaquada Creek in Buffalo (at West Avenue) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. The fauna was heavily dominated by sewage-tolerant worms, snails, and scuds. Municipal/industrial inputs were the likely cause of the impact. The substrate at this site was predominantly mud, and sandy stream criteria were used to evaluate the data. The fauna was dominated by tolerant worms, snails, scuds, and midges. Zebra mussels were also found at this site. (DEC/DOW, BWAR/SBU, April 2003)

Sludge banks along the creek impact aesthetics and recreational (fishing) uses. Hydrologic and habitat modification (i.e. channelization) of the stream also impacts wildlife and fishery resources. Sediment contamination was noted in the Niagara River Toxics Management Plan reports. (DEC/DOW, Region 9, April 2003)

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters due to CSOs and urban runoff sources.

This segment includes the portion of the stream and all tribs from the mouth to Main Street in Buffalo. The waters of this portion of the stream are Class B. There are no identified tribs to this reach. Delaware Park Pond (P25) is listed separately.

Delaware Park Pond (0101-0026) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-15-P25
Hydro Unit Code: 04120104/010 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 32.1 Acres
Seg Description: entire pond

Drain Basin: Lake Erie-Niagara River
Niagara River
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO NORTHWEST (J-05-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT
Suspected: Urban Runoff
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Delaware Park Lake is impaired due to a NYS DOH health advisory that recommends eating no more than one meal per month of carp because of elevated PCB levels. The sources of PCBs are attributed to contaminated sediments in the lake. (2002-03 NYS DOH Health Advisories and DEC/FWMR, Habitat, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

The lake was the focus of a Clean Lakes project that was completed in 1985. The lake restoration effort included the diversion of the incoming stream (Scajaquada Creek) around the lake, rerouting of storm sewers, and dredging to remove accumulated sediment. Despite the restrictions of fish consumption, this city park lake is used for fishing, boating and recreational enjoyment. (DEC/DOW, BWM/Lakes, October 2002)

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Waterbody Inventory
for
The Lake Erie Shoreline

Water Index Number	Waterbody Segment	Category
Lake Erie Shoreline		
Ont 158-E (portion 1)	Lake Erie (Erie Basin) (0104-0032)	**Impaired Seg**
Ont 158-E (portion 2)	Lake Erie (Outer Harbor, North) (0104-0033)	**Impaired Seg**
Ont 158-E (portion 3)	Lake Erie (Outer Harbor, South) (0104-0034)	**Impaired Seg**
Ont 158-E (portion 4)	Lake Erie (Northeast Shoreline) (0104-0035)	**Impaired Seg**
Ont 158-E (portion 5)	Lake Erie (Northeast Shoreline) (0104-0036)	**Impaired Seg**
Ont 158-E (portion 6)	Lake Erie (Main Lake, North) (0104-0037)	**Impaired Seg**
Ont 158-E (portion 7)	Lake Erie (Main Lake, South) (0105-0033)	**Impaired Seg**
Ont 158-E (portion 7a)	Lake Erie (Dunkirk Harbor) (0105-0009)	**Impaired Seg**
Ont 158-E (portion 7b)	Lake Erie (Barcelona Harbor) (0105-0011)	**Impaired Seg**

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Lake Erie (Erie Basin) (0104-0032) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-E (portion 1)
Hydro Unit Code: 04120103/ **Str Class:** C
Waterbody Type: G.Lakes
Waterbody Size: 4.1 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO NORTHWEST (J-05-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the lake shoreline south of the Peace Bridge, and north of the South Pier Light at USCG Station. The waters of this segment are Class C.

Lake Erie (Outer Harbor, North) (0104-0033) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-E (portion 2)
Hydro Unit Code: 04120103/ **Str Class:** B
Waterbody Type: G.Lakes
Waterbody Size: 9.1 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO NORTHWEST (J-05-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the lake shoreline within the Outer Harbor, as defined as being south of the South Pier Light at the USCG Station, and north of a line extending Tift Street to the shore. The waters of this segment are Class B.

Lake Erie (Outer Harbor, South) (0104-0034) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-E (portion 3)
Hydro Unit Code: 04120103/ **Str Class:** C
Waterbody Type: G.Lakes
Waterbody Size: 3.5 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO NORTHWEST (J-05-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the lake shoreline within the southern end of the Outer Harbor, as defined as being south of a line extending Tift Street to the shore and north of the south end (base) of the Outer Harbor breakwater at Stony Point. This segment includes Union and Lackawanna Canals. The waters of this segment are Class C.

Lake Erie (Northeast Shoreline) (0104-0035) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-E (portion 4)
Hydro Unit Code: 04120103/ **Str Class:** C
Waterbody Type: G.Lakes
Waterbody Size: 2.7 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO SOUTHEAST (J-05-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the lake shoreline south of the southern end (base) of the Outer Harbor breakwater at Stony Point, and north of a line extending First Street in Woodlawn to the shore. The waters of this segment are Class C.

Lake Erie (Northeast Shoreline) (0104-0036) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-E (portion 5)
Hydro Unit Code: 04120103/ **Str Class:** B
Waterbody Type: G.Lakes
Waterbody Size: 9.1 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO SOUTHEAST (J-05-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the lake shoreline south of a line extending First Street in Woodlawn to the shore and north of the mouth of Eighteenmile Creek. The waters of this segment are Class B.

Lake Erie (Main Lake, North) (0104-0037) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-E (portion 6)
Hydro Unit Code: 04120103/010 **Str Class:** A-Spcl
Waterbody Type: G.Lakes
Waterbody Size: 15.7 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: ANGOLA (K-04-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the lake shoreline southwest of the mouth of Eighteenmile Creek, and northeast of the mouth of Cattaraugus Creek. The waters of this segment are an international boundary water and are designated Class A-Spcl.

Lake Erie (Main Lake, South) (0105-0033) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-E (portion 7)
Hydro Unit Code: 04120101/ **Str Class:** A-Spcl
Waterbody Type: G.Lakes
Waterbody Size: 45.2 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Lake Erie-Chautauqua
Reg/County: 9/Chautauqua Co. (7)
Quad Map: BROCKTON (L-03-1) ...

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the lake shoreline southwest of the mouth of Cattaraugus Creek, and northeast of the PA state line. The portions of the shoreline within Dunkirk Harbor and Barcelona Harbor are listed separately. The waters of this segment are an international boundary water and are designated Class A-Spcl.

Lake Erie (Dunkirk Harbor) (0105-0009) Impaired Seg

Waterbody Location Information

Revised: 03/08/2005

Water Index No: Ont 158-E (portion 7a)
Hydro Unit Code: 04120101/ **Str Class:** B
Waterbody Type: G.Lakes
Waterbody Size: 2.0 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Lake Erie-Chautauqua
Reg/County: 9/Chautauqua Co. (7)
Quad Map: DUNKIRK (L-03-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
PUBLIC BATHING	Impaired	Known
FISH CONSUMPTION	Impaired	Known
RECREATION	Impaired	Known
Aesthetics	Stressed	Suspected

Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBs), PATHOGENS
Suspected: Aesthetics
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT, STORM SEWERS, UNKNOWN SOURCE, Urban Runoff
Possible: Failing On-Site Syst

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 1,2b (High Priority for TMDL Development by NYSDEC)

Further Details

Public bathing, recreation and fish consumption along this portion of Lake Erie shoreline is impaired by bathing beach closures and fish consumption restrictions.

East and West Wright Park Beaches and Main Street Beach in Dunkirk continued to experience bathing beach closures during the 2004 swimming season due to high coliform bacteria levels. The specific source of the impairment is unknown. The City of Dunkirk and the Chautauqua County Health Department have been investigating the situation. The Dunkirk WWTP has undergone some upgrading, is operating within compliance and has been largely eliminated as the source of the beach closure problem. Storm runoff carried by Hyde Creek, which enters Lake Erie at Wright Park Beach, is now considered the most likely source. (DEC/DOW, Chautauqua Co DOH and DEC/DOW, Region 9, January 2005)

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination.

Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters due to contaminated sediment (fish consumption) and urban runoff sources.

This segment includes the lake shoreline southwest of Battery Point and east of Point Gratiot. The waters of this segment are Class B.

Lake Erie (Barcelona Harbor) (0105-0011) Impaired Seg

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158-E (portion 7b)
Hydro Unit Code: 04120101/ **Str Class:** B
Waterbody Type: G.Lakes
Waterbody Size: 1.0 ShrMi
Seg Description: portion as described below

Drain Basin: Lake Erie-Niagara River
Lake Erie-Chautauqua
Reg/County: 9/Chautauqua Co. (7)
Quad Map: WESTFIELD (L-02-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Low
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Lake Erie is impaired by a NYS DOH health advisory that recommends that women of childbearing age and children under the age of 15 eat no more than one meal per month of certain species due to PCB contamination. Advisories for this population regarding some species (smaller chinook salmon, burbot, freshwater drum, lake whitefish, rock bass and yellow perch) recommend a less restrictive limit of no more than one meal per week - the same as the general (statewide) advisory for fish consumption for all people. However, because the more stringent restrictions apply to a significantly large population, fish consumption in the Lake Erie is considered to be impaired. (2002-03 NYS DOH Health Advisories, October 2002).

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the lake shoreline between the east and west breakwater. southwest The waters of this segment are Class B.

Waterbody Inventory
for
The Buffalo River/Eighteenmile Creek Watershed

Water Index Number	Waterbody Segment	Category
Buffalo River Watershed		
Ont 158..E- 1	Buffalo River (0103-0001)	**Impaired Seg**
Ont 158..E- 1*	Buffalo Creek, Lower, and minor tribs (0103-0003)	**MinorImpacts**
Ont 158..E- 1*	Buffalo Creek, Upper, and minor tribs (0103-0004)	**NoKnownImpct**
Ont 158..E- 1*-55-P??	Beaver Meadow Pond (0103-0010)	UnAssessed
Ont 158..E- 1- 4	Cazenovia Creek and tribs (0103-0009)	**NoKnownImpct**
Ont 158..E- 1- 4-14	East Br. Cazenovia, Lower, and tribs (0103-0011)	**NoKnownImpct**
Ont 158..E- 1- 4-14	East Br. Cazenovia, Upper, and tribs (0103-0012)	**NoKnownImpct**
Ont 158..E- 1- 4-15	West Br. Cazenovia, Lower, and tribs (0103-0013)	**NoKnownImpct**
Ont 158..E- 1- 4-15	West Br. Cazenovia, Upper, minor tribs (0103-0014)	**NoKnownImpct**
Ont 158..E- 1- 4-15-10	Pipe Creek and tribs (0103-0015)	UnAssessed
Ont 158..E- 1- 4-15-10-P??	Orchard Park Reservoir (0103-0016)	**MinorImpacts**
Ont 158..E- 1- 6	Cayuga Creek, Lower, and tribs (0103-0007)	**MinorImpacts**
Ont 158..E- 1- 6	Cayuga Creek, Middle, and minor tribs (0103-0017)	**Need Verific**
Ont 158..E- 1- 6	Cayuga Creek, Upper, and tribs (0103-0002)	UnAssessed
Ont 158..E- 1- 6- 2	Slate Bottom Creek and tribs (0103-0018)	UnAssessed
Ont 158..E- 1- 6- 6	Plumb Bottom Creek and tribs (0103-0019)	UnAssessed
Ont 158..E- 1- 6- 7	Little Buffalo Creek and tribs (0103-0008)	**MinorImpacts**
Ont 158..E- 1- 6-30	Right Branch/Gillett Creek and tribs (0103-0020)	**NoKnownImpct**
Tribs to Lake Erie, Lackawanna to Highland		
Ont 158..E- 2	Smoke Creek, Lower, and minor tribs (0101-0007)	**MinorImpacts**
Ont 158..E- 2	Smoke Creek, Upper, and tribs (0101-0035)	UnAssessed
Ont 158..E- 2- 1	South Branch, Lower, and tribs (0101-0036)	**Impaired Seg**
Ont 158..E- 2- 1	South Branch, Upper, and tribs (0101-0037)	UnAssessed
Ont 158..E- 2- 1-P81b	Green Lake (0101-0038)	**MinorImpacts**
Ont 158..E- 3	Rush Creek and tribs (0104-0018)	**Impaired Seg**
Ont 158..E- 4 thru 12	Minor Tribs to Lake Erie (0104-0038)	UnAssessed
Eighteenmile Creek Watershed		
Ont 158..E-13	Eighteenmile Creek, Lower, minor tribs (0104-0030)	Minor Impact
Ont 158..E-13	Eighteenmile Creek, Middle, and tribs (0104-0017)	**NoKnownImpct**
Ont 158..E-13	Eighteenmile Creek, Upper, and tribs (0104-0039)	**NoKnownImpct**
Ont 158..E-13- 4	South Br. Eighteenmile, Lower, and tribs (0104-0016)	**NoKnownImpct**
Ont 158..E-13- 4	South Br. Eighteenmile, Upper, and tribs (0104-0040)	**NoKnownImpct**
Ont 158..E-13- 6	Hampton Brook and tribs (0104-0041)	UnAssessed

...Buffalo River/Eighteenmile Creek Watershed

Water Index Number	Waterbody Segment	Category
Tribs to Lake Erie, Highland to Irving		
Ont 158..E-14 thru 22 (selected)	Minor Tribs to Lake Erie (0104-0042)	UnAssessed
Ont 158..E-15	Pike Creek, Lower, and tribs (0104-0043)	UnAssessed
Ont 158..E-15	Pike Creek, Upper, and tribs (0104-0044)	UnAssessed
Ont 158..E-19	Little Sister Creek, Lower, and tribs (0104-0045)	**Impaired Seg**
Ont 158..E-19	Little Sister Creek, Upper, and tribs (0104-0046)	UnAssessed
Ont 158..E-20	Big Sister Creek, Lower, and tribs (0104-0013)	**MinorImpacts**
Ont 158..E-20	Big Sister Creek, Upper, and tribs (0104-0047)	UnAssessed
Ont 158..E-20-13	Rythus Creek and tribs (0104-0048)	**NoKnownImpct**
Ont 158..E-21	Delaware Creek, Lower, and tribs (0104-0049)	**MinorImpacts**
Ont 158..E-21	Delaware Creek, Upper, and tribs (0104-0050)	UnAssessed
Ont 158..E-22	Muddy Creek, Lower, and tribs (0104-0051)	**Impaired Seg**
Ont 158..E-22	Muddy Creek, Upper, and tribs (0104-0052)	UnAssessed

Buffalo River (0103-0001) Impaired Seg

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158..E- 1
Hydro Unit Code: 04120103/070 **Str Class:** C
Waterbody Type: River
Waterbody Size: 13.5 Miles
Seg Description: entire stream and tribs, from mouth to Cayuga Creek

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO SOUTHEAST (J-05-3)

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	Suspected
Recreation	Stressed	Known

Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBs)
Suspected: D.O./Oxygen Demand, Pathogens, Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT, Habitat Modification, Hydro Modification, Urban Runoff
Suspected: COMB. SEWER OVERFLOW
Possible: Industrial, Landfill/Land Disp., Municipal, Storm Sewers

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/FWMR **Resolution Potential:** Medium
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in the Buffalo River is impaired, while other recreational uses in the river remain somewhat impacted. CSOs, urban runoff, storm sewers, industrial inputs, hazardous waste sites, habitat and hydrologic modification of the stream - all typical of highly developed industrial urban waters - are concerns. Despite these impacts, water quality in this urban waterway has shown and continues to show notable improvement.

Fish consumption in the Buffalo River and Harbor is impaired due to a NYS DOH health advisory that recommends eating no carp because of elevated PCB levels. The sources of PCBs are attributed to contaminated sediment and previous industrial inputs. (2002-03 NYS DOH Health Advisories, October 2002).

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring of the Buffalo River in Buffalo, Erie County, is conducted annually (since 1968) at the Ohio Street bridge. This sampling location is 1.7 miles above the mouth at Lake Erie. 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. The most recent assessment was conducted in 2001. In addition to water column chemistry, this Intensive Network sampling includes

sediment assessment, macroinvertebrate tissue analysis and toxicity testing, as well as macroinvertebrate community analysis (see below). Water column sampling revealed ammonia, dissolved oxygen, water temperature and iron to be parameters of concern. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAR/RIBS, January 2005)

A biological (macroinvertebrate) assessment of the Buffalo River in Buffalo (at Ohio Street) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. Water quality has continued to improve through the 1980's and 1990's. Caddisflies were first collected in 1988, and more sensitive mayflies were first collected in 2000. The river has progressed from severely impacted in 1976 to moderately impacted in 1988 to slightly impacted in 1993 and 2000, based on resident macroinvertebrate communities. Municipal/industrial inputs remain the likely stressor. In the 2000 multiplate samples, 4 species of clean-water mayflies were found at the Ohio Street bridge site. Zebra mussels are now numerous in the river, and are occasionally numerous enough to invalidate the multiplate samples. (DEC/DOW, BWAR/SBU, April 2003)

The lower Buffalo River has been severely modified from extensive channel dredging, filling, and bulkheading activities. As a result, vegetation has been significantly altered and sedimentation is a problem. Upstream stream bed stabilization is believed to impede fish migration. The Buffalo River Remedial Action Plan (RAP) was developed to address sediments, water quality, habitat, and the overall restoration of beneficial uses. Starting late 2003, the Friends of the Buffalo Niagara Rivers (FBNR) received USEPA grant funding to provide RAP coordination and management. The focus is on sediment assessment, nonpoint source project implementation, habitat restoration, watershed open space improvements, and delisting considerations for this Great Lakes Area of Concern (AOC). A "Report Card" is near completion which defines the status of use impairments indicators. Public involvement is one goal of the RAP process. The RAP tracks and reports on projects affecting the AOC including: the City of Buffalo waterfront revitalization, the Buffalo Sewer Authority CSO correction, sediment evaluation, and habitat restoration. Three habitat improvement projects have been constructed to address habitat impairments with funding provided through USEPA. These habitat project plans were developed by Erie County in cooperation the City of Buffalo, US Fish and Wildlife Service, US Army Corps of Engineers (USACE), and New York State Department of Environmental Conservation (NYSDEC). The Buffalo Sewer Authority has received Bond Act funding to address sewer overflows. In addition, the SUNY Buffalo State College Research Foundation, in conjunction with the FBNR, is conducting a study funded by the USACE to assess river sediments and remedial needs. This study will evaluate the Hamburg Drain CSO, update land use, inventory land cover, assess surface sediments for bioaccumulation, define bed sediment characteristics and watershed sediment transport, and assess the impact of abandoned shoreline structures. EPA recently renewed the grant to continue the FBNR's RAP coordination beyond 2005.

This segment is included on Part 2b (fish consumption) of the NYS 2004 Section 303(d) List of Impaired Waters.

This segment includes the entire stream from the mouth to Cayuga Creek. The waters of the stream are Class C. Tribs to this reach/segment, including the Buffalo Ship Canal, are also Class C. Above Cayuga Creek, the stream become Buffalo Creek and is listed separately.

Buffalo Creek, Lower, and minor tribs (0103-0003) MinorImpacts

Waterbody Location Information

Revised: 01/27/2005

Water Index No:	Ont 158..E- 1*			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120103/050	**Str Class:**	B		Buffalo/Eighteenmile
Waterbody Type:	River			**Reg/County:**	9/Erie Co. (15)
Waterbody Size:	63.5 Miles			**Quad Map:**	ORCHARD PARK (J-06-4)
Seg Description:	stream and tribs, from mouth to trib -18				

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

Source(s) of Pollutant(s)

Known:	STREAMBANK EROSION, URBAN RUNOFF
Suspected:	AGRICULTURE
Possible:	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 **Resolution Potential:** Medium
TMDL/303d Status: n/a ()

Further Details

Aquatic life support in Buffalo Creek is thought to be somewhat affected by elevated silt/sediment loads from urban runoff, streambank erosion and other nonpoint source inputs. In spite of some/these minor impacts, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network (mini-study) monitoring of Buffalo Creek in Gardenville (at Route 277) was conducted in 2001. The focus of the limited mini-study was to re-sample this previous RIBS site to evaluate if conditions had changed since the 1993-94 sampling effort. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed no parameters of concern. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Bottom sediment sampling results revealed cadmium and 6 PAHs to be exceeding the Threshold Effects level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Buffalo Creek in Gardenville (at Route 277) was conducted in 2000 and 2001. Sampling results fluctuate somewhat but generally indicate slightly impacted water quality conditions, similar to assessments from 1976-1988. When sampled during high-flow years (1994, 2000) water quality was assessed as non-impacted, while samples during low-flow years (1993, 2001) result in assessments of slight impact. Siltation has

been indicated to be a factor at the Gardenville site. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth at Cayuga Creek to trib -18 near East Elma. The waters of this portion of the stream are Class B. Tribs to this reach/segment, including Pond Brook (-15), are primarily Class B; with some tribs designated Class C.

Buffalo Creek, Upper, and minor tribs (0103-0004) NoKnownImpct

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158..E- 1*
Hydro Unit Code: 04120103/050 **Str Class:** A
Waterbody Type: River
Waterbody Size: 285.3 Miles
Seg Description: stream and tribs, above East Elma

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: EAST AURORA (J-06-3)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Buffalo Creek in Wales Center (at Route 20A) was conducted in 2000. Sampling results indicate non-impacted water quality conditions. The 2000 macroinvertebrate sample was field-assessed as passing screening, and the sample was not laboratory-processed. Siltation has been indicated to be a factor influencing slightly impacted conditions at the Gardenville site. (DEC/DOW, BWAR/SBU, April 2003)

Biological (macroinvertebrate) assessments of two Buffalo Creek tribs were also conducted in 2000. In both Hunter Creek in Wales Center and Sheldon/Hollow Creek near Strykersville sampling results indicate non-impacted water quality conditions. These samples were field-assessed as passing screening criteria, and the sample was not laboratory-processed. (DEC/DOW, BWAR/SBU, April 2003)

Loss of riparian vegetation and stream cover and resulting increases in stream temperature have been cited as concerns by local agencies in the past. Other poor agricultural practices, such as cattle access to the streams, exacerbate streambank erosion and silt/sediment loads. Over the years, many streambank erosion problems have been addressed by installing rip-rap but problems still exist. Operation of on-site septic systems have also been a past concern. (Wyoming County WQCC, 1996)

This segment includes the portion of the stream and all tribs above/including trib -18 near East Elma. The waters of this portion of the stream are Class A. Tribs to this reach/segment, including Belowe Creek (-22), Ellis Brook (-23), Hunter Creek (-30), Hollow Creek (-40), Glade Creek (-45), Beaver Meadow Creek (-55) and Plato Creek (-59), are primarily Class C, C(T); with some tribs designated Class B, B(T) and D.

Cazenovia Creek and tribs (0103-0009) NoKnownImpct

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158..E- 1- 4
Hydro Unit Code: 04120103/070 **Str Class:** B
Waterbody Type: River
Waterbody Size: 51.7 Miles
Seg Description: stream and tribs, from mouth to near East Aurora

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: ORCHARD PARK (J-06-4)

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:**
TMDL/303d Status: n/a ()

Further Details

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network (mini-study) monitoring of xxx Creek in xxx (at xx) was conducted in 20xx. The focus of the limited mini-study was to re-sample this previous RIBS site to evaluate if conditions had changed since the 19xx-xx sampling effort. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below) revealed... (DEC/DOW, BWAR/RIBS, April 2003)

Biological (macroinvertebrate) assessments of Cazenovia Creek in Cazenovia Park (at Parkside Drive) were conducted in 2000 and 2001. Sampling results indicate non-impacted to slightly impacted water quality conditions. The most downstream site, in Cazenovia Park in Buffalo, displayed a diverse fauna of clean-water mayflies, stoneflies, and caddisflies in 2000 and 2001 samples. The water quality assessment was non-impacted in 2000, a high-flow year, and slightly impacted in 2001, a low-flow year. Nonpoint source nutrient enrichment are silt/sediment are the primary stressors. The site was assessed as non-impacted in 1994. Previous samples of the creek, 2 miles upstream in West Seneca, showed the creek to be slightly impacted in 1976 and 1982. Despite some minor impacts, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the entire stream and all tribs from the mouth to the confluence of the East and West Branches near East Aurora. The waters of the stream are primarily Class B, with a short reach near the mouth designated Class C. Tribs to this reach/segment, including Spring Brook (-7), are Class C,C(T). The East Branch and West Branch are listed separately.

East Br. Cazenovia, Lower, and tribs (0103-0011) NoKnownImpct

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158..E- 1- 4-14
Hydro Unit Code: 04120103/070 **Str Class:** B
Waterbody Type: River
Waterbody Size: 33.9 Miles
Seg Description: stream and tribs, from mouth to South Wales

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: EAST AURORA (J-06-3)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of East Branch Cazenovia Creek in East Aurora (at Jewett Holmwood Road) was conducted in 2000. Sampling results indicate non-impacted water quality conditions. Some nonpoint nutrient enrichment was indicated, but the fauna remained diverse and well-balanced. Similar conditions were noted in 1994. Despite these conditions, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to trib -12 in South Wales. The waters of this portion of the stream are Class B. Tribs to this reach/segment, including Tannery Brook (-4), are primarily Class B, with some tribs designated Class C.

East Br. Cazenovia, Upper, and tribs (0103-0012) NoKnownImpct

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158..E- 1- 4-14
Hydro Unit Code: 04120103/070 **Str Class:** B
Waterbody Type: River
Waterbody Size: 93.7 Miles
Seg Description: stream and tribs, above South Wales

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: HOLLAND (K-06-2)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of East Branch Cazenovia Creek in Holland (at Greenwood Road) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs above/including trib -12 in South Wales. The waters of this portion of the stream are Class B, from trib -12 to Protection Creek (-26), and Class C(T) for the remainder of the reach. Tribs to this reach/segment are Class B, C, C(T).

West Br. Cazenovia, Lower, and tribs (0103-0013) NoKnownImpct

Waterbody Location Information

Revised: 05/08/2003

Water Index No:	Ont 158..E- 1- 4-15			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120103/070	**Str Class:**	B*		Buffalo/Eighteenmile
Waterbody Type:	River			**Reg/County:**	9/Erie Co. (15)
Waterbody Size:	25.1 Miles			**Quad Map:**	COLDEN (K-06-1)
Seg Description:	stream and tribs, from mouth to West Falls				

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of West Branch Cazenovia Creek in East Aurora (at Jewett Holmwood Road) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. Similar conditions were noted in 1994. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to Pipe Creek (-10) near West Falls. The waters of this portion of the stream are Class B from the mouth to trib -4, Class A between trib -4 and trib -5, and Class B for the remainder of the reach. Tribs to this reach/segment are Class B. Pipe Creek (-10) is listed separately.

West Br. Cazenovia, Upper, minor tribs (0103-0014) NoKnownImpct

Waterbody Location Information

Revised: 05/08/2003

Water Index No: Ont 158..E- 1- 4-15
Hydro Unit Code: 04120103/070 **Str Class:** B
Waterbody Type: River
Waterbody Size: 73.8 Miles
Seg Description: stream and tribs, above West Falls

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: COLDEN (K-06-1)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of West Branch Cazenovia Creek in Colden (at Route 240) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs above Pipe Creek (-10) near West Falls. The waters of this portion of the stream are Class B. Tribs to this reach/segment, including Crump Brook (-19), Sprague Brook (-21), Spencer Brook (-22) and Graff Brook (-23), are also Class B. Pipe Creek (-10) is listed separately.

Orchard Park Reservoir (0103-0016) MinorImpacts

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E- 1- 4-15-10-P??
Hydro Unit Code: 04120103/070 **Str Class:** A
Waterbody Type: Lake(R)
Waterbody Size: 25.7 Acres
Seg Description: entire reservoir

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: COLDEN (K-06-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Known
Public Bathing	Stressed	Known
Recreation	Stressed	Known

Type of Pollutant(s)

Known: NUTRIENTS (phosphorus)
Suspected: Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: URBAN 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

Drinking water supply use, public bathing, and recreational uses in Orchard Park Reservoir are affected by elevated nutrient levels. Sources of nutrients and other pollutants are thought to be nonpoint runoff related to the surrounding urban/commercial/residential land use.

Orchard Park Reservoir was included in the 2001 Lake Classification and Inventory study effort. Results of this study indicate elevated phosphorus levels that exceeded the criteria for support of bathing/recreation uses. However, there was insufficient data to evaluate the impact of these conditions on water supply use. (DEC/DOW, BWM/Lake Services, April 2003)

Cayuga Creek, Lower, and tribs (0103-0007) MinorImpacts

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158..E- 1- 6
Hydro Unit Code: 04120103/060 **Str Class:** C
Waterbody Type: River
Waterbody Size: 13.7 Miles
Seg Description: stream and selected tribs, from mouth to Lancaster

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: LANCASTER (J-06-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: Metals, Priority Organics (PAHs)
Suspected: NUTRIENTS, SILT/SEDIMENT
Possible: Pathogens

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION, URBAN RUNOFF
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

Aquatic life support and fish consumption in this portion of Cayuga Creek are thought to be stressed by nutrient enrichment and silt/sediment loads from urban runoff and various other nonpoint sources. Elevated levels of some organics and metals in macroinvertebrate tissue samples have also been documented. Despite these minor impacts, aquatic life and other uses are considered to be fully supported in the stream.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Cayuga Creek in Cheektowaga , Erie County, (at Route 277) was conducted in 2001. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed ammonia, dissolved oxygen and iron to be parameters of concern. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Bottom sediment sampling results revealed several PAHs to be exceeding the Probable Effects Level - a level at which adverse impacts are expected. Cadmium, PCBs, DDT, DDE and PAHs are also present at Threshold Effects level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Cayuga Creek were conducted in Depew/Cheektowaga (at Route 277) in

2000 and 2001 and in East Lancaster (at Bowen Road) in 2000. Sampling results indicated slightly impacted water quality conditions in Depew. Nonpoint source nutrient enrichment and siltation were the primary causes of impact. Similar conditions at this site were documented in 1993 and 1994, maintaining good water quality following well-documented improvements in the 1980's. Sampling results indicated non-impacted conditions in East Lancaster. The fauna was dominated by clean-water mayflies and caddisflies. This represents an improvement in water quality compared to 1976 to 1988, when slight impact was documented. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to Plumb Bottom Creek (-6) in Lancaster. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C. Slate Bottom Creek (-2) and Plumb Bottom Creek (-6) are listed separately.

Cayuga Creek, Middle, and minor tribs (0103-0017) Need Verific

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E- 1- 6
Hydro Unit Code: 04120103/060 **Str Class:** B
Waterbody Type: River
Waterbody Size: 116.5 Miles
Seg Description: stream and selected tribs, from Lancaster to Folsomdale

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: CLARENCE (J-06-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: NUTRIENTS, PATHOGENS, Silt/Sediment
Possible: D.O./Oxygen Demand

Source(s) of Pollutant(s)

Known: - - -
Suspected: FAILING ON-SITE SYST (Cowlesville), Streambank Erosion
Possible: - - -

Resolution/Management Information

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

Further Details

Aquatic life support and recreational uses in this portion of Cayuga Creek may be affected by failing and/or inadequate on-site septic systems. The impact of the septic systems on the stream need to be verified.

There are concerns regarding failing and/or inadequate on-site septic systems in the hamlet of Cowlesville. About 100 homes are served by on-site systems. A referendum for a sewer project to be funded within the Construction Grants Program was voted down. There has been some more recent interest in wastewater facilities planning by the town. The community has applied for a Tier 3 grant. (DEC/DOW, Region 9, April 2003)

A biological (macroinvertebrate) assessment of Cayuga Creek in Lancaster (at Bowen Road), well below Cowlesville, was conducted in 2000. Sampling results indicated non-impacted water quality conditions. The fauna was dominated by clean-water mayflies and caddisflies. This represents an improvement in water quality compared to 1976 to 1988, when slight impact was documented. The most recent sampling upstream nearer to Cowlesville (Alden) conducted in 1993 indicated slight impact, likely due to nonpoint source nutrient enrichment. But conditions in this portion of the stream should be verified. (DEC/DOW, BWAR/SBU, April 2003) This segment includes the portion of the stream and selected/smaller tribs from Plumb Bottom Creek (-6) in Lancaster to Right Branch/Gillett Creek near Folsomdale. The

waters of this portion of the stream are Class B. Tribs to this reach/segment, including Red Brook (-24), are Class C. Plumb Bottom Creek (-6), Little Buffalo Creek (-7) and Right Branch/Gillett Creek (-30), are listed separately.

Little Buffalo Creek and tribs (0103-0008) MinorImpacts

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158..E- 1- 6- 7
Hydro Unit Code: 04120103/060 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 74.4 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: EAST AURORA (J-06-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrolgy	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: 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

Natural resources (fishery) habitat are thought to be affected by silt/sediment loadings and other nonpoint inputs. Streambank erosion from residential development and urbanization have been cited as the major sources of these impacts.

A biological (macroinvertebrate) assessment of Little Buffalo Creek near the mouth in East Lancaster (at Bowen Road) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. Clean-water mayflies, stoneflies, caddisflies, and beetles were present and no water quality problems were indicated. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the entire stream and all tribs. The waters of the stream are Class C from the mouth to trib -4, Class B between trib -4 and trib -6, and Class C,C(T) for the remainder of the reach. Tribs to this reach/segment are also Class C.

Right Branch/Gillett Creek and tribs (0103-0020) NoKnownImpct

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E- 1- 6-30
Hydro Unit Code: 04120103/060 **Str Class:** C
Waterbody Type: River
Waterbody Size: 30.1 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: COWLESVILLE (J-07-4)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Right Branch/Gillette Creek in Bennington Center (at Route 77) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. Clean-water mayflies and caddisflies were numerous, although nonpoint source nutrient enrichment was also indicated. The sample satisfied field screening criteria and was returned to the stream. Despite some minor impacts, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment, including French Brook (-4) and Fenton Creek (-4-1), are also C.

Smoke Creek, Lower, and minor tribs (0101-0007) MinorImpacts

Waterbody Location Information

Revised: 05/09/2003

Water Index No:	Ont 158..E- 2			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120103/040	**Str Class:**	C		Buffalo/Eighteenmile
Waterbody Type:	River			**Reg/County:**	9/Erie Co. (15)
Waterbody Size:	9.8 Miles			**Quad Map:**	BUFFALO SOUTHEAST (J-05-3)
Seg Description:	stream and selected tribs, fr mouth to Webster Corners				

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
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known:	AESTHETICS (sludge banks)
Suspected:	NUTRIENTS (phosphorus), SILT/SEDIMENT
Possible:	D.O./Oxygen Demand, Water Level/Flow, Metals, Pathogens

Source(s) of Pollutant(s)

Known:	URBAN RUNOFF
Suspected:	INDUSTRIAL
Possible:	Comb. Sewer Overflow, Hydro Modification, Municipal, Tox/Contam. Sediment, Storm Sewers

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 Smoke Creek is considered to be somewhat affected by silt/sediment loads, sludge banks, nutrients and other pollutant associated with urban runoff and other nonpoint source inputs. In spite of some/these minor impacts, aquatic life is considered to be fully supported in the stream.

A biological (macroinvertebrate) assessment of Smoke Creek in Lackawanna (at South Park Avenue) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. Impact Source Determination identified municipal/industrial effects and nonpoint sources effects, indicating that urban runoff is likely the primary stressor. Conditions in South Branch Smoke Creek (listed separately) were assessed as moderately impacted. (DEC/DOW, BWAR/SBU, April 2003)

The primary cause of impact to recreation is past industrial activities and discharges including sludge banks along the creek. Hydrologic modification of the lower creek for flood control is also a concern. (DEC/DOW, Region 9, 1996)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to Route 20 near Webster

Corners. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C. South Branch (-1) is listed separately.

South Branch, Lower, and tribs (0101-0036) Impaired Seg

Waterbody Location Information

Revised: 05/09/2003

Water Index No:	Ont 158..E- 2- 1			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120103/040	**Str Class:**	C		Buffalo/Eighteenmile
Waterbody Type:	River			**Reg/County:**	9/Erie Co. (15)
Waterbody Size:	27.6 Miles			**Quad Map:**	BUFFALO SOUTHEAST (J-05-3)
Seg Description:	stream and tribs, from mouth to Orchard Park				

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
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known:	NUTRIENTS (phosphorus), SILT/SEDIMENT, Aesthetics (sludge, debris)
Suspected:	- - -
Possible:	Pathogens

Source(s) of Pollutant(s)

Known:	STREAMBANK EROSION, URBAN RUNOFF
Suspected:	- - -
Possible:	COMB. SEWER OVERFLOW, Industrial, Storm Sewers

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 3b ()

Further Details

Aquatic life support and recreational uses in South Branch Smoke Creek are restricted by nutrient enrichment, silt/sediment loads and other pollutant associated with urban runoff, CSOs and other nonpoint source inputs.

A biological (macroinvertebrate) assessment of South Branch Smoke Creek in Lackawanna (at South Park Avenue) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated that nonpoint nutrient enrichment was the likely cause of impact. Surrounding land use suggests urban/industrial runoff, streambank erosion and other nonpoint source inputs. (DEC/DOW, BWAR/SBU, April 2003

CSOs from Erie County SD #6 which discharge to Smoke Creek have been identified as needing additional control measures. (DEC/BWP, March 2005)

This segment is included on Part 3b (needing verification of cause/pollutants) of the NYS 2004 Section 303(d) List of Impaired Waters due to suspected impacts from urban runoff and/or streambank erosion.

This segment includes the portion of the stream and all tribs from the mouth to Green Lake (P81b) in Orchard Park. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also C.

Green Lake (0101-0038) MinorImpacts

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E- 2- 1-P81b
Hydro Unit Code: 04120103/040 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 10.0 Acres
Seg Description: entire lake

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: ORCHARD PARK (J-06-4)

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: NUTRIENTS (phosphorus)
Suspected: Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: URBAN 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

Public bathing, and recreational (fishing, boating) uses in Green Lake are affected by elevated nutrient levels and low water clarity. Sources of nutrients and silt/sediment are thought to be nonpoint runoff related to the surrounding urban/commercial/residential land use.

Green Lake was included in the 2001 Lake Classification and Inventory study effort. Results of this study indicate elevated phosphorus levels that exceeded and water clarity readings that failed to meet the criteria for support of bathing/recreation uses. However, there was insufficient data to evaluate the actual impact of these conditions on recreational uses. Oxygen levels were adequate to support the fishery throughout the lake. (DEC/DOW, BWM/Lake Services, April 2003)

Rush Creek and tribs (0104-0018) Impaired Seg

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E- 3
Hydro Unit Code: 04120103/030 **Str Class:** C
Waterbody Type: River
Waterbody Size: 17.4 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: BUFFALO SOUTHEAST (J-05-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: PATHOGENS, Aesthetics (sludge banks, odors), Oil and Grease
Suspected: NUTRIENTS (phosphorus), Unknown Toxicity
Possible: D.O./Oxygen Demand, Priority Organics

Source(s) of Pollutant(s)

Known: MUNICIPAL, URBAN RUNOFF
Suspected: Storm Sewers
Possible: Failing On-Site Syst

Resolution/Management Information

Issue Resolvability: 2 (Strategy Exists, Needs Funding/Resources)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 1 (High Priority for TMDL Development by NYSDEC)

Further Details

Aquatic life, recreational uses (swimming, fishing) and aesthetics in Rush Creek are restricted by pathogens, nutrients, silt/sediment loads and other pollutant associated with municipal/industrial discharges, urban runoff and other nonpoint source inputs. Poor aesthetics in and along the stream (sludge banks, oil, grease, odors) also discourage uses. However, significant work and anticipated improvements have occurred in recent years; verification of water quality conditions is recommended.

A biological (macroinvertebrate) assessment of Rush Creek in Blasdell (at Mile Strip Road) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated that municipal/industrial inputs of a toxic nature were the likely cause of impact. Surrounding land use suggests municipal impacts, urban/industrial runoff and other nonpoint source inputs. (DEC/DOW, BWAR/SBU, April 2003)

Periodic wet weather overflows of stormwater impact recreational use in the creek and in the nearby lake shore area at the creek mouth. The Town of Hamburg and the Village of Blasdell are under consent orders to abate SSO discharges

to Rush Creek. A revised schedule for reducing or eliminating overflows from the Electric Avenue Pump station is being prepared by Region 9 staff. Erie County is soliciting engineering consultants for the project.

The Erie County Fairground is also under DEC order to eliminate site runoff impacts on Rush Creek. Overflows from the Milestrip Road pump station in the Village of Blasdell were eliminated in 1995. Other sources of impacts to Rush Creek have been addressed. Failing/inadequate on-site septic systems in the residential area of Highland Acres, have been being addressed. The community was awarded $1.95 million in CW/CA Bond Act funds and approximately 150 homes were sewered in 1999. The second phase of the project to sewer an additional 30 homes was completed in the Fall of 2004. A consent order to address a discharge from the Erie County Fairgrounds was satisfied in January 1996. (DEC/DOW, BWC and Region 9, February 2005)

This stream enters Lake Erie at Woodlawn Beach. Woodlawn Beach was purchased by NYS and has been developed into a state park and bathing beach.

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters due to CSOs, municipal, urban runoff sources.

This segment includes the entire stream and all tribs. The waters of the stream are primarily Class C, with a 1/8 mile reach at the mouth designated Class B. Tribs to this reach/segment are also Class C.

Eighteenmile Creek, Lower, minor tribs (0104-0030) MinorImpacts

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158..E-13
Hydro Unit Code: 04120103/020 **Str Class:** B(T)
Waterbody Type: River
Waterbody Size: 32.3 Miles
Seg Description: stream and selected tribs, from mouth to Hamburg

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: EDEN (K-05-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Fish Consumption	Stressed	Possible
Habitat/Hydrolgy	Stressed	Suspected

Type of Pollutant(s)

Known: - - -
Suspected: SILT/SEDIMENT, Priority Organics (PCBs)
Possible: Thermal Changes

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION, URBAN RUNOFF, Hydro Modification, Tox/Contam. Sediment
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 2 (Problem Verified, Cause Unknown)
Lead Agency/Office: ext/WQCC **Resolution Potential:** Medium
TMDL/303d Status: n/a ()

Further Details

Aquatic life support and natural resources (fishery) habitat in Eighteenmile Creek is thought to be affected by elevated stream temperatures, silt/sediment and other nonpoint inputs related to streambank erosion, residential development in the surrounding suburban area, urban and stormwater runoff. Impacts on fish consumption are also of some concern based on elevated levels of PCBs found in sediments. The main branch is used by migratory rainbow trout from Lake Erie.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Eighteenmile Creek in Evans, Erie County, (at Lake Shore Road) was conducted in 2001. This sampling location is 0.6 miles above the mouth at Lake Erie. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed no parameters of concern. Toxicity testing of the water column showed no significant mortality or reproductive impacts. However, bottom sediment sampling results revealed PCBs to be exceeding the Probable Effects Level - a level at which adverse impacts are expected. Nickle and 3 PAHs exceeded the Threshold Effects level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Eighteenmile Creek in Highland on the Lake/Evans (at Lake Shore Road) were conducted in 2000 and 2001. Sampling results indicated slightly impacted water quality conditions. The primary cause of impact was determined to be nonpoint source nutrient enrichment. Despite these minor impacts, aquatic life is considered to be fully supported in the stream. (DEC/DOW, BWAR/SBU, April 2003)

Previously cited on-site septic system impacts are no longer an issue as most of the area has been sewered. Urban runoff from the Village of Hamburg and Hamlet of North Boston is possible source of silt and sediment problems. Silt and sediment is also coming from unstable banks further upstream. Irrigation water withdrawals from the creek lower water level causing thermal warming and stress in cold water fish. (Erie County WQCC, 1996)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to the Hamburg water supply dam. The waters of this portion of the stream are Class B(T). Tribs to this reach/segment are Class B and C. South Branch (-4) and Hampton Brook (-6) are listed separately.

Eighteenmile Creek, Middle, and tribs (0104-0017) NoKnownImpct

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E-13
Drain Basin: Lake Erie-Niagara River
Hydro Unit Code: 04120103/020 **Str Class:** A Buffalo/Eighteenmile
Waterbody Type: River **Reg/County:** 9/Erie Co. (15)
Waterbody Size: 47.9 Miles **Quad Map:** HAMBURG (K-05-2)
Seg Description: stream and tribs, from Hamburg to Patchin

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Eighteenmile Creek in North Boston (at Route 277) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the Hamburg water supply dam to/including trib -27 in Patchin. The waters of this portion of the stream are Class A. Tribs to this reach/segment, including Neuman Creek (-8), are also Class A.

Eighteenmile Creek, Upper, and tribs (0104-0039) NoKnownImpct

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E-13
Hydro Unit Code: 04120103/020 **Str Class:** A
Waterbody Type: River
Waterbody Size: 72.3 Miles
Seg Description: stream and tribs, above Patchin

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: SPRINGVILLE (K-06-4)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Eighteenmile Creek in North Boston (at Route 277) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. Though this sampling point is just below the described segment, it is considered representative of water quality in the upper reach. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs above trib -27 in Patchin. The waters of this portion of the stream are Class A, A(T). Tribs to this reach/segment, including Landon Brook (-46), are also Class A.

South Br. Eighteenmile, Lower, and tribs (0104-0016) NoKnownImpct

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E-13- 4
Drain Basin: Lake Erie-Niagara River
Hydro Unit Code: 04120103/020 **Str Class:** B
Buffalo/Eighteenmile
Waterbody Type: River
Reg/County: 9/Erie Co. (15)
Waterbody Size: 77.8 Miles
Quad Map: HAMBURG (K-05-2)
Seg Description: stream and tribs, from mouth to New Oregon

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:
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of South Branch Eighteenmile Creek in Eden Valley (at Eden Valley Road) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to/including trib -23 near New Oregon. The waters of this portion of the stream are Class B,B(T). Tribs to this reach/segment, including Jennings Creek (-13), are also Class B.

South Br. Eighteenmile, Upper, and tribs (0104-0040) NoKnownImpct

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E-13- 4
Hydro Unit Code: 04120103/020 **Str Class:** C
Waterbody Type: River
Waterbody Size: 21.7 Miles
Seg Description: stream and tribs, above New Oregon

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: LANGFORD (K-05-3)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of South Branch Eighteenmile Creek in Eden Valley (at Eden Valley Road) was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. Though this sampling point is just below the described segment, it is considered representative of water quality in the upper reach. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs above trib -23 near New Oregon. The waters of this portion of the stream are Class C(TS). Tribs to this reach/segment are also Class C.

Little Sister Creek, Lower, and tribs (0104-0045) Impaired Seg

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E-19
Hydro Unit Code: 04120103/010 **Str Class:** B
Waterbody Type: River
Waterbody Size: 3.4 Miles
Seg Description: stream and tribs, from mouth to Route 5

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: ANGOLA (K-04-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Public Bathing	Stressed	Known
AQUATIC LIFE	Impaired	Known
RECREATION	Impaired	Known

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: FAILING ON-SITE SYST

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 3b ()

Further Details

Aquatic life support and recreational uses are impaired in this portion of Little Sister Creek. Additional sampling is necessary to determine the specific source of the problems. Based on surrounding land use, failing and/or inadequate on-site septic systems are a possible cause.

A biological (macroinvertebrate) assessment of Little Sister Creek in Evans Center (at Route 5) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. The fauna was dominated by midges and scuds, and Impact Source Determination indicated that municipal/industrial inputs were the primary cause of impact. (DEC/DOW, BWAR/SBU, April 2003)

This segment is included on Part 3b (needing verification of cause/pollutants) of the NYS 2004 Section 303(d) List of Impaired Waters due to suspected impacts from inadequate/failing on-site septic systems.

This segment includes the portion of the stream from the mouth to Route 5, including lower portion of trib -1. The waters of this reach/segment are Class B.

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Big Sister Creek, Lower, and tribs (0104-0013) MinorImpacts

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158..E-20
Hydro Unit Code: 04120103/010 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 19.6 Miles
Seg Description: stream and tribs, from mouth to Pontiac

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: ANGOLA (K-04-2)

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: - - -
Suspected: AESTHETICS (floatables), NUTRIENTS
Possible: D.O./Oxygen Demand, Pathogens, Silt/Sediment

Source(s) of Pollutant(s)

Known: - - -
Suspected: MUNICIPAL, Urban Runoff
Possible: Failing On-Site Syst

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DEC/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: n/a ()

Further Details

Aquatic life support and recreational uses (swimming, fishing) in this portion of Big Sister Creek are impacted by nutrient and possible sewage inputs. Some of the previously cited problems at the Angola WWTP have been addressed with plant upgrades and expansions in the mid 1990s. The wastewater treatment plant is in compliance with its SPDES permit. Based on surrounding land use, failing and/or inadequate on-site septic systems are a possible cause.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Big Sister Creek in Evans, Erie County, (at Route 5) was conducted in 2001. This sampling location is 2.0 miles above the mouth at Lake Erie. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed iron to be the only parameter of concern. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Bottom sediment sampling results revealed arsenic, copper, nickle and zinc to be exceeding the Threshold Effects level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Big Sister Creek in Evans Center (at Route 5) were conducted in 2000 and

2001. Slightly impacted water quality was assessed for the site in Evans Center, based on 2001 macroinvertebrate sampling. Nutrient enrichment and municipal/industrial inputs were the likely source of impacts. The fauna was dominated by facultative and tolerant midges. The site was previously assessed as moderately impacted in 1993 and 2000, and non-impacted in 1994. Due to the fluctuating water quality assessments, continued monitoring is recommended for this site. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to Rythus Creek (-2) in Pontiac. The waters of this portion of the stream are Class B from the mouth to Old Lake Shore Road (0.6 mi) and Class C,C(T) for the remainder of the reach. Tribs to this reach/segment are also Class C. Rythus Creek (-2) is listed separately.

Rythus Creek and tribs (0104-0048) NoKnownImpct

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E-20-13
Hydro Unit Code: 04120103/010 **Str Class:** C
Waterbody Type: River
Waterbody Size: 19.4 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: EDEN (K-05-1)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Rythus Creek in Pontiac (at New Jerusalem Road) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. The fauna was diverse, and only siltation was indicated as a source of impact. Despite these conditions, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAR/SBU, April 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.

Delaware Creek, Lower, and tribs (0104-0049) MinorImpacts

Waterbody Location Information

Revised: 05/09/2003

Water Index No: Ont 158..E-21
Hydro Unit Code: 04120103/010 **Str Class:** B(TS)
Waterbody Type: River
Waterbody Size: 4.1 Miles
Seg Description: stream and tribs, from mouth to Route 5

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: ANGOLA (K-04-2)

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: - - -
Suspected: NUTRIENTS, D.O./Oxygen Demand
Possible: Pathogens

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: FAILING ON-SITE SYST

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: n/a ()

Further Details

Aquatic life support and recreational uses are impacted in this portion of Delaware Creek. Additional sampling is necessary to determine the specific source of the problems. Based on surrounding land use, failing and/or inadequate on-site septic systems are a possible cause.

A biological (macroinvertebrate) assessment of Delaware Creek in Angola (at Route 5) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. The fauna was dominated by facultative midges and black fly larvae, and municipal/industrial inputs was the likely cause of impact. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to Route 5. The waters of this reach/segment are Class B(TS). Tribs to this reach/segment are Class B.

Muddy Creek, Lower, and tribs (0104-0051) Impaired Seg

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158..E-22
Hydro Unit Code: 04120103/010 **Str Class:** B
Waterbody Type: River
Waterbody Size: 1.6 Miles
Seg Description: stream and tribs, from mouth to tribs -a

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: FARNHAM (K-04-3)

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: - - -
Suspected: UNKNOWN TOXICITY, Nutrients
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: UNKNOWN SOURCE

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 2 (Problem Verified, Cause Unknown)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: 3b ()

Further Details

A biological (macroinvertebrate) assessment of Muddy Creek in Angola (at Lake Shore Road) was conducted in 2000. Sampling results indicated moderately impacted water quality conditions. Impact Source Determinate indicated that municipal/industrial inputs of a toxic nature were the likely cause of the impact. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to trib -a. The waters of this reach/segment are Class B. Tribs to the reach/segment are also Class B.

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Waterbody Inventory
for
The Cattaraugus Creek Watershed

Water Index Number	Waterbody Segment	Category
Cattaraugus Creek, Main Stem		
Ont 158..E-23 (portion 1)	Cattaraugus Cr, Lower, Main Stem (0104-0029)	**MinorImpacts**
Ont 158..E-23 (portion 2)	Cattaraugus Cr, Middle, Main Stem (0104-0053)	**NoKnownImpct**
Ont 158..E-23 (portion 3)	Cattaraugus Cr, Middle, Main Stem (0104-0025)	**NoKnownImpct**
Ont 158..E-23 (portion 4)	Cattaraugus Cr, Middle, Main Stem (0104-0020)	**MinorImpacts**
Ont 158..E-23 (portion 5)	Cattaraugus Cr, Upper, and tribs (0104-0005)	**Need Verific**
Tribs to Cattaraugus Creek, mouth to Gowanda		
Ont 158..E-23- 1 thru 18 (sel.)	Minor Tribs to Cattaraugus Creek (0104-0073)	UnAssessed
Ont 158..E-23- 6	Clear Creek, Lower, and tribs (0104-0024)	**NoKnownImpct**
Ont 158..E-23- 6	Clear Creek, Upper, and tribs (0104-0054)	UnAssessed
Ont 158..E-23- 6-4	North Branch Clear Cr, Lower, and tribs (0104-0055)	**MinorImpacts**
Ont 158..E-23- 6-4	North Branch Clear Cr, Upper, and tribs (0104-0056)	UnAssessed
Ont 158..E-23- 6-P100	Clear Lake (0104-0057)	**MinorImpacts**
Ont 158..E-23-19	Point Peter Brook, Upper, and tribs (0104-0003)	**Need Verific**
Ont 158..E-23-19 thru 31 (sel.)	Minor Tribs to Cattaraugus Creek (0104-0074)	**NoKnownImpct**
South Branch Cattaraugus Creek Watershed		
Ont 158..E-23-20	South Br. Cattaraugus, Lower, and tribs (0104-0006)	**NoKnownImpct**
Ont 158..E-23-20	South Br. Cattaraugus, Upper, and tribs (0104-0058)	**NoKnownImpct**
Ont 158..E-23-20-11	Mansfield Creek and tribs (0104-0059)	**NoKnownImpct**
Ont 158..E-23-20-P??	Rainbow, Timber Lakes (0104-0060)	**Need Verific**
Tribs to Cattaraugus Creek, above Gowanda		
Ont 158..E-23-27	Connoisarauley Creek, Lower, and tribs (0104-0061)	**NoKnownImpct**
Ont 158..E-23-27	Connoisarauley Creek, Upper, and tribs (0104-0062)	**NoKnownImpct**
Ont 158..E-23-32	Spring Brook and tribs (0104-0021)	**MinorImpacts**
Ont 158..E-23-33	Buttermilk Creek and tribs (0104-0063)	**NoKnownImpct**
Ont 158..E-23-43 thru 47	Minor Tribs to Cattaraugus Creek (0104-0075)	UnAssessed
Ont 158..E-23-48	Elton Creek, Lower, and tribs (0104-0008)	**NoKnownImpct**
Ont 158..E-23-48	Elton Creek, Upper, and tribs (0104-0064)	**NoKnownImpct**
Ont 158..E-23-48-3	Lime Lake Outlet and tribs (0104-0065)	**NoKnownImpct**
Ont 158..E-23-48-3-P128,P132	Frog Pond, Sucker Pond (0104-0066)	UnAssessed
Ont 158..E-23-48-3-P130	Lime Lake (0104-0001)	**MinorImpacts**
Ont 158..E-23-48-9-P133	Beaver Lake (0104-0067)	UnAssessed

...The Cattaraugus Creek Watershed

Water Index Number	Waterbody Segment	Category
Tribs to Cattaraugus Creek, above Gowanda (con't)		
Ont 158..E-23-56	Clear Creek and tribs (0104-0031)	**Need Verific**
Ont 158..E-23-56-11-P141	Skim Lake (0104-0068)	**NoKnownImpct**
Ont 158..E-23-56-14-P146	Moores Pond (0104-0069)	UnAssessed
Ont 158..E-23-56-14-P147	Crystal Lake (0104-0070)	**Need Verific**
Ont 158..E-23-65-P149	Hiram Lake (0104-0071)	UnAssessed
Ont 158..E-23-P152	Java Lake (0104-0004)	**Impaired Seg**

Cattaraugus Cr, Lower, Main Stem (0104-0029) MinorImpacts

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23 (portion 1)
Hydro Unit Code: 04120102/030 **Str Class:** B(T)
Waterbody Type: River
Waterbody Size: 10.8 Miles
Seg Description: stream and selected tribs, from mouth to Iroquois

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Erie Co. (15)
Quad Map: FARNHAM (K-04-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrolgy	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION
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

Natural resources (fishery) habitat are thought to be affected by silt/sediment loadings and other nonpoint inputs. Streambank erosion and agricultural activities are the primary sources. As is the case in much of the Cattaraugus Creek watershed, elevated silt and sediment loads in the creek are common and can impact aquatic habitat and recreational uses to some degree. However, much of the sediment loading is considered to be natural, a result of highly erodible soils throughout the basin. Cattaraugus Creek is stocked with trout and salmon and experiences significant migratory runs of these species.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Cattaraugus Creek in Irving, Chautauqua County, (at Route 5/20) was conducted in 2001. This sampling location is on the Erie/Chautauqua County line 0.6 miles above the mouth at Lake Erie. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed iron to be the only parameter of concern. However, this substance is considered to be naturally occurring and not a source of water quality impacts. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Bottom sediment sampling results revealed some metals and 1 PAH to be exceeding the Threshold Effects level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Cattaraugus Creek in Irving (at Route 20) were conducted in 2000 and 2001. Sampling results indicated slightly impacted water quality conditions in 2001. In 2000 the site was assessed as non-impacted, but this was based on a field assessment during a high-flow year, and is considered less reliable than the 2001 sampling. Previous assessments of the creek in Irving ranged from non-impacted (in 1987 and 1988) to slightly impacted (in 1994). Water quality at Irving appears to have declined some in recent years, but due to fluctuating assessments and flow conditions this suspected decline needs further verification. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream from the mouth to the Gowanda State Hospital outfall near Iroquois. The waters of this portion of the stream are Class B(T).

Cattaraugus Cr, Middle, Main Stem (0104-0053) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23 (portion 2)
Hydro Unit Code: 04120102/030 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 9.1 Miles
Seg Description: stream and tribs, from Iroquois to Gowanda

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Erie Co. (15)
Quad Map: NORTH COLLINS (K-05-4)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Cattaraugus Creek in Gowanda (at Route 39) was conducted in 2000. Sampling results indicated non-impacted water quality conditions, although some nutrient enrichment and siltation were present. Conditions at this site appear similar to those sampled in 1988. Despite these conditions, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAR/SBU, April 2003)

A 1994 biological survey found no impact at a site in Versailles (at Versailles Plank Road), and slight impact at the Gowanda site. Significant improvements were noted when compared to results of a 1976 survey. Most of these improvements were attributed to upgrades of WWTPs and reduction/elimination of industrial discharges. (Cattaraugus Creek Biological Assessment Report, Bode et al, May 1995)

This segment includes the portion of the stream from the Gowanda State Hospital outfall near Iroquois to an extension of the southern boundary of Gowanda Village. The waters of this portion of the stream are Class C(T).

Cattaraugus Cr, Middle, Main Stem (0104-0025) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23 (portion 3)
Hydro Unit Code: 04120102/030 **Str Class:** B
Waterbody Type: River
Waterbody Size: 21.8 Miles
Seg Description: stream and selected tribs, fr Gowanda to Springville

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Erie Co. (15)
Quad Map: COLLINS CENTER (L-05-2)

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:**
TMDL/303d Status: n/a ()

Further Details

Biological (macroinvertebrate) assessments of Cattaraugus Creek in Gowanda (at Route 39) and Springville (at Route 240) were conducted in 2000. These sites are located at either end of the segment. Sampling results indicated non-impacted water quality conditions at Gowanda and slightly impacted conditions in Springville. Although water quality in the creek and this segment was determined to range from good to very good, nutrient enrichment and siltation were present. Despite these conditions, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAR/SBU, April 2003)

A 1994 biological survey found slight impacts at sites in Gowanda, Zoar Valley and Scoby Bridge. Significant improvements were noted when compared to results of a 1976 survey. Most of these improvements were attributed to upgrades of WWTPs and reduction/elimination of industrial discharges. (Cattaraugus Creek Biological Assessment Report, Bode et al, May 1995)

This segment includes the portion of the stream and selected/smaller tribs from an extension of the southern boundary of Gowanda Village to Spring Brook (-32) near Springville. The waters of this portion of the stream are Class B.

Cattaraugus Cr, Middle, Main Stem (0104-0020) MinorImpacts

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23 (portion 4)
Hydro Unit Code: 04120103/010 **Str Class:** B
Waterbody Type: River
Waterbody Size: 13.1 Miles
Seg Description: stream and selected tribs, Springville to Stillman Cnrs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: ASHFORD HOLLOW (L-06-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrolgy	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION
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

Natural resources (fishery) habitat are thought to be affected by silt/sediment loadings and other nonpoint inputs. Streambank erosion and agricultural activities are the primary sources. As is the case in much of the Cattaraugus Creek watershed, elevated silt and sediment loads in the creek are common and can impact aquatic habitat and recreational uses to some degree. However, much of the sediment loading is considered to be natural, a result of highly erodible soils throughout the basin.

A biological (macroinvertebrate) assessment of Cattaraugus Creek in Springville (at Route 240) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. Although water quality was determined to be good, some nonpoint nutrient enrichment was present. A 1994 survey found non-impact to slightly impacted conditions with evidence of siltation (see below). Despite these minor impacts, aquatic life is considered to be fully supported in the stream,(DEC/DOW, BWAR/SBU, April 2003)

A 1994 biological survey found slight impact with some evidence of siltation downstream of the Arcade STP outfall at North Woods Road. Further downstream, at McKinstry Road Bridge in Sardinia, the stream was judged to be non-impacted. Conditions were assessed as non-impacted just above Springville (Bigelow Bridge). There was evidence of some siltation at all sites. Nonetheless, water quality throughout the length of the creek was found to range from good

to very good. Significant improvements were noted when compared to results of a 1976 survey. Most of these improvements were attributed to upgrades of WWTPs and reduction/elimination of industrial discharges. (Cattaraugus Creek Biological Assessment Report, Bode et al, May 1995)

This segment includes the portion of the stream and selected/smaller tribs from Spring Brook (-32) near Springville to Elton Brook (-48) near Stillman Corners. The waters of this portion of the stream are Class B,B(T).

Cattaraugus Cr, Upper, and tribs (0104-0005) Need Verific

Waterbody Location Information

Revised: 01/27/2005

Water Index No: Ont 158..E-23 (portion 5)
Drain Basin: Lake Erie-Niagara River
Hydro Unit Code: 04120103/010 **Str Class:** C(T)
Buffalo/Eighteenmile
Waterbody Type: River
Reg/County: 9/Wyoming Co. (61)
Waterbody Size: 191.1 Miles
Quad Map: SARDINIA (K-06-3)
Seg Description: stream and selected tribs, above Stillman Corners

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: TOX/CONTAM. SEDIMENT
Possible: - - -

Resolution/Management Information

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

Further Details

Fish consumption may be affected by elevated PAH levels in the sediment. Possible impacts should be verified, as there are no other indicators of water quality impacts or limits to designated uses.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Cattaraugus Creek in East Arcade, Wyoming County, (at Route 11) was conducted in 2001. This sampling location is approximately 62 miles above the mouth at Lake Erie and is considered to be a background site generally unimpacted by anthropogenic sources. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed no parameters of concern. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Bottom sediment sampling results revealed a PAH (phenantrene) to be exceeding the Probable Effects Level - a level at which adverse impacts are expected. Cadmium and several other PAHs exceed the Threshold Effects level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Cattaraugus Creek in Arcade (at East Arcade Road) was conducted in 2001. Sampling results indicated non-impacted water quality conditions. A diverse fauna of clean water organisms including mayflies, stoneflies and caddisflies was found. (DEC/DOW, BWAR/SBU, April 2003)

A 1994 biological survey found no impact upstream of Arcade at Water Street, and slight impact with some evidence of siltation downstream of the Arcade STP outfall at North Woods Road. Further downstream, at McKinstry Road Bridge in Sardinia, the stream was judged to be non-impacted, although there was also evidence of siltation. Nonetheless, water quality throughout the length of the creek was found to range from good to very good. Significant improvements were noted when compared to results of a 1976 survey. Most of these improvements were attributed to upgrades of WWTPs and reduction/elimination of industrial discharges. (Cattaraugus Creek Biological Assessment Report, Bode et al, May 1995)

A biological (macroinvertebrate) assessment of Monkey Run Creek in Arcade Center was conducted in 2000. Field sampling results suggested slightly impacted water quality conditions, however laboratory analysis indicated non-impacted conditions. Clean-water mayflies and caddisflies dominated the sample. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and selected/smaller tribs above Elton Brook (-48) near Stillman Corners. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Hosmer Brook (-50), Nichols Brook (-51), Monkey Run (-60), Spring Brook (-67) and Tyler Brook (-68), are primarily Class C,C(T),C(TS). Elton Brook (-48) and Clear Creek (-56) are listed separately.

Clear Creek, Lower, and tribs (0104-0024) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23- 6
Hydro Unit Code: 04120102/030 **Str Class:** C(TS)
Waterbody Type: River
Waterbody Size: 11.4 Miles
Seg Description: stream and tribs, from mouth to Taylor Hollow

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Erie Co. (15)
Quad Map: NORTH COLLINS (K-05-4)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Clear Creek in Iroquois was conducted in 2000. Field sampling results indicated slightly impacted water quality conditions, however lab analysis of the sample found the site to be non-impacted. (DEC/DOW, BWAR/SBU, April 2003)

A 1994 biological survey also found non-impacted condition at the Clear Creek site. Improvements were noted when compared to results of a 1976 survey. (Cattaraugus Creek Biological Assessment Report, Bode et al, May 1995)

This segment includes the portion of the stream and all tribs from the mouth to North Branch Clear Creek (-4) near Taylor Hollow. The waters of this reach/segment are Class C(TS). Tribs to the reach/segment are Class C. North Branch Clear Creek (-4) is listed separately.

North Branch Clear Cr, Lower, and tribs (0104-0055) MinorImpacts

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23- 6-4
Hydro Unit Code: 04120102/030 **Str Class:** C
Waterbody Type: River
Waterbody Size: 34.8 Miles
Seg Description: stream and tribs, from mouth to Clear Lake

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Erie Co. (15)
Quad Map: NORTH COLLINS (K-05-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Recreation	Stressed	Suspected

Type of Pollutant(s)

Known: - - -
Suspected: PATHOGENS, Aesthetics
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: FAILING ON-SITE SYST (Lawtons)
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg9
Resolution Potential: Medium
TMDL/303d Status: n/a ()

Further Details

Recreational use in this portion of Clear Creek is thought to be affected by impacts from failing and/or inadequate on-site septic systems.

Approximately 20 homes with inadequate septic systems in the hamlet of Lawtons discharge directly to a common storm sewer. This storm sewer empties into an unnamed tributary of Clear Creek. (DEC/DOW, Region 9, April 2003)

A biological (macroinvertebrate) assessment of North Branch Clear Creek in Taylor Hollow was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to Clear Lake (P100). The waters of this reach/segment are Class C,C(TS). Tribs to the reach/segment are Class C.

Clear Lake (0104-0057) MinorImpacts

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23- 6-P100
Hydro Unit Code: 04120102/030 **Str Class:** A
Waterbody Type: Lake
Waterbody Size: 179.1 Acres
Seg Description: entire lake

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Erie Co. (15)
Quad Map: LANGFORD (K-05-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, NUTRIENTS (phosphorus), SILT/SEDIMENT
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: AGRICULTURE, STREAMBANK EROSION
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

Drinking water supply, public bathing, and recreational (fishing, boating) uses in Clear Lake are impacted by elevated nutrient levels and low water clarity. Sources of nutrients and silt/sediment are thought to be nonpoint runoff from agricultural activities in the surrounding watershed.

Clear Lake was included in the 2001 Lake Classification and Inventory study effort. Results of this study indicate elevated phosphorus levels and low water clarity readings significant enough to impact uses. The bottom of the reservoir (below 5 meters) was found to be anoxic and enriched with extremely high levels of nutrients. However, there was insufficient data to fully evaluate the impact of these conditions on the drinking water supply use. (DEC/DOW, BWM/Lake Services, April 2003)

Point Peter Brook, Upper, and tribs (0104-0003) Need Verific

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-19
Hydro Unit Code: 04120102/030 **Str Class:** A(T)
Waterbody Type: River
Waterbody Size: 14.6 Miles
Seg Description: stream and tribs, above reservoir dam

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: GOWANDA (L-05-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Stressed	Possible

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 1 (Waterbody Nominated, Problem Not Verified)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: n/a ()

Further Details

Drinking water supply uses in Point Peter Brook may be affected by silt/sediment from streambank erosion. There were well documented problems, however conditions need to be verified in light of recent efforts to address the issues.

Until recently, silt/sediment from streambank erosion caused increased treatment costs for the Village of Gowanda water treatment plant. Naturally occurring streambank erosion on high banks along the stream was the source of the problem. However concurrent with recent water treatment plant upgrades, improvements were also made in the watershed upstream of the reservoir. Velocity control structures were installed. Valley slopes were modified to minimize erosion. Also, during periods of high stream flow and turbidity, stream flow can now be diverted around the reservoir - minimizing impacts on the water supply. (Cattaraugus County WQCC/SWCD, 1996)

This segment includes the portion of the stream and all tribs to and above the Point Peter Reservoir (P104a) dam. The waters of this reach/segment are Class A(T). Tribs to the reach/segment, including Allen Springs (-1), are Class A.

Minor Tribs to Cattaraugus Creek (0104-0074) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-19 thru 31 (selected)
Drain Basin: Lake Erie-Niagara River
Hydro Unit Code: 04120102/030 **Str Class:** C
Cattaraugus Creek
Waterbody Type: River (Low Flow)
Reg/County: 9/Erie Co. (15)
Waterbody Size: 131.2 Miles
Quad Map: ()
Seg Description: total length of select tribs, fr Gowanda to Springville

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:
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Spooner Creek near Springville was conducted in 2000. Field sampling results suggested slightly impacted water quality conditions, however laboratory analysis indicated non-impacted conditions. Clean-water mayflies, stoneflies and caddisflies were numerous, although some nonpoint source nutrient enrichment was also indicated. Despite these conditions, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAR/SBU, April 2003)

Spooner Creek is considered to be representative of the other tribs in this segment.

This segment includes the total length of selected/smaller tribs to Cattaraugus Creek from an extension of the southern boundary of Gowanda Village to Spring Brook (-32) near Springville. Tribs within this reach/segment, including Lower Point Peter Brook (-19), Waterman Brook (-21), Utley Brook (-23), Kelly Brook (-24), Coon Brook (-25), Derby Brook (-28), Spooner Creek (-30), are Class B,B(T),B(TS),C,C(T),C(TS). Upper Point Peter Brook (-19), South Branch (-20) and Connoisarauley Creek (-27) are listed separately.

South Br. Cattaraugus, Lower, and tribs (0104-0006) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-20
Hydro Unit Code: 04120102/030 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 97.5 Miles
Seg Description: stream and tribs, from mouth to near Otto

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: GOWANDA (L-05-1)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of South Branch Cattaraugus Creek near the mouth near Gowanda was conducted in 2000. Field sampling results indicated good (slightly impacted) water quality conditions. Despite these conditions, the sample satisfied field screening criteria and aquatic life is considered to be fully supported in the stream. There are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAR/SBU, April 2003)

The Town of Otto completed a $420,000 wastewater treatment plant (27,000 gpd) and sewer project in 1996 to serve 50 homes. Most of the funding came from a HUD grant. (DEC/DOW, Region 9, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to Mansfield Creek (-11) near/above Otto. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C. Mansfield Creek (-11) is listed separately.

South Br. Cattaraugus, Upper, and tribs (0104-0058) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-20
Hydro Unit Code: 04120103/020 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 80.6 Miles
Seg Description: stream and tribs, above Otto

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: COLLINS CENTER (L-05-2)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of South Branch Cattaraugus Creek in Otto was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The field assessment was verified by laboratory-sorting of the sample to order level. A diverse and well-balanced fauna was present. (DEC/DOW, BWAR/SBU, April 2003)

The Town of Otto completed a $420,000 wastewater treatment plant (27,000 gpd) and sewer project in 1996 to serve 50 homes. Most of the funding came from a HUD grant. (DEC/DOW, Region 9, April 2003)

This segment includes the portion of the stream and all tribs above Mansfield Creek (-11) near/above Otto. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C. Mansfield Creek (-11) is listed separately.

Mansfield Creek and tribs (0104-0059) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-20-11
Hydro Unit Code: 04120102/030 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 92.9 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: CATTARAUGUS (L-05-3)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Mansfield Creek near the mouth above Otto was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, July 2002)

This segment includes the entire stream and all tribs. The waters of the stream are Class C(T). Tribs to this reach/segment, including Jersey Hollow Creek (-2) and Goodell Creek (-9), are Class C,C(T).

Rainbow, Timber Lakes (0104-0060) Need Verific

Waterbody Location Information

Revised: 05/13/2003

Water Index No: Ont 158..E-23-20-P??
Hydro Unit Code: 04120102/030 **Str Class:** C(T)
Waterbody Type: Lake
Waterbody Size: 76.8 Acres
Seg Description: total area of both lakes

Drain Basin: Lake Erie-Niagara River
Cattaraugus Creek
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: CATTARAUGUS (L-05-3)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: AGRICULTURE, STREAMBANK EROSION

Resolution/Management Information

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

Further Details

Recreational uses (fishing, boating) in Timber Lake are thought to be affected by high nutrient levels and reduced clarity. Sources of nutrients and silt/sediment are thought to be nonpoint runoff from agricultural activities in the surrounding area and streambank erosion within the watershed.

Timber Lake was included in the USEPA Environmental Monitoring and Assessment Program (EMAP) in 1993. Results of this study indicated high phosphorus levels and limited water clarity significant enough to impact uses. However, there was insufficient data to fully evaluate the impact of these conditions on the recreational uses of the lake. And given the age of the data, conditions in the lake need to be verified. (DEC/DOW, BWM/Lake Services, April 2003)

Connoisarauley Creek, Lower, and tribs (0104-0061) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No:	Ont 158..E-23-27			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120102/030	**Str Class:**	B(TS)		Cattaraugus Creek
Waterbody Type:	River			**Reg/County:**	9/Cattaraugus Co. (5)
Waterbody Size:	38.3 Miles			**Quad Map:**	ASHFORD HOLLOW (L-06-1)
Seg Description:	stream and tribs, from mouth to Near Ashford Hollow				

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Connoisarauley Creek at the mouth in Edies Siding near East Otto was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, July 2002)

This segment includes the portion of the stream and all tribs from the mouth to trib -4 near Ashford Hollow. The waters of this portion of the stream are Class B(TS). Tribs to this reach/segment are Class C,C(T).

Connoisarauley Creek, Upper, and tribs (0104-0062) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No:	Ont 158..E-23-27			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120102/030	**Str Class:**	C(T)		Cattaraugus Creek
Waterbody Type:	River			**Reg/County:**	9/Cattaraugus Co. (5)
Waterbody Size:	21.3 Miles			**Quad Map:**	ASHFORD HOLLOW (L-06-1)
Seg Description:	stream and tribs, above Ashford Hollow				

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Connoisarauley Creek at the mouth in Edies Siding near East Otto was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. Though this sampling point is below the described segment, it is considered representative of water quality in the upper reach. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs above/including trib -4 near Ashford Hollow. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C,C(T).

Spring Brook and tribs (0104-0021) MinorImpacts

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-32
Hydro Unit Code: 04120103/010 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 16.3 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: ASHFORD HOLLOW (L-06-1)

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/Hydrolgy	Stressed	Known

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: AGRICULTURE
Suspected: STREAMBANK EROSION, Hydro Modification, Municipal (Springville WWTP)
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, natural resources (fishery) habitat and recreational uses in Spring Brook are affected by silt/sediment loads from agricultural activities, streambank erosion and other nonpoint sources.

A biological (macroinvertebrate) assessment of Spring Brook below Springville (at Mill Street) was conducted in 1990. Field sampling results suggested moderately impacted water quality conditions. This small tributary of Cattaraugus Creek appeared very turbid during sampling, and yielded a very sparse fauna near the mouth, However the stream is assessed as no more than slightly impacted, based on the macroinvertebrate metrics. Similar sampling results were found during a biological survey in 1994 (see below). The more recent samples represent an apparent improvement in water quality since 1976, but the stream remains very turbid and the macroinvertebrate fauna remains very meager. (DEC/DOW, BWAR/SBU, April 2003)

A 1994 Biological survey of Cattaraugus Creek included sampling of Spring Brook. Elevated levels of aluminum were measured in crayfish collected at this site. The likely causes is thought to be alum applications at the Springville (V) Wastewater Treatment Facility upstream. This site was assessed as moderately impacted in a 1976 macroinvertebrate

sampling by the DEC Avon Pollution Investigations Unit. (Cattaraugus Creek Biological Assessment, Bode etal, May 1995)

A stretch of Spring Brook passes through an area utilized intensively by livestock. Livestock has unrestricted access to the stream and overgrazing of the streambanks and riparian corridor occur. As a result, the stream channel is poorly-formed and tends to jump its banks. Stream cover and shape are extremely poor. Excessive stream warming occurs. Enhanced nutrient loadings may occur as a result of livestock within and adjacent to the stream. (Erie County WQCC/SWCD, 1996)

Upstream of this reach, Spring Brook is a fine trout stream containing a population of wild trout. Streams which provide this type of brook trout population are uncommon in Erie County. (DEC/FWMR, Region 9, 1996)

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 are primarily Class C,C(T); with on trib (-2) Class B.

Buttermilk Creek and tribs (0104-0063) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-33
Hydro Unit Code: 04120103/010 **Str Class:** C
Waterbody Type: River
Waterbody Size: 81.2 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: ASHFORD HOLLOW (L-06-1)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Buttermilk Creek in Thomas Corners was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The field assessment was verified by laboratory-sorting of the sample to order level. Clean water mayflies dominated the fauna. (DEC/DOW, BWAR/SBU, April 2003)

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 Gooseneck Creek (-5) and Indian Creek (-7), are Class C,C(T),C(TS).

Elton Creek, Lower, and tribs (0104-0008) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-48
Hydro Unit Code: 04120103/010 **Str Class:** C(TS)
Waterbody Type: River
Waterbody Size: 43.4 Miles
Seg Description: stream and tribs, from mouth to Delevan

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: ARCADE (K-07-4)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Elton Creek near the mouth in Delevan was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, July 2002)

This segment includes the portion of the stream and all tribs from the mouth to Lime Lake Outlet (-3) in Delevan. The waters of this portion of the stream are Class C(TS). Tribs to this reach/segment, including Stony Creek (-1), are Class C,C(T),C(TS). Lime Lake Outlet (-3) is listed separately.

Elton Creek, Upper, and tribs (0104-0064) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-48
Hydro Unit Code: 04120103/010 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 82.5 Miles
Seg Description: stream and tribs, above Delevan

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: DELEVAN (L-07-1)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Elton Creek near the mouth in Delevan was conducted in 2000. Field sampling results indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, July 2002)

This segment includes the portion of the stream and all tribs above Lime Lake Outlet (-3) in Delevan. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C,C(T). Lime Lake Outlet (-3) is listed separately.

Lime Lake Outlet and tribs (0104-0065) NoKnownImpct

Waterbody Location Information

Revised: 05/12/2003

Water Index No: Ont 158..E-23-48-3
Hydro Unit Code: 04120103/010 **Str Class:** C(TS)
Waterbody Type: River
Waterbody Size: 35.9 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: DELEVAN (L-07-1)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Lime Lake Outlet in Delevan was conducted in 2000. Field sampling results indicated slightly impacted water quality conditions. The field assessment was verified by laboratory-sorting of the sample to order level. Despite these conditions, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the entire stream and all tribs. The waters of the stream are Class C(TS). Tribs to this reach/segment, including McKinstry Creek (-2), are Class C,C(T),C(TS).

Lime Lake (0104-0001) MinorImpacts

Waterbody Location Information

Revised: 03/25/2005

Water Index No: Ont 158..E-23-48-3-P130
Hydro Unit Code: 04120103/010 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 153.7 Acres
Seg Description: entire lake

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: DELEVAN (L-07-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Public Bathing	Threatened	Suspected
Recreation	Stressed	Suspected

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (nitrogen)
Suspected: - - -
Possible: Pathogens

Source(s) of Pollutant(s)

Known: - - -
Suspected: FAILING ON-SITE SYST (Lime Lake)
Possible: CONSTRUCTION (residential development)

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

Public bathing, and recreational (fishing, boating) uses in Lime Lake are threatened by slightly elevated nutrient levels and excessive aquatic weed growth. Nuisance species have also been noted in the lake. Residential development and impacts from on-site septic systems along the lake shore are possible sources of impacts.

The are approximately 300 lakeside residences. No obvious on-site septic systems failures have been documented, but small lots result in inadequate separation of systems. Soil conditions (gravel) are thought to contribute to high nitrogen levels in groundwater and lake. There has been some local interest in wastewater facility planning. The community applied for a 2002 WQCC Tier 3 grant. (DEC/DOW, Region 9, April 2003)

Lime Lake was included in the Citizens Statewide Lake Assessment Program from 1997-2002. Results of this study found elevated phosphorus levels and a use support assessment indicating conditions that threaten recreation uses during 10-25% of the sampling sessions at the lake. Excessive weed growth has been reported at the lake, and the presence of Myriophyllum spicatum (Eurasian water milfoil) has been noted at the lake. Herbicide application to about one-third of the lake is conducted annually to help control aquatic growth. (DEC/DOW, BWM/Lake Services, April 2003)

Clear Creek and tribs (0104-0031) Need Verific

Waterbody Location Information

Revised: 10/29/1993

Water Index No: Ont 158..E-23-56
Hydro Unit Code: 04120103/010 **Str Class:** C(TS)
Waterbody Type: River
Waterbody Size: 75.5 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: ARCADE (K-07-4)

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, Thermal Changes

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: DOW/Reg9 **Resolution Potential:** Medium
TMDL/303d Status: n/a ()

Further Details

Intensive agricultural production throughout this watershed contributes to erosion and runoff of sediments, nutrients, animal wastes and other related contaminants into Clear Creek threatening fish propagation and fish survival. The Creek is a prime trout stream, it is managed for 2 species of wild trout and there is no need for stocking. Intensive agricultural production occurring within the stream's drainage area, as well as frequent severe flooding and streambank erosion problems contributes sediment to the stream.

Flooding, erosion and sedimentation also results in the contribution of other contaminants such as nutrients and pesticides to the stream. Removal of riparian vegetation has also resulted in destabilization of streambanks, as well as an increase in average stream temperatures which can be detrimental to trout habitat. These erosion and sedimentation problems have been documented over the years, with numerous erosion control measures that have been applied both on the upland areas of the watershed and along streambanks. Lack of funds in recent years has resulted in a decrease in the application of conservation measures that can be utilized to manage these problems.

Source of information: Cattaraugus County SWCD & Regional Fisheries This segment includes the entire stream and all tribs. The waters of the stream are Class C(TS). Tribs to this reach/segment, including Cheney Creek (-9), are Class C,C(T),C(TS).

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Skim Lake (0104-0068) NoKnownImpct

Waterbody Location Information

Revised: 05/13/2003

Water Index No: Ont 158..E-23-56-11-P141
Hydro Unit Code: 04120103/010 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 19.3 Acres
Seg Description: entire lake

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: FREEDOM (L-07-2)

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:**
TMDL/303d Status: n/a ()

Further Details

Skim Lake was included in the 2001 Lake Classification and Inventory study effort. Results of this study found no evidence of significant water quality problems and conditions appear to be adequate to support recreational uses of the lake. However, rooted aquatic plant growth, primarily bladderwort (Utricularia spp.) and Sago pondweed (Stuckenia pectinatus), is extensive on the lake surface throughout the lake. There was insufficient data to fully evaluate the impact of these conditions on recreational uses of the lake. (DEC/DOW, BWM/Lake Services, April 2003)

Crystal Lake (0104-0070) Need Verific

Waterbody Location Information

Revised: 05/13/2003

Water Index No: Ont 158..E-23-56-14-P147
Hydro Unit Code: 04120103/010 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 32.1 Acres
Seg Description: entire lake

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Cattaraugus Co. (5)
Quad Map: FREEDOM (L-07-2)

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: D.O./OXYGEN DEMAND, NUTRIENTS (phosphorus)
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Aquatic life support and recreational uses of Crystal Lake are thought to be threatened by low dissolved oxygen and elevated nutrients at the lake bottom.

Crystal Lake was sampled as part of the Lake Classification and Inventory Survey (LCI) in 2001. Data collected through this program indicate that surface phosphorus levels and water clarity readings were adequate to fully support aquatic life/recreational uses. However the bottom of the lake (below 7 meters) was found to be anoxic and the bottom waters were enriched with extremely high nutrient levels, creating a potential threat to aquatic life and recreational uses of the lake. (DEC/DOW, BWM/Lake Services, April 2003)

Java Lake (0104-0004) Impaired Seg

Waterbody Location Information

Revised: 05/13/2003

Water Index No: Ont 158..E-23-P152
Hydro Unit Code: 04120103/010 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 51.1 Acres
Seg Description: entire lake

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Wyoming Co. (61)
Quad Map: BLISS (K-07-3)

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	Possible
RECREATION	Impaired	Known
Aesthetics	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: FAILING ON-SITE SYST, Construction (residential development)
Possible: Agriculture, Streambank Erosion

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg9 **Resolution Potential:**
TMDL/303d Status: 1 (High Priority for TMDL Development by NYSDEC)

Further Details

Recreational use (fishing, boating) in Java Lake are restricted by excessive weed growth and algal blooms in the lake. Public bathing and aesthetics are also considered impacted. Elevated nutrient levels contribute to the weed/algal growth. Residential development and on-site septic systems serving these homes along the lake shore are considered to be sources of nutrient loads and silt/sediment. Agricultural activity in the watershed and shore erosion are additional possible sources.

Java Lake was included in a Citizens Statewide Lake Assessment Program from 1998-1999. Results of this study found elevated phosphorus levels and a use impairment assessment indicating conditions that significantly impact recreation uses during more than 25% of the sampling sessions at the lake. Excessive algae blooms have been measured, and surface weed growth has been reported at the lake. (DEC/DOW, BWM/Lake Services, April 2003)

There are 235 housing units on this private lake with about 35 of these occupied full-time. Originally, this area was developed for seasonal and recreational use but the conversion of more residences to full-time use is likely to continue.

Due to the lack of regulations when many of the houses were built, it is suspected that some of the on-site disposal systems are sub-standard and/or failing. Another continuing problem is that gravel roads on steep slopes on the west side of the lake are prone to erosion during heavy run-off periods adding sediment to the lake. Agricultural run-off from farms to the north and east of the lake is a suspected contributor to lake pollution problems although no water quality testing or monitoring has been done to confirm this. (DEC/DOW, Region 9, 1998)

This segment is included on the NYS 2004 Section 303(d) List of Impaired Waters.

Waterbody Inventory
for
The Lake Erie/Chautauqua Creek Watershed

Water Index Number	Waterbody Segment	Category
Silver/Walnut Creek Watershed		
Ont 158..E-24	Halfway Brook and tribs (0104-0072)	UnAssessed
Ont 158..E-25	Silver Creek, Lower, and minor tribs (0105-0007)	**MinorImpacts**
Ont 158..E-25	Silver Creek, Upper, and tribs (0105-0012)	UnAssessed
Ont 158..E-25- 1	Walnut Creek, Lower, and tribs (0105-0006)	**MinorImpacts**
Ont 158..E-25- 1	Walnut Creek, Upper, and tribs (0105-0013)	UnAssessed
Ont 158..E-25- 8-P??	Silver Creek Reservoir (0105-0014)	**NoKnownImpct**
Tribs to Lake Erie, Silver Creek to Dunkirk		
Ont 158..E-26 thru 41 (selected)	Minor Tribs to Lake Erie (0105-0015)	UnAssessed
Ont 158..E-31	Beaver Creek and tribs (0105-0016)	UnAssessed
Ont 158..E-32	Scott Creek and tribs (0105-0017)	UnAssessed
Ont 158..E-34	Hyde Creek and tribs (0105-0018)	UnAssessed
Ont 158..E-36	Crooked Brook and tribs (0105-0019)	UnAssessed
Canadaway Creek Watershed		
Ont 158..E-37	Canadaway Creek, Lower, and tribs (0105-0008)	**Need Verific**
Ont 158..E-37	Canadaway Creek, Upper, and tribs (0105-0020)	UnAssessed
Ont 158..E-37- 7-P160	Fredonia Reservoir (0105-0021)	UnAssessed
Ont 158..E-37- 7-P160-	Tribs to Fredonia Reservoir (0105-0022)	UnAssessed
Tribs to Lake Erie, Dunkirk to PA State Line		
Ont 158..E-43	Little Canadaway Creek and tribs (0105-0023)	UnAssessed
Ont 158..E-44 thru 67 (selected)	Minor Tribs to Lake Erie (0105-0024)	UnAssessed
Ont 158..E-50	Slippery Rock Creek and tribs (0105-0010)	**NoKnownImpct**
Ont 158..E-50-P160k	Brocton Reservoir (0105-0025)	UnAssessed
Ont 158..E-50-P160k-	Tribs to Brocton Reservoir (0105-0026)	UnAssessed
Ont 158..E-68	Chautauqua Creek, Lower, and minor tribs (0105-0001)	**NoKnownImpct**
Ont 158..E-68	Chautauqua Creek, Upper and tribs (0105-0027)	UnAssessed
Ont 158..E-68- 1	Little Chautauqua Creek and tribs (0105-0028)	UnAssessed
Ont 158..E-68- 2-P165a	Minton Reservoir (0105-0029)	UnAssessed
Ont 158..E-69 thru 95	Minor Tribs to Lake Erie (0105-0030)	UnAssessed
Ont 158..E-96	Twentymile Creek and minor tribs (0105-0003)	**MinorImpacts**
Ont 158..E-96- 3	Upper Belson Creek/Gage Gulf and tribs (0105-0031)	UnAssessed
Ont 158..E-97	unnamed tribs to Pennsylvania (0105-0032)	UnAssessed

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Silver Creek, Lower, and minor tribs (0105-0007) MinorImpacts

Waterbody Location Information

Revised: 05/14/2003

Water Index No:	Ont 158..E-25			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120101/140	**Str Class:**	C(T)		Lake Erie-Chautauqua
Waterbody Type:	River			**Reg/County:**	9/Chautauqua Co. (7)
Waterbody Size:	21.8 Miles			**Quad Map:**	SILVER CREEK (K-04-4)
Seg Description:	stream and selected tribs, from mouth to Smith Mills				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrolgy	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION, Silviculture
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

Natural resources (fishery) habitat in Silver Creek are thought to be affected by silt/sediment loadings and other nonpoint inputs. Streambank erosion and logging activities are the suspected sources. Elevated silt and sediment loads in the creek are common and can impact aquatic habitat and recreational uses to some degree. However, much of the sediment loading is considered to be natural, a result of highly erodible soils throughout the basin.

A biological (macroinvertebrate) assessment of Silver Creek in Silver Creek (at Route 5) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was the likely source of impact. This site was similarly assessed as slightly impacted in 1993 and 1994. Despite these minor impacts, aquatic life is considered to be fully supported in the stream, and there are no other apparent impacts to water quality. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to the outlet of the Lower Silver Creek Reservoir in Smith Mills. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C. Walnut Creek (-1) is listed separately.

Walnut Creek, Lower, and tribs (0105-0006) MinorImpacts

Waterbody Location Information

Revised: 05/14/2003

Water Index No: Ont 158..E-25- 1
Hydro Unit Code: 04120101/140 **Str Class:** C
Waterbody Type: River
Waterbody Size: 25.4 Miles
Seg Description: stream and tribs, from the mouth to Forestville

Drain Basin: Lake Erie-Niagara River
Lake Erie-Chautauqua
Reg/County: 9/Chautauqua Co. (7)
Quad Map: SILVER CREEK (K-04-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrolgy	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION, Silviculture
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

Natural resources (fishery) habitat in Walnut Creek are thought to be affected by silt/sediment loadings and other nonpoint inputs. Streambank erosion and logging activities are the suspected sources. Elevated silt and sediment loads in the creek are common and can impact aquatic habitat and recreational uses to some degree. However, much of the sediment loading is considered to be natural, a result of highly erodible soils throughout the basin.

A biological (macroinvertebrate) assessment of Walnut Creek in Silver Creek (at Route 5) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was the primary cause of impact. Walnut Creek had also been assessed as slightly impacted in 1993, and non-impacted in 1994. The 1994 sample is considered non-representative, and caused by a high-flow year. Despite some minor impacts, aquatic life is considered to be fully supported in the stream, and there are no other apparent impacts to water quality. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to/including Tupper Creek (-5) in Forestville. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Tupper Creek (-5), are Class C,C(T).

Silver Creek Reservoir (0105-0014) NoKnownImpct

Waterbody Location Information

Revised: 05/14/2003

Water Index No: Ont 158..E-25- 8-P??
Hydro Unit Code: 04120101/140 **Str Class:** A
Waterbody Type: Lake(R)
Waterbody Size: 44.7 Acres
Seg Description: entire lake

Drain Basin: Lake Erie-Niagara River
Lake Erie-Chautauqua
Reg/County: 9/Chautauqua Co. (7)
Quad Map: SILVER CREEK (K-04-4)

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:**
TMDL/303d Status: n/a ()

Further Details

Silver Creek Reservoir was included in the 2001 Lake Classification and Inventory study effort. Results of this study with regard to surface phosphorus levels, water clarity, and aquatic vegetation densities found no evidence of significant water quality problems and conditions appear to be adequate to support recreational uses of the lake. There was insufficient data to fully evaluate the impact of these conditions on water supply use in the lake. (DEC/DOW, BWM/Lake Services, April 2003)

Canadaway Creek, Lower, and tribs (0105-0008) Need Verific

Waterbody Location Information

Revised: 05/14/2003

Water Index No: Ont 158..E-37
Hydro Unit Code: 04120101/130 **Str Class:** B
Waterbody Type: River
Waterbody Size: 36.9 Miles
Seg Description: stream and tribs, from mouth to Shumla

Drain Basin: Lake Erie-Niagara River
Lake Erie-Chautauqua
Reg/County: 9/Chautauqua Co. (7)
Quad Map: DUNKIRK (L-03-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Aquatic Life	Stressed	Possible
Habitat/Hydrolgy	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION
Possible: Agriculture, Urban Runoff

Resolution/Management Information

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

Further Details

Natural resources (fishery) habitat in Canadaway Creek are thought to be affected by silt/sediment loadings and other nonpoint inputs. Aquatic life support may also be affected; the most recent biological sampling indicated no water quality impacts, but conditions during sampling may have not been representative and results should be verified (see below). Streambank erosion and logging activities are the suspected sources. Elevated silt and sediment loads in the creek are common and can impact aquatic habitat and recreational uses to some degree. However, much of the sediment loading is considered to be natural, a result of highly erodible soils throughout the basin.

A biological (macroinvertebrate) assessment of Canadaway Creek in Dunkirk (at Route 5) was conducted in 2000. Sampling results indicated non-impacted water quality conditions. However the 2000 assessment of non-impacted was based only on field screening during a high-flow year. A 1994 assessment of non-impacted was from a processed sample, but also during a high-flow year. The prior year (1993), a low-flow year, yielded an assessment of moderately impacted. The 1988 assessment indicated slight impact. The invertebrate fauna continues to be dominated by filtering caddisfly larvae, but populations of mayflies and stoneflies are also maintained. Improvement is indicated for this stream, but needs verification. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the portion of the stream and all tribs from the mouth to the Fredonia Reservoir Outlet (-7) near Shumla. The waters of this portion of the stream are Class B,B(TS). Tribs to this reach/segment, including Beaver Creek (-2) and Dutch Hollow Creek (-5), are Class B,B(T).

Slippery Rock Creek and tribs (0105-0010) NoKnownImpct

Waterbody Location Information

Revised: 05/14/2003

Water Index No: Ont 158..E-50
Hydro Unit Code: 04120101/120 **Str Class:** C
Waterbody Type: River
Waterbody Size: 11.8 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Lake Erie-Chautauqua
Reg/County: 9/Chautauqua Co. (7)
Quad Map: BROCKTON (L-03-1)

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:**
TMDL/303d Status: n/a ()

Further Details

A biological (macroinvertebrate) assessment of Slippery Rock Creek in Brockton (at Route 5) was conducted in 2000. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was the primary cause of impact. Midges and caddisflies dominated the fauna. Despite these conditions, aquatic life is considered to be fully supported in the stream, and there are no other apparent impacts to designated uses. (DEC/DOW, BWAR/SBU, April 2003)

The Village of Brocton applied for funding to construct a sanitary line to construct a sanitary sewer to tie filter backwash from the village water treatment plan, as well as several homes with failing septics, into the WWTP. The most recent (2003) SPDES permit reduces the allowable flow of the WWTP to 0.372 MGD from 0.4 MGD previously. (DEC/DOW, BWC and Region 9, February 2005)

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C. Tribs to this reach/segment are also Class C. Brocton Reservoir (P160k) and tribs are is listed separately.

Chautauqua Creek, Lower, and minor tribs (0105-0001) NoKnownImpct

Waterbody Location Information

Revised: 05/14/2003

Water Index No:	Ont 158..E-68			**Drain Basin:**	Lake Erie-Niagara River
Hydro Unit Code:	04120101/120	**Str Class:**	C(T)		Lake Erie-Chautauqua
Waterbody Type:	River			**Reg/County:**	9/Chautauqua Co. (7)
Waterbody Size:	6.5 Miles			**Quad Map:**	WESTFIELD (L-02-3)
Seg Description:	stream and selected tribs, fr mouth to near Minton Res				

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:**
TMDL/303d Status: n/a ()

Further Details

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Chautauqua Creek in Barcelona, Chautauqua County, (at Route 5) was conducted in 2001. This sampling location is 0.3 miles above the mouth at Lake Erie. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis (see below). Water column sampling revealed iron to be the only parameter of concern. However, this is considered to be naturally occurring and not a source of water quality impacts. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Bottom sediment sampling results revealed cadmium and one PAH (dibenzo(a,h)anthracene) to be exceeding the Threshold Effects Level - levels at which adverse impacts occasionally occur. (DEC/DOW, BWAR/RIBS, January 2005)

Biological (macroinvertebrate) assessments of Chautauqua Creek in Barcelona (at Route 5) were conducted in 2000 and 2001. Sampling results indicated non-impacted water quality conditions, although the 2000 assessment was based only on field screening. It was assessed as non-impacted in 1994, a high-flow year, but slightly impacted in 1993, a low-flow year, and in 1987 and 1988. Based on the most recent assessments, water quality is considered non-impacted. The improvements may be related to the 1988 upgrading of the Westfield (V) Wastewater Treatment Facility, located 2 miles upstream. (DEC/DOW, BWAR/SBU, April 2003)

Improvements/repairs to the Westfield WWTP corrected total suspended solids violation reported in 2003. The plant is now in compliance with its permit. The village is also under a 2003 consent order to reduce I/I to a pump station. This action was driven by a citizen law suit. The goal of the order is to reduce I/I, freeing up some plant capacity to handle filter backwash water from the municipal water treatment facility, rather than discharging to the surface waters. An engineering report on reducing I/I (or proposing alternatives) is due May 2005; end construction date to tie the filter backwash discharge to the sanitary line in Dec 2007. (DEC/DOW, BWC and Region 9, Feb 2005)

This segment includes the portion of the stream and selected/smaller tribs from the mouth to 0.25 miles above trib -2. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C,C(T). Little Chautauqua Creek (-1) and Minton Reservoir (P165a) are listed separately.

Twentymile Creek and minor tribs (0105-0003) MinorImpacts

Waterbody Location Information

Revised: 05/14/2003

Water Index No: Ont 158..E-96
Hydro Unit Code: 04120101/110 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 53.3 Miles
Seg Description: entire stream and selected tribs

Drain Basin: Lake Erie-Niagara River
Lake Erie-Chautauqua
Reg/County: 9/Chautauqua Co. (7)
Quad Map: SOUTH RIPLEY (M-02-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrolgy	Stressed	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

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

Natural resources (fishery) habitat in Twentymile Creek are thought to be affected by silt/sediment loadings and other nonpoint inputs. Streambank erosion and logging activities are the suspected sources. Elevated silt and sediment loads in the creek are common and can impact aquatic habitat and recreational uses to some degree. However, much of the sediment loading is considered to be natural, a result of highly erodible soils throughout the basin.

A biological (macroinvertebrate) assessment of Twentymile Creek in Robinson Stop, PA (at Route 5) was conducted in 2000. Sampling results indicated non-impacted water quality conditions. Field sampling results found clean-water mayflies, stoneflies, caddisflies, and beetles to be present. The sample satisfied field screening criteria and was returned to the stream. There are no other apparent impacts to water quality. (DEC/DOW, BWAR/SBU, April 2003)

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C(T). Tribs to this reach/segment, including Lower Belson Creek/Gage Gulf (-3), are Class C,C(T). Upper Belson Creek/Gage Gulf (-3) is listed separately.

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Summary Listing of Priority Waters

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NiagaraRiver/Lake Erie Basin Priority Waterbodies List Table 1

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
Ont 158 (portion 1) **Section 303(d) Listed Water**	Niagara River, Lower, Main Stem (0101-0027) Fish Consumption KNOWN to be IMPAIRED Habitat/Hydro SUSPECTED of being IMPAIR	Niagara	13.9 Mile	River	A-Spcl	Impaired Seg Causes: Priority Organics, Priority Organics, Pesticides Sources: Tox/Contam. Sediment, Habitat Modification
Ont 158 (portion 2) **Section 303(d) Listed Water**	Niagara River, Upper, Main Stem (0101-0006) Fish Consumption KNOWN to be IMPAIRED Habitat/Hydro SUSPECTED of being IMPAIR Aquatic Life SUSPECTED of being STRESSED	Niagara	21.6 Mile	River	A-Spcl	Impaired Seg Causes: Priority Organics Sources: Habitat Modification, Tox/Contam. Sedim...
Ont 158 (portion 3)	Chippewa (West) Channel (0101-0028) Fish Consumption KNOWN to be IMPAIRED	Niagara	12.8 Mile	River	A-Spcl	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment, Landfill/Land Disp.
Ont 158 (portion 4)	Black Rock Canal (0101-0025) Fish Consumption KNOWN to be IMPAIRED Habitat/Hydroy SUSPECTED of being IMPAIR Aquatic Life POSSIBLY STRESSED	Niagara	1.0 Mile	River	C	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment, Habitat Modifica...
Ont 158- 6 **Section 303(d) Listed Water**	Gill Creek and tribs (0101-0002) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Niagara	13.8 Mile	River	C	Impaired Seg Causes: Unknown Toxicity Sources: Urban Runoff, Tox/Contam. Sediment
Ont 158- 8 **Section 303(d) Listed Water**	Cayuga Creek and minor tribs (0101-0001) Fish Consumption KNOWN to be IMPAIRED Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Niagara	21.8 Mile	River	C	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment, Urban Runoff

NiagaraRiver/Lake Erie Basin Priority Waterbodies List Table 1

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
Ont 158- 8-1 **Section 303(d) Listed Water**	Bergholtz Creek and tribs (0101-0004) Fish Consumption KNOWN to be IMPAIRED Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Niagara	33.1 Mile	River	C	Impaired Seg Causes: Priority Organics, Nutrients, Pathogens Sources: Tox/Contam. Sediment, Urban Runoff
Ont 158-12 (portion 1) **Section 303(d) Listed Water**	Tonawanda Creek, Lower, Main Stem (0102-0022) Fish Consumption KNOWN to be IMPAIRED Aquatic Life SUSPECTED of being STRESSED Recreation SUSPECTED of being STRESSED	Niagara	12.3 Mile	River	C	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158-12 (portion 2)	Tonawanda Creek, Middle, Main Stem (0102-0006) Aquatic Life SUSPECTED of being STRESSED Recreation SUSPECTED of being STRESSED	Niagara	50.1 Mile	River	B	MinorImpacts Causes: Silt/Sediment Sources: Streambank Erosion
Ont 158-12 (portion 3) **Section 303(d) Listed Water**	Tonawanda Creek, Middle, Main Stem (0102-0002) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics SUSPECTED of being STRESSED	Genesee	10.9 Mile	River	C	Impaired Seg Causes: Nutrients, Silt/Sediment Sources: Streambank Erosion, Storm Sewers, Urban Runoff
Ont 158-12 (portion 4) **Section 303(d) Listed Water**	Tonawanda Creek, Upp, and mnr tribs (0102-0003) Water Supply KNOWN to be IMPAIRED Aquatic Life KNOWN to be STRESSED Recreation KNOWN to be STRESSED	Genesee	254.9 Mile	River	A	Impaired Seg Causes: Silt/Sediment Sources: Agriculture, Streambank Erosion
Ont 158-12- 1 **Section 303(d) Listed Water**	Ellicott Creek, Lower, and tribs (0102-0018) Aquatic Life SUSPECTED of being IMPAIRED Recreation KNOWN to be STRESSED Fish Consumption POSSIBLY STRESSED Aesthetics POSSIBLY STRESSED	Erie	112.1 Mile	River	B	Impaired Seg Causes: Nutrients, Silt/Sediment Sources: Urban Runoff, Habitat Modification, Hydro Modification, Muni...

NiagaraRiver/Lake Erie Basin Priority Waterbodies List Table 1

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
Ont 158-12- 6 **Section 303(d) Listed Water**	Ransom Creek, Lower, and tribs (0102-0004) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Erie	49.5 Mile	River	C	Impaired Seg Causes: D.O./Oxygen Demand, Pathogens Sources: Failing On-Site Syst, Private/Comm/Inst
Ont 158-12- 6 **Section 303(d) Listed Water**	Ransom Creek, Upper, and tribs (0102-0027) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Erie	44.2 Mile	River	C(T)	Impaired Seg Causes: D.O./Oxygen Demand, Pathogens Sources: Failing On-Site Syst, Private/Comm/Inst
Ont 158-12- 9 **Section 303(d) Listed Water**	Beeman Creek and tribs (0102-0030) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED	Erie	43.7 Mile	River	C	Impaired Seg Causes: D.O./Oxygen Demand, Nutrients, Pathogens Sources: Failing On-Site Syst
Ont 158-12-11-1 **Section 303(d) Listed Water**	Murder Creek, Lower, and tribs (0102-0031) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED	Erie	76.2 Mile	River	C*	Impaired Seg Causes: D.O./Oxygen Demand, Nutrients, Pathogens Sources: Failing On-Site Syst
Ont 158-12-28 **Section 303(d) Listed Water**	Bowen Brook and tribs (0102-0036) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED	Genesee	60.8 Mile	River	C*	Impaired Seg Causes: D.O./Oxygen Demand, Nutrients Sources: Failing On-Site Syst
Ont 158-12-32 **Section 303(d) Listed Water**	Little Tonawanda Cr, Lower, and tribs (0102-0001) Water Supply KNOWN to be IMPAIRED Public Bathing KNOWN to be STRESSED Recreation KNOWN to be STRESSED	Genesee	52.8 Mile	River	A	Impaired Seg Causes: Silt/Sediment Sources: Agriculture, Streambank Erosion
Ont 158-12-46-P20	Attica Reservoir (0102-0039) Public Bathing KNOWN to be STRESSED Recreation KNOWN to be STRESSED Water Supply POSSIBLY STRESSED	Wyoming	12.8 Acre	Lake(R)	A	MinorImpacts Causes: Algal/Weed Growth, Nutrients Sources: Agriculture

NiagaraRiver/Lake Erie Basin Priority Waterbodies List Table 1

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
Ont 158-13 **Section 303(d) Listed Water**	Two Mile Creek and tribs (0101-0005) Public Bathing KNOWN to be IMPAIRED Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Erie	7.3 Mile	River	B	Impaired Seg Causes: Aesthetics, D.O./Oxygen Demand, Pathogens Sources: Comb. Sewer Overflow, Municipal
Ont 158-15 **Section 303(d) Listed Water**	Scajaquada Creek, Lower, and tribs (0101-0023) Public Bathing KNOWN to be IMPAIRED Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Habitat/Hydrolgy KNOWN to be STRESSED Aesthetics KNOWN to be STRESSED	Erie	3.2 Mile	River	B	Impaired Seg Causes: Aesthetics, D.O./Oxygen Demand, Pathogens Sources: Comb. Sewer Overflow, Urban Runoff
Ont 158-15-P25 **Section 303(d) Listed Water**	Delaware Park Pond (0101-0026) Fish Consumption KNOWN to be IMPAIRED	Erie	32.1 Acre	Lake	B	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158-E (portion 1) **Section 303(d) Listed Water**	Lake Erie (Erie Basin) (0104-0032) Fish Consumption KNOWN to be IMPAIRED	Erie	4.1 ShrMi	G.Lakes	C	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158-E (portion 2) **Section 303(d) Listed Water**	Lake Erie (Outer Harbor, North) (0104-0033) Fish Consumption KNOWN to be IMPAIRED	Erie	9.1 ShrMi	G.Lakes	B	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158-E (portion 3) **Section 303(d) Listed Water**	Lake Erie (Outer Harbor, South) (0104-0034) Fish Consumption KNOWN to be IMPAIRED	Erie	3.5 ShrMi	G.Lakes	C	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment

NiagaraRiver/Lake Erie Basin Priority Waterbodies List Table 1

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
Ont 158-E (portion 4) **Section 303(d) Listed Water**	Lake Erie (Northeast Shoreline) (0104-0035) Fish Consumption KNOWN to be IMPAIRED	Erie	2.7 ShrMi	G.Lakes	C	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158-E (portion 5) **Section 303(d) Listed Water**	Lake Erie (Northeast Shoreline) (0104-0036) Fish Consumption KNOWN to be IMPAIRED	Erie	9.1 ShrMi	G.Lakes	B	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158-E (portion 6) **Section 303(d) Listed Water**	Lake Erie (Main Lake, North) (0104-0037) Fish Consumption KNOWN to be IMPAIRED	Erie	15.7 ShrMi	G.Lakes	A-Spcl	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158-E (portion 7) **Section 303(d) Listed Water**	Lake Erie (Main Lake, South) (0105-0033) Fish Consumption KNOWN to be IMPAIRED	Chautauqua	45.2 ShrMi	G.Lakes	A-Spcl	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158-E (portion 7a) **Section 303(d) Listed Water**	Lake Erie (Dunkirk Harbor) (0105-0009) Public Bathing KNOWN to be IMPAIRED Fish Consumption KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics SUSPECTED of being STRESSED	Chautauqua	2.0 ShrMi	G.Lakes	B	Impaired Seg Causes: Priority Organics, Pathogens Sources: Tox/Contam. Sediment, Storm Sewers, Unknown Source
Ont 158-E (portion 7b) **Section 303(d) Listed Water**	Lake Erie (Barcelona Harbor) (0105-0011) Fish Consumption KNOWN to be IMPAIRED	Chautauqua	1.0 ShrMi	G.Lakes	B	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment
Ont 158..E- 1 **Section 303(d) Listed Water**	Buffalo River (0103-0001) Fish Consumption KNOWN to be IMPAIRED Recreation KNOWN to be STRESSED Aquatic Life SUSPECTED of being STRESSED	Erie	13.5 Mile	River	C	Impaired Seg Causes: Priority Organics Sources: Tox/Contam. Sediment, Comb. Sewer Overflow
Ont 158..E- 1*	Buffalo Creek, Lower, and minor tribs (0103-0003)	Erie	63.5 Mile	River	B	MinorImpacts

NiagaraRiver/Lake Erie Basin Priority Waterbodies List Table 1

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
	Aquatic Life SUSPECTED of being STRESSED					Causes: Silt/Sediment Sources: Streambank Erosion, Urban Runoff, Agriculture
Ont 158..E- 1- 4-15-10-P??	Orchard Park Reservoir (0103-0016) Public Bathing KNOWN to be STRESSED Recreation KNOWN to be STRESSED Water Supply KNOWN to be THREATENED	Erie	25.7 Acre	Lake(R)	A	MinorImpacts Causes: Nutrients Sources: Urban Runoff
Ont 158..E- 1- 6	Cayuga Creek, Lower, and tribs (0103-0007) Aquatic Life SUSPECTED of being STRESSED Fish Consumption POSSIBLY STRESSED	Erie	13.7 Mile	River	C	MinorImpacts Causes: Nutrients, Silt/Sediment Sources: Streambank Erosion, Urban Runoff
Ont 158..E- 1- 6- 7	Little Buffalo Creek and tribs (0103-0008) Habitat/Hydro SUSPECTED of being STRESS	Erie	74.4 Mile	River	C*	MinorImpacts Causes: Silt/Sediment Sources: Streambank Erosion
Ont 158..E- 2	Smoke Creek, Lower, and minor tribs (0101-0007) Aquatic Life KNOWN to be STRESSED Recreation KNOWN to be STRESSED Aesthetics KNOWN to be STRESSED	Erie	9.8 Mile	River	C	MinorImpacts Causes: Aesthetics, Nutrients, Silt/Sediment Sources: Urban Runoff, Industrial
Ont 158..E- 2- 1 **Section 303(d) Listed Water**	South Branch, Lower, and tribs (0101-0036) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED	Erie	27.6 Mile	River	C	Impaired Seg Causes: Nutrients, Silt/Sediment Sources: Streambank Erosion, Urban Runoff, Comb. Sewer Overflow
Ont 158..E- 2- 1-P81b	Green Lake (0101-0038) Public Bathing KNOWN to be STRESSED Recreation KNOWN to be STRESSED	Erie	10.0 Acre	Lake	B	MinorImpacts Causes: Nutrients Sources: Urban Runoff
Ont 158..E- 3 **Section 303(d) Listed Water**	Rush Creek and tribs (0104-0018) Public Bathing KNOWN to be IMPAIRED	Erie	17.4 Mile	River	C	Impaired Seg Causes: Pathogens, Nutrients

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
	Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Aesthetics KNOWN to be STRESSED					Sources: Municipal, Urban Runoff
Ont 158..E-13	Eighteenmile Cr, Lower, minor tribs (0104-0030) Habitat/Hydro SUSPECTED of being STRESS Fish Consumption POSSIBLY STRESSED	Erie	32.3 Mile	River	B(T)	MinorImpacts Causes: Silt/Sediment Sources: Streambank Erosion, Urban Runoff
Ont 158..E-19 **Section 303(d) Listed Water**	Little Sister Creek, Lower, and tribs (0104-0045) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be IMPAIRED Public Bathing KNOWN to be STRESSED	Erie	3.4 Mile	River	B	Impaired Seg Causes: Nutrients, Pathogens Sources: Failing On-Site Syst
Ont 158..E-20	Big Sister Creek, Lower, and tribs (0104-0013) Aquatic Life KNOWN to be STRESSED Recreation KNOWN to be STRESSED Public Bathing POSSIBLY STRESSED	Erie	19.6 Mile	River	C*	MinorImpacts Causes: Aesthetics, Nutrients Sources: Municipal
Ont 158..E-21	Delaware Creek, Lower, and tribs (0104-0049) Aquatic Life KNOWN to be STRESSED Recreation KNOWN to be STRESSED	Erie	4.1 Mile	River	B(TS)	MinorImpacts Causes: Nutrients Sources: Failing On-Site Syst
Ont 158..E-22	Muddy Creek, Lower, and tribs (0104-0051) Aquatic Life KNOWN to be IMPAIRED Recreation KNOWN to be STRESSED	Erie	1.6 Mile	River	B	Impaired Seg Causes: Unknown Toxicity Sources: Unknown Source
Ont 158..E-23 (portion 1)	Cattaraugus Cr, Lower, Main Stem (0104-0029) Habitat/Hydro SUSPECTED of being STRESS	Erie	10.8 Mile	River	B(T)	MinorImpacts Causes: Silt/Sediment Sources: Streambank Erosion
Ont 158..E-23 (portion 4)	Cattaraugus Cr, Middle, Main Stem (0104-0020) Habitat/Hydro SUSPECTED of being STRESS	Erie	13.1 Mile	River	B	MinorImpacts Causes: Silt/Sediment

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
						Sources: Streambank Erosion
Ont 158..E-23- 6-4	North Branch Clear Cr, Low, and tribs (0104-0055) Recreation SUSPECTED of being STRESSED	Erie	34.8 Mile	River	C	MinorImpacts Causes: Pathogens Sources: Failing On-Site Syst
Ont 158..E-23- 6-P100	Clear Lake (0104-0057) Aquatic Life SUSPECTED of being STRESSED Recreation SUSPECTED of being STRESSED Water Supply POSSIBLY STRESSED	Erie	179.1 Acre	Lake	A	MinorImpacts Causes: D.O./Oxygen Demand, Nutrients, Silt/Sediment Sources: Agriculture, Streambank Erosion
Ont 158..E-23-32	Spring Brook and tribs (0104-0021) Aquatic Life KNOWN to be STRESSED Recreation KNOWN to be STRESSED Habitat/Hydrolgy KNOWN to be STRESSED	Erie	16.3 Mile	River	C*	MinorImpacts Causes: Silt/Sediment Sources: Agriculture, Streambank Erosion
Ont 158..E-23-48-3-P130	Lime Lake (0104-0001) Recreation SUSPECTED of being STRESSED Public Bathing SUSPECTED of being THREAT	Cattaraugus	153.7 Acre	Lake	B	MinorImpacts Causes: Algal/Weed Growth, Nutrients Sources: Failing On-Site Syst, Construction
Ont 158..E-23-P152 **Section 303(d) Listed Water**	Java Lake (0104-0004) Recreation KNOWN to be IMPAIRED Aesthetics SUSPECTED of being STRESSED Public Bathing POSSIBLY STRESSED Aquatic Life POSSIBLY STRESSED	Wyoming	51.1 Acre	Lake	B	Impaired Seg Causes: Algal/Weed Growth, Nutrients Sources: Failing On-Site Syst
Ont 158..E-25	Silver Creek, Lower, and minor tribs (0105-0007) Habitat/Hydro SUSPECTED of being STRESS	Chautauqua	21.8 Mile	River	C(T)	MinorImpacts Causes: Silt/Sediment Sources: Streambank Erosion
Ont 158..E-25- 1	Walnut Creek, Lower, and tribs (0105-0006) Habitat/Hydro SUSPECTED of being STRESS	Chautauqua	25.4 Mile	River	C	MinorImpacts Causes: Silt/Sediment

Water Index Number	Waterbody/Segment Name (ID) Use Impairment(s)	County	Seg Size	Type	Class	W.B.Category Cause/Source Information
						Sources: Streambank Erosion
Ont 158..E-96	Twentymile Creek and minor tribs (0105-0003) Habitat/Hydro SUSPECTED of being STRESS	Chautauqua	53.3 Mile	River	C(T)	MinorImpacts Causes: Silt/Sediment Sources: Streambank Erosion, Silviculture

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The Waterbody Inventory Priority Waterbodies List Assessment Methodology

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 (*Special Protection*)
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.

Table 2 Aquatic Life Use Assessment Criteria

Biological (Macroinvertebrate) Assessment		WI/PWL Use Impairment		EPA Designated Use Support
		Severity	Documentation	
Non-Impacted (Very Good)		No Known Impairment	Assessment Level: *Monitored*	Fully Supporting
Slightly Impacted* (Good)	No other indications of impairment	No Known Impairment	Assessment Level: *Evaluated*	Fully Supporting
	Other indications of impairment present	Stressed	Suspected or Known	Fully Supporting, but Threatened
Moderately Impacted (Poor)		Impaired	Known	Partially Supporting
Severely Impacted (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*.

Table 3 Acid Rain/Aquatic Life Assessment Criteria

Lake pH/Fishery Assessment	WI/PWL Use Impairment		EPA Designated Use Support
	Severity	Documentation	
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, but fishery surveys indicate no fish, and lake characteristics suggest acid rain as cause	Impaired*	Suspected*	Partially Supporting
other indications of acid rain**	Stressed	Suspected	Fully Supporting, but Threatened
No indications of acid rain effects	No Known Impairment	Assessment: *Evaluated*	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.

Table 4 Drinking Water Use Assessment Criteria

Criteria	WI/PWL Use Impairment		EPA Designated Use Support
	Severity	Documentation	
Frequent/Persistent Conditions Prevent Use • One or more NYS DOH Drinking water supply closures resulting in closure of the supply for more than 30 days.	Precluded	Known	Not Supporting
Occasional Conditions Prevent Use • One or more NYS DOH drinking water supply closures resulting in closure of the supply for less than 30 days, or	Impaired	Known	Partially Supporting
Frequent/Persistent Conditions Discourage Use • 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.). • Monitoring data exceeds contaminant criteria* more than 25% of time.	Impaired	Known or Suspected	Partially Supporting
Occasional Conditions Discourage Use • Monitoring data exceeds contaminant criteria* more than 10% of time.	Stressed	Suspected	Full Support (Threatened)
Conditions Support Uses, Threats Noted • Contaminants are present, but at levels sufficiently low that routine treatment results in acceptable drinking water.	Threatened	Known or Suspected	Full Support or Full Support, (Threatened)
No Known Impairments or Imminent Threats • No drinking water restrictions, and • No additional treatment required, and • No known contaminants present.	*Special Protection Waters**		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

Table 5 Fish Consumption Use Assessment Criteria

Criteria	WI/PWL Use Impairment		EPA Designated Use Support
	Severity	Documentation	
Frequent/Persistent Conditions Prevent Use • NYS DOH advisory recommends eating no fish (or none of sub-species) from specific waterbody.	Precluded	Known	Not Supporting
Periodic/Occasional Conditions Prevent Use • NYS DOH advisory recommends limiting consumption of fish from a specific waterbody. • Monitoring of fish tissue show contaminant levels that exceed levels of concern, but NYS DOH advisory has not been issued.	Impaired	Known or Suspected	Partially Supporting
Occasional (Other) Conditions Discourage Use • Monitoring of macroinvertebrate tissue or surficial bottom sediment show contaminant levels that exceed levels of concern.	Stressed	Suspected	Fully Supporting (Threatened)
Conditions Support Use, Threats Noted • Monitoring of fish (known), macroinvertebrate tissue/bottom sediment (suspected) show contaminant levels present but not exceeding levels of concern.	Threatened	Known or Suspected	Full Support or Full Support (Threatened)
No Known Impairment or Imminent Threats • No fish consumption advisory beyond the NYS DOH *General Advisory for Eating Gamefish*, and • Monitoring data revealing no contaminants in fish, macroinvertebrate tissue or surficial bottom sediment above background levels.	No Known Impairment	Assessment Level: *Monitored*	Full Support

that have not been 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.

Table 6 Shellfishing Use Assessment Criteria

Criteria	WI/PWL Use Impairment		EPA Designated Use Support
	Severity	Documentation	
Frequent/Persistent Conditions Prevent Use • NYS DEC Division of Fish Wildlife and Marine Resources (DFWMR) has issued a year-round shellfishing closure for the water.	Precluded	Known	Not Supporting
Periodic/Occasional Conditions Prevent Use • DFWMR has issued a seasonal or partial shellfishing closure for the water.	Impaired	Known	Partially Supporting
Occasional (Other) Conditions Discourage Use • ???	Stressed	Known or Suspected	Full Support, Threatened
Conditions Support Use, but Threats Noted • Shellfish Land Certification monitoring reveals contaminant above background, but not sufficient to warrant shellfish bed closure.	Threatened	Known	Full Support (Threatened)
No Known Impairment or Threat to Use • DFWMR has certified (opened) the water for direct market harvesting of shellfish, and • Shellfish Land Certification monitoring (DFWMR) reveals no contaminants above background levels.	No Known Impairment	Assessment Level: *Monitored*	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*.

Table 7 Public Bathing/Recreation Use Assessment Criteria

Criteria	WI/PWL Use Impairment		EPA Designated Use Support
	Severity	**Documentation**	
Frequent/Persistent Conditions Prevent Uses • State/local/county health department has closed beach/water to swimming for the entire season.	Precluded	Known	Not Supporting
Periodic/Occasional Conditions Prevent Uses • State/local/county health department has issued temporary beach closure for the waterbody. • Sufficient stream flow/water level necessary to support recreational uses are artificially restricted.	Impaired	Known	Partially Supporting
Frequent/Persistent Conditions Discourage Uses • Recreational Uses of water require additional measures (e.g., weed harvesting/control). • Monitoring data exceeds *Impaired* criteria* more than 10% (suspected) or 25% (known) of time. • Observational criteria* for restricted use noted more than 75% of the time.	Impaired	Known or Suspected	
Occasional (Other) Conditions Discourage Uses • Monitoring data exceeds *Stressed* criteria* more than 10% (suspected) or 25% (known) of time. • Observational criteria* for restricted use noted more than 25% of the time.	Stressed	Known or Suspected	Full Support (Threatened)
Conditions Support Uses, but Threats Noted • Data exceeds *Threatened* criteria* more than 10% (suspected) or 25% (known) of time. • Observational criteria* for restricted use noted more than 10% of the time.	Threatened	Known or Suspected	Full Support or Full Support, (Threatened)
No Known Impairments or Threats to Uses • Monitoring data does not exceed use restriction criteria more than 10% of time. • Observational criteria* for restricted use noted less than 10% of the time.	No Known Impairment	Assessment Level: *Monitored*	Full Support

*** Monitoring Data Criteria**	*Impaired*	*Stressed*	*Threatened*
Total Phosphorus	40 µg/l	30 µg/l	20 µg/l
Chlorophyl a	15 µg/l	12 µg/l	8 µg/l
Clarity (Secchi Disc)	1.2 m	1.5 m	2.0 m

*** Observational Data Criteria**

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 *CSLAP Field Observation Forms*.

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.

Appendix B

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.

Category	MA7CD/10 Range
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 tubidity 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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Appendix C

Waterbody Inventory Data Sheets
By County, Segment Name

Waterbody/Segment (ID)	Water Index Number	Category
Cattaraugus County		
Beaver Lake (0104-0067)	Ont 158..E-23-48-9-P133	UnAssessed
Buttermilk Creek and tribs (0104-0063)	Ont 158..E-23-33	NoKnownImpct
Clear Creek and tribs (0104-0031)	Ont 158..E-23-56	Need Verific
Connoisarauley Creek, Lower, and tribs (0104-0061)	Ont 158..E-23-27	NoKnownImpct
Connoisarauley Creek, Upper, and tribs (0104-0062)	Ont 158..E-23-27	NoKnownImpct
Crystal Lake (0104-0070)	Ont 158..E-23-56-14-P147	Need Verific
Elton Creek, Lower, and tribs (0104-0008)	Ont 158..E-23-48	NoKnownImpct
Elton Creek, Upper, and tribs (0104-0064)	Ont 158..E-23-48	NoKnownImpct
Frog Pond, Sucker Pond (0104-0066)	Ont 158..E-23-48-3-P128,P132	UnAssessed
Lime Lake (0104-0001)	Ont 158..E-23-48-3-P130	MinorImpacts
Lime Lake Outlet and tribs (0104-0065)	Ont 158..E-23-48-3	NoKnownImpct
Mansfield Creek and tribs (0104-0059)	Ont 158..E-23-20-11	NoKnownImpct
Moores Pond (0104-0069)	Ont 158..E-23-56-14-P146	UnAssessed
Point Peter Brook, Upper, and tribs (0104-0003)	Ont 158..E-23-19	Need Verific
Rainbow, Timber Lakes (0104-0060)	Ont 158..E-23-20-P??	Need Verific
Skim Lake (0104-0068)	Ont 158..E-23-56-11-P141	NoKnownImpct
South Br. Cattaraugus, Lower, and tribs (0104-0006)	Ont 158..E-23-20	NoKnownImpct
South Br. Cattaraugus, Upper, and tribs (0104-0058)	Ont 158..E-23-20	NoKnownImpct
Chautauqua County		
Beaver Creek and tribs (0105-0016)	Ont 158..E-31	UnAssessed
Brocton Reservoir (0105-0025)	Ont 158..E-50-P160k	UnAssessed
Canadaway Creek, Lower, and tribs (0105-0008)	Ont 158..E-37	Need Verific
Canadaway Creek, Upper, and tribs (0105-0020)	Ont 158..E-37	UnAssessed
Chautauqua Creek, Lower, and minor tribs (0105-0001)	Ont 158..E-68	NoKnownImpct
Chautauqua Creek, Upper and tribs (0105-0027)	Ont 158..E-68	UnAssessed
Crooked Brook and tribs (0105-0019)	Ont 158..E-36	UnAssessed
Fredonia Reservoir (0105-0021)	Ont 158..E-37- 7-P160	UnAssessed
Halfway Brook and tribs (0104-0072)	Ont 158..E-24	UnAssessed
Hyde Creek and tribs (0105-0018)	Ont 158..E-34	UnAssessed
Lake Erie (Barcelona Harbor) (0105-0011)	Ont 158-E (portion 7b)	Impaired Seg
Lake Erie (Dunkirk Harbor) (0105-0009)	Ont 158-E (portion 7a)	Impaired Seg
Lake Erie (Main Lake, South) (0105-0033)	Ont 158-E (portion 7)	Impaired Seg
Little Canadaway Creek and tribs (0105-0023)	Ont 158..E-43	UnAssessed
Little Chautauqua Creek and tribs (0105-0028)	Ont 158..E-68- 1	UnAssessed
Minor Tribs to Lake Erie (0105-0015)	Ont 158..E-26 thru 41 (selected)	UnAssessed
Minor Tribs to Lake Erie (0105-0024)	Ont 158..E-44 thru 67 (selected)	UnAssessed
Minor Tribs to Lake Erie (0105-0030)	Ont 158..E-69 thru 95	UnAssessed
Minton Reservoir (0105-0029)	Ont 158..E-68- 2-P165a	UnAssessed
Scott Creek and tribs (0105-0017)	Ont 158..E-32	UnAssessed
Silver Creek Reservoir (0105-0014)	Ont 158..E-25- 8-P??	NoKnownImpct
Silver Creek, Lower, and minor tribs (0105-0007)	Ont 158..E-25	MinorImpacts
Silver Creek, Upper, and tribs (0105-0012)	Ont 158..E-25	UnAssessed
Slippery Rock Creek and tribs (0105-0010)	Ont 158..E-50	NoKnownImpct

Waterbody/Segment (ID)	Water Index Number	Category
Chautauqua County (con't)		
Tribs to Brocton Reservoir (0105-0026)	Ont 158..E-50-P160k-	UnAssessed
Tribs to Fredonia Reservoir (0105-0022)	Ont 158..E-37- 7-P160-	UnAssessed
Twentymile Creek and minor tribs (0105-0003)	Ont 158..E-96	MinorImpacts
Upper Belson Creek/Gage Gulf and tribs (0105-0031)	Ont 158..E-96- 3	UnAssessed
Walnut Creek, Lower, and tribs (0105-0006)	Ont 158..E-25- 1	MinorImpacts
Walnut Creek, Upper, and tribs (0105-0013)	Ont 158..E-25- 1	UnAssessed
unnamed tribs to Pennsylvania (0105-0032)	Ont 158..E-97	UnAssessed
Erie County		
Beaver Meadow Pond (0103-0010)	Ont 158..E- 1*-55-P??	UnAssessed
Beeman Creek and tribs (0102-0030)	Ont 158-12- 9	Impaired Seg
Big Sister Creek, Lower, and tribs (0104-0013)	Ont 158..E-20	MinorImpacts
Big Sister Creek, Upper, and tribs (0104-0047)	Ont 158..E-20	UnAssessed
Buffalo Creek, Lower, and minor tribs (0103-0003)	Ont 158..E- 1*	MinorImpacts
Buffalo Creek, Upper, and minor tribs (0103-0004)	Ont 158..E- 1*	NoKnownImpct
Buffalo River (0103-0001)	Ont 158..E- 1	Impaired Seg
Cattaraugus Cr, Lower, Main Stem (0104-0029)	Ont 158..E-23 (portion 1)	MinorImpacts
Cattaraugus Cr, Middle, Main Stem (0104-0053)	Ont 158..E-23 (portion 2)	NoKnownImpct
Cattaraugus Cr, Middle, Main Stem (0104-0025)	Ont 158..E-23 (portion 3)	NoKnownImpct
Cattaraugus Cr, Middle, Main Stem (0104-0020)	Ont 158..E-23 (portion 4)	MinorImpacts
Cayuga Creek, Lower, and tribs (0103-0007)	Ont 158..E- 1- 6	MinorImpacts
Cayuga Creek, Middle, and minor tribs (0103-0017)	Ont 158..E- 1- 6	Need Verific
Cayuga Creek, Upper, and tribs (0103-0002)	Ont 158..E- 1- 6	UnAssessed
Cazenovia Creek and tribs (0103-0009)	Ont 158..E- 1- 4	NoKnownImpct
Clear Creek, Lower, and tribs (0104-0024)	Ont 158..E-23- 6	NoKnownImpct
Clear Creek, Upper, and tribs (0104-0054)	Ont 158..E-23- 6	UnAssessed
Clear Lake (0104-0057)	Ont 158..E-23- 6-P100	MinorImpacts
Delaware Creek, Lower, and tribs (0104-0049)	Ont 158..E-21	MinorImpacts
Delaware Creek, Upper, and tribs (0104-0050)	Ont 158..E-21	UnAssessed
Delaware Park Pond (0101-0026)	Ont 158-15-P25	Impaired Seg
East Br. Cazenovia, Lower, and tribs (0103-0011)	Ont 158..E- 1- 4-14	NoKnownImpct
East Br. Cazenovia, Upper, and tribs (0103-0012)	Ont 158..E- 1- 4-14	NoKnownImpct
Eighteenmile Creek, Lower, minor tribs (0104-0030)	Ont 158..E-13	MinorImpacts
Eighteenmile Creek, Middle, and tribs (0104-0017)	Ont 158..E-13	NoKnownImpct
Eighteenmile Creek, Upper, and tribs (0104-0039)	Ont 158..E-13	NoKnownImpct
Ellicott Creek, Lower, and tribs (0102-0018)	Ont 158-12- 1	Impaired Seg
Ellicott Creek, Upper, and tribs (0102-0024)	Ont 158-12- 1	Need Verific
Green Lake (0101-0038)	Ont 158..E- 2- 1-P81b	MinorImpacts
Hampton Brook and tribs (0104-0041)	Ont 158..E-13- 6	UnAssessed
Lake Erie (Erie Basin) (0104-0032)	Ont 158-E (portion 1)	Impaired Seg
Lake Erie (Main Lake, North) (0104-0037)	Ont 158-E (portion 6)	Impaired Seg
Lake Erie (Northeast Shoreline) (0104-0035)	Ont 158-E (portion 4)	Impaired Seg
Lake Erie (Northeast Shoreline) (0104-0036)	Ont 158-E (portion 5)	Impaired Seg
Lake Erie (Outer Harbor, North) (0104-0033)	Ont 158-E (portion 2)	Impaired Seg
Lake Erie (Outer Harbor, South) (0104-0034)	Ont 158-E (portion 3)	Impaired Seg
Ledge Creek and minor tribs (0102-0012)	Ont 158-12-11	Need Verific
Little Buffalo Creek and tribs (0103-0008)	Ont 158..E- 1- 6- 7	MinorImpacts
Little Sister Creek, Lower, and tribs (0104-0045)	Ont 158..E-19	Impaired Seg
Little Sister Creek, Upper, and tribs (0104-0046)	Ont 158..E-19	UnAssessed
Minor Tribs to Cattaraugus Creek (0104-0073)	Ont 158..E-23- 1 thru 18 (selected)	UnAssessed
Minor Tribs to Cattaraugus Creek (0104-0075)	Ont 158..E-23-43 thru 47	UnAssessed
Minor Tribs to Cattaraugus Creek (0104-0074)	Ont 158..E-23-19 thru 31 (selected)	NoKnownImpct

Waterbody/Segment (ID)	Water Index Number	Category
Erie County (con't)		
Minor Tribs to Lake Erie (0104-0038)	Ont 158..E- 4 thru 12	UnAssessed
Minor Tribs to Lake Erie (0104-0042)	Ont 158..E-14 thru 22 (selected)	UnAssessed
Muddy Creek, Lower, and tribs (0104-0051)	Ont 158..E-22	Impaired Seg
Muddy Creek, Upper, and tribs (0104-0052)	Ont 158..E-22	UnAssessed
Murder Creek, Lower, and tribs (0102-0031)	Ont 158-12-11-1	Impaired Seg
North Branch Clear Cr, Lower, and tribs (0104-0055)	Ont 158..E-23- 6-4	MinorImpacts
North Branch Clear Cr, Upper, and tribs (0104-0056)	Ont 158..E-23- 6-4	UnAssessed
Orchard Park Reservoir (0103-0016)	Ont 158..E- 1- 4-15-10-P??	MinorImpacts
Pike Creek, Lower, and tribs (0104-0043)	Ont 158..E-15	UnAssessed
Pike Creek, Upper, and tribs (0104-0044)	Ont 158..E-15	UnAssessed
Pipe Creek and tribs (0103-0015)	Ont 158..E- 1- 4-15-10	UnAssessed
Plumb Bottom Creek and tribs (0103-0019)	Ont 158..E- 1- 6- 6	UnAssessed
Ransom Creek, Lower, and tribs (0102-0004)	Ont 158-12- 6	Impaired Seg
Ransom Creek, Upper, and tribs (0102-0027)	Ont 158-12- 6	Impaired Seg
Right Branch/Gillett Creek and tribs (0103-0020)	Ont 158..E- 1- 6-30	NoKnownImpct
Rush Creek and tribs (0104-0018)	Ont 158..E- 3	Impaired Seg
Rythus Creek and tribs (0104-0048)	Ont 158..E-20-13	NoKnownImpct
Scajaquada Creek, Lower, and tribs (0101-0023)	Ont 158-15	Impaired Seg
Scajaquada Creek, Middle, and tribs (0101-0033)	Ont 158-15	UnAssessed
Scajaquada Creek, Upper, and tribs (0101-0034)	Ont 158-15	UnAssessed
Slate Bottom Creek and tribs (0103-0018)	Ont 158..E- 1- 6- 2	UnAssessed
Smoke Creek, Lower, and minor tribs (0101-0007)	Ont 158..E- 2	MinorImpacts
Smoke Creek, Upper, and tribs (0101-0035)	Ont 158..E- 2	UnAssessed
South Br. Eighteenmile, Lower, and tribs (0104-0016)	Ont 158..E-13- 4	NoKnownImpct
South Br. Eighteenmile, Upper, and tribs (0104-0040)	Ont 158..E-13- 4	NoKnownImpct
South Branch, Lower, and tribs (0101-0036)	Ont 158..E- 2- 1	Impaired Seg
South Branch, Upper, and tribs (0101-0037)	Ont 158..E- 2- 1	UnAssessed
Spring Brook and tribs (0104-0021)	Ont 158..E-23-32	MinorImpacts
Two Mile Creek and tribs (0101-0005)	Ont 158-13	Impaired Seg
West Br. Cazenovia, Lower, and tribs (0103-0013)	Ont 158..E- 1- 4-15	NoKnownImpct
West Br. Cazenovia, Upper, minor tribs (0103-0014)	Ont 158..E- 1- 4-15	NoKnownImpct
unnamed trib to Niagara River (0101-0032)	Ont 158-14	UnAssessed
Genesee County		
Bowen Brook and tribs (0102-0036)	Ont 158-12-28	Impaired Seg
Divers Lake (0102-0035)	Ont 158-12-20-P15	UnAssessed
Little Tonawanda Creek, Lower, and tribs (0102-0001)	Ont 158-12-32	Impaired Seg
Little Tonawanda Creek, Upper, and tribs (0102-0037)	Ont 158-12-32	UnAssessed
Murder Creek, Upper, and tribs (0102-0032)	Ont 158-12-11-1	Need Verific
Tannery Brook and tribs (0102-0038)	Ont 158-12-41	UnAssessed
Tonawanda Creek, Middle, Main Stem (0102-0002)	Ont 158-12 (portion 3)	Impaired Seg
Tonawanda Creek, Upper, and minor tribs (0102-0003)	Ont 158-12 (portion 4)	Impaired Seg
Tribs to Akron Reservoir (0102-0034)	Ont 158-12-11-1-P13-	UnAssessed
Niagara County		
Bergholtz Creek and tribs (0101-0004)	Ont 158- 8-1	Impaired Seg
Black Rock Canal (0101-0025)	Ont 158 (portion 4)	Impaired Seg
Bull Creek and tribs (0102-0026)	Ont 158-12- 3	UnAssessed
Cayuga Creek and minor tribs (0101-0001)	Ont 158- 8	Impaired Seg
Chippewa (West) Channel (0101-0028)	Ont 158 (portion 3)	Impaired Seg
Gill Creek and tribs (0101-0002)	Ont 158- 6	Impaired Seg
Grand Island (all tribs to Niagara R) (0101-0011)	Ont 158 G.I.-1 thru 6	Need Verific

Waterbody/Segment (ID)	Water Index Number	Category
Niagara County (con't)		
Hyde Park Lake (0101-0030)	Ont 158- 6-P1a	UnAssessed
Minor Tribs to Lower Tonawanda Creek (0102-0025)	Ont 158-12- 2 thru 5 (selected)	UnAssessed
Minor Tribs to Niagara River (0101-0029)	Ont 158- 1 thru 5	UnAssessed
Minor Tribs to Niagara River (0101-0031)	Ont 158- 7 thru 11	UnAssessed
Minor Tribs to Tonawanda Creek (0102-0028)	Ont 158-12- 7 thru 31 (selected)	UnAssessed
Mud Creek and tribs (0102-0029)	Ont 158-12- 8	NoKnownImpct
NYS Barge Canal (portion 1) (0102-0044)	Ont 158-12 (portion 1a)	UnAssessed
Niagara River, Lower, Main Stem (0101-0027)	Ont 158 (portion 1)	Impaired Seg
Niagara River, Upper, Main Stem (0101-0006)	Ont 158 (portion 2)	Impaired Seg
Tonawanda Creek, Lower, Main Stem (0102-0022)	Ont 158-12 (portion 1)	Impaired Seg
Tonawanda Creek, Middle, Main Stem (0102-0006)	Ont 158-12 (portion 2)	MinorImpacts
Wyoming County		
Akron Reservoir (0102-0033)	Ont 158-12-11-1-P13	UnAssessed
Attica Reservoir (0102-0039)	Ont 158-12-46-P20	MinorImpacts
Attica Water Supply Reservoir (0102-0040)	Ont 158-12-46-P20a	UnAssessed
Cattaraugus Cr, Upper, and tribs (0104-0005)	Ont 158..E-23 (portion 5)	Need Verific
Crow Creek and tribs (0102-0023)	Ont 158-12-46	NoKnownImpct
East Fork and tribs (0102-0042)	Ont 158-12-77	NoKnownImpct
Faun Lake (0102-0043)	Ont 158-12-77-3-P20b	NoKnownImpct
Hiram Lake (0104-0071)	Ont 158..E-23-65-P149	UnAssessed
Java Lake (0104-0004)	Ont 158..E-23-P152	Impaired Seg
Stony Brook and tribs (0102-0041)	Ont 158-12-66	UnAssessed

Appendix D

Waterbody Inventory Data Sheets
By Segment Name

Waterbody/Segment (ID)	Water Index Number	Category
Bergholtz Creek and tribs (0101-0004)	Ont 158- 8-1	Impaired Seg
Black Rock Canal (0101-0025)	Ont 158 (portion 4)	Impaired Seg
Cayuga Creek and minor tribs (0101-0001)	Ont 158- 8	Impaired Seg
Chippewa (West) Channel (0101-0028)	Ont 158 (portion 3)	Impaired Seg
Delaware Park Pond (0101-0026)	Ont 158-15-P25	Impaired Seg
Gill Creek and tribs (0101-0002)	Ont 158- 6	Impaired Seg
Grand Island (all tribs to Niagara R) (0101-0011)	Ont 158 G.I.-1 thru 6	Need Verific
Green Lake (0101-0038)	Ont 158..E- 2- 1-P81b	MinorImpacts
Hyde Park Lake (0101-0030)	Ont 158- 6-P1a	UnAssessed
Minor Tribs to Niagara River (0101-0029)	Ont 158- 1 thru 5	UnAssessed
Minor Tribs to Niagara River (0101-0031)	Ont 158- 7 thru 11	UnAssessed
Niagara River, Lower, Main Stem (0101-0027)	Ont 158 (portion 1)	Impaired Seg
Niagara River, Upper, Main Stem (0101-0006)	Ont 158 (portion 2)	Impaired Seg
Scajaquada Creek, Lower, and tribs (0101-0023)	Ont 158-15	Impaired Seg
Scajaquada Creek, Middle, and tribs (0101-0033)	Ont 158-15	UnAssessed
Scajaquada Creek, Upper, and tribs (0101-0034)	Ont 158-15	UnAssessed
Smoke Creek, Lower, and minor tribs (0101-0007)	Ont 158..E- 2	MinorImpacts
Smoke Creek, Upper, and tribs (0101-0035)	Ont 158..E- 2	UnAssessed
South Branch, Lower, and tribs (0101-0036)	Ont 158..E- 2- 1	Impaired Seg
South Branch, Upper, and tribs (0101-0037)	Ont 158..E- 2- 1	UnAssessed
Two Mile Creek and tribs (0101-0005)	Ont 158-13	Impaired Seg
unnamed trib to Niagara River (0101-0032)	Ont 158-14	UnAssessed
Akron Reservoir (0102-0033)	Ont 158-12-11-1-P13	UnAssessed
Attica Reservoir (0102-0039)	Ont 158-12-46-P20	MinorImpacts
Attica Water Supply Reservoir (0102-0040)	Ont 158-12-46-P20a	UnAssessed
Beeman Creek and tribs (0102-0030)	Ont 158-12- 9	Impaired Seg
Bowen Brook and tribs (0102-0036)	Ont 158-12-28	Impaired Seg
Bull Creek and tribs (0102-0026)	Ont 158-12- 3	UnAssessed
Crow Creek and tribs (0102-0023)	Ont 158-12-46	NoKnownImpct
Divers Lake (0102-0035)	Ont 158-12-20-P15	UnAssessed
East Fork and tribs (0102-0042)	Ont 158-12-77	NoKnownImpct
Ellicott Creek, Lower, and tribs (0102-0018)	Ont 158-12- 1	Impaired Seg
Ellicott Creek, Upper, and tribs (0102-0024)	Ont 158-12- 1	Need Verific
Faun Lake (0102-0043)	Ont 158-12-77-3-P20b	NoKnownImpct
Ledge Creek and minor tribs (0102-0012)	Ont 158-12-11	Need Verific
Little Tonawanda Creek, Lower, and tribs (0102-0001)	Ont 158-12-32	Impaired Seg
Little Tonawanda Creek, Upper, and tribs (0102-0037)	Ont 158-12-32	UnAssessed
Minor Tribs to Lower Tonawanda Creek (0102-0025)	Ont 158-12- 2 thru 5 (selected)	UnAssessed
Minor Tribs to Tonawanda Creek (0102-0028)	Ont 158-12- 7 thru 31 (selected)	UnAssessed
Mud Creek and tribs (0102-0029)	Ont 158-12- 8	NoKnownImpct
Murder Creek, Lower, and tribs (0102-0031)	Ont 158-12-11-1	Impaired Seg
Murder Creek, Upper, and tribs (0102-0032)	Ont 158-12-11-1	Need Verific
NYS Barge Canal (portion 1) (0102-0044)	Ont 158-12 (portion 1a)	UnAssessed
Ransom Creek, Lower, and tribs (0102-0004)	Ont 158-12- 6	Impaired Seg
Ransom Creek, Upper, and tribs (0102-0027)	Ont 158-12- 6	Impaired Seg
Stony Brook and tribs (0102-0041)	Ont 158-12-66	UnAssessed

Waterbody/Segment (ID)	Water Index Number	Category
Tannery Brook and tribs (0102-0038)	Ont 158-12-41	UnAssessed
Tonawanda Creek, Lower, Main Stem (0102-0022)	Ont 158-12 (portion 1)	Impaired Seg
Tonawanda Creek, Middle, Main Stem (0102-0006)	Ont 158-12 (portion 2)	MinorImpacts
Tonawanda Creek, Middle, Main Stem (0102-0002)	Ont 158-12 (portion 3)	Impaired Seg
Tonawanda Creek, Upper, and minor tribs (0102-0003)	Ont 158-12 (portion 4)	Impaired Seg
Tribs to Akron Reservoir (0102-0034)	Ont 158-12-11-1-P13-	UnAssessed
Beaver Meadow Pond (0103-0010)	Ont 158..E- 1*-55-P??	UnAssessed
Buffalo Creek, Lower, and minor tribs (0103-0003)	Ont 158..E- 1*	MinorImpacts
Buffalo Creek, Upper, and minor tribs (0103-0004)	Ont 158..E- 1*	NoKnownImpct
Buffalo River (0103-0001)	Ont 158..E- 1	Impaired Seg
Cayuga Creek, Lower, and tribs (0103-0007)	Ont 158..E- 1- 6	MinorImpacts
Cayuga Creek, Middle, and minor tribs (0103-0017)	Ont 158..E- 1- 6	Need Verific
Cayuga Creek, Upper, and tribs (0103-0002)	Ont 158..E- 1- 6	UnAssessed
Cazenovia Creek and tribs (0103-0009)	Ont 158..E- 1- 4	NoKnownImpct
East Br. Cazenovia, Lower, and tribs (0103-0011)	Ont 158..E- 1- 4-14	NoKnownImpct
East Br. Cazenovia, Upper, and tribs (0103-0012)	Ont 158..E- 1- 4-14	NoKnownImpct
Little Buffalo Creek and tribs (0103-0008)	Ont 158..E- 1- 6- 7	MinorImpacts
Orchard Park Reservoir (0103-0016)	Ont 158..E- 1- 4-15-10-P??	MinorImpacts
Pipe Creek and tribs (0103-0015)	Ont 158..E- 1- 4-15-10	UnAssessed
Plumb Bottom Creek and tribs (0103-0019)	Ont 158..E- 1- 6- 6	UnAssessed
Right Branch/Gillett Creek and tribs (0103-0020)	Ont 158..E- 1- 6-30	NoKnownImpct
Slate Bottom Creek and tribs (0103-0018)	Ont 158..E- 1- 6- 2	UnAssessed
West Br. Cazenovia, Lower, and tribs (0103-0013)	Ont 158..E- 1- 4-15	NoKnownImpct
West Br. Cazenovia, Upper, minor tribs (0103-0014)	Ont 158..E- 1- 4-15	NoKnownImpct
Beaver Lake (0104-0067)	Ont 158..E-23-48-9-P133	UnAssessed
Big Sister Creek, Lower, and tribs (0104-0013)	Ont 158..E-20	MinorImpacts
Big Sister Creek, Upper, and tribs (0104-0047)	Ont 158..E-20	UnAssessed
Buttermilk Creek and tribs (0104-0063)	Ont 158..E-23-33	NoKnownImpct
Cattaraugus Cr, Lower, Main Stem (0104-0029)	Ont 158..E-23 (portion 1)	MinorImpacts
Cattaraugus Cr, Middle, Main Stem (0104-0053)	Ont 158..E-23 (portion 2)	NoKnownImpct
Cattaraugus Cr, Middle, Main Stem (0104-0025)	Ont 158..E-23 (portion 3)	NoKnownImpct
Cattaraugus Cr, Middle, Main Stem (0104-0020)	Ont 158..E-23 (portion 4)	MinorImpacts
Cattaraugus Cr, Upper, and tribs (0104-0005)	Ont 158..E-23 (portion 5)	Need Verific
Clear Creek and tribs (0104-0031)	Ont 158..E-23-56	Need Verific
Clear Creek, Lower, and tribs (0104-0024)	Ont 158..E-23- 6	NoKnownImpct
Clear Creek, Upper, and tribs (0104-0054)	Ont 158..E-23- 6	UnAssessed
Clear Lake (0104-0057)	Ont 158..E-23- 6-P100	MinorImpacts
Connoisarauley Creek, Lower, and tribs (0104-0061)	Ont 158..E-23-27	NoKnownImpct
Connoisarauley Creek, Upper, and tribs (0104-0062)	Ont 158..E-23-27	NoKnownImpct
Crystal Lake (0104-0070)	Ont 158..E-23-56-14-P147	Need Verific
Delaware Creek, Lower, and tribs (0104-0049)	Ont 158..E-21	MinorImpacts
Delaware Creek, Upper, and tribs (0104-0050)	Ont 158..E-21	UnAssessed
Eighteenmile Creek, Lower, minor tribs (0104-0030)	Ont 158..E-13	MinorImpacts
Eighteenmile Creek, Middle, and tribs (0104-0017)	Ont 158..E-13	NoKnownImpct
Eighteenmile Creek, Upper, and tribs (0104-0039)	Ont 158..E-13	NoKnownImpct
Elton Creek, Lower, and tribs (0104-0008)	Ont 158..E-23-48	NoKnownImpct
Elton Creek, Upper, and tribs (0104-0064)	Ont 158..E-23-48	NoKnownImpct
Frog Pond, Sucker Pond (0104-0066)	Ont 158..E-23-48-3-P128,P132	UnAssessed
Halfway Brook and tribs (0104-0072)	Ont 158..E-24	UnAssessed
Hampton Brook and tribs (0104-0041)	Ont 158..E-13- 6	UnAssessed
Hiram Lake (0104-0071)	Ont 158..E-23-65-P149	UnAssessed
Java Lake (0104-0004)	Ont 158..E-23-P152	Impaired Seg

Waterbody/Segment (ID)	Water Index Number	Category
Lake Erie (Erie Basin) (0104-0032)	Ont 158-E (portion 1)	Impaired Seg
Lake Erie (Main Lake, North) (0104-0037)	Ont 158-E (portion 6)	Impaired Seg
Lake Erie (Northeast Shoreline) (0104-0035)	Ont 158-E (portion 4)	Impaired Seg
Lake Erie (Northeast Shoreline) (0104-0036)	Ont 158-E (portion 5)	Impaired Seg
Lake Erie (Outer Harbor, North) (0104-0033)	Ont 158-E (portion 2)	Impaired Seg
Lake Erie (Outer Harbor, South) (0104-0034)	Ont 158-E (portion 3)	Impaired Seg
Lime Lake (0104-0001)	Ont 158..E-23-48-3-P130	MinorImpacts
Lime Lake Outlet and tribs (0104-0065)	Ont 158..E-23-48-3	NoKnownImpct
Little Sister Creek, Lower, and tribs (0104-0045)	Ont 158..E-19	Impaired Seg
Little Sister Creek, Upper, and tribs (0104-0046)	Ont 158..E-19	UnAssessed
Mansfield Creek and tribs (0104-0059)	Ont 158..E-23-20-11	NoKnownImpct
Minor Tribs to Cattaraugus Creek (0104-0073)	Ont 158..E-23- 1 thru 18 (selected)	UnAssessed
Minor Tribs to Cattaraugus Creek (0104-0074)	Ont 158..E-23-19 thru 31 (selected)	NoKnownImpct
Minor Tribs to Cattaraugus Creek (0104-0075)	Ont 158..E-23-43 thru 47	UnAssessed
Minor Tribs to Lake Erie (0104-0038)	Ont 158..E- 4 thru 12	UnAssessed
Minor Tribs to Lake Erie (0104-0042)	Ont 158..E-14 thru 22 (selected)	UnAssessed
Moores Pond (0104-0069)	Ont 158..E-23-56-14-P146	UnAssessed
Muddy Creek, Lower, and tribs (0104-0051)	Ont 158..E-22	Impaired Seg
Muddy Creek, Upper, and tribs (0104-0052)	Ont 158..E-22	UnAssessed
North Branch Clear Cr, Lower, and tribs (0104-0055)	Ont 158..E-23- 6-4	MinorImpacts
North Branch Clear Cr, Upper, and tribs (0104-0056)	Ont 158..E-23- 6-4	UnAssessed
Pike Creek, Lower, and tribs (0104-0043)	Ont 158..E-15	UnAssessed
Pike Creek, Upper, and tribs (0104-0044)	Ont 158..E-15	UnAssessed
Point Peter Brook, Upper, and tribs (0104-0003)	Ont 158..E-23-19	Need Verific
Rainbow, Timber Lakes (0104-0060)	Ont 158..E-23-20-P??	Need Verific
Rush Creek and tribs (0104-0018)	Ont 158..E- 3	Impaired Seg
Rythus Creek and tribs (0104-0048)	Ont 158..E-20-13	NoKnownImpct
Skim Lake (0104-0068)	Ont 158..E-23-56-11-P141	NoKnownImpct
South Br. Cattaraugus, Lower, and tribs (0104-0006)	Ont 158..E-23-20	NoKnownImpct
South Br. Cattaraugus, Upper, and tribs (0104-0058)	Ont 158..E-23-20	NoKnownImpct
South Br. Eighteenmile, Lower, and tribs (0104-0016)	Ont 158..E-13- 4	NoKnownImpct
South Br. Eighteenmile, Upper, and tribs (0104-0040)	Ont 158..E-13- 4	NoKnownImpct
Spring Brook and tribs (0104-0021)	Ont 158..E-23-32	MinorImpacts
Beaver Creek and tribs (0105-0016)	Ont 158..E-31	UnAssessed
Brocton Reservoir (0105-0025)	Ont 158..E-50-P160k	UnAssessed
Canadaway Creek, Lower, and tribs (0105-0008)	Ont 158..E-37	Need Verific
Canadaway Creek, Upper, and tribs (0105-0020)	Ont 158..E-37	UnAssessed
Chautauqua Creek, Lower, and minor tribs (0105-0001)	Ont 158..E-68	NoKnownImpct
Chautauqua Creek, Upper and tribs (0105-0027)	Ont 158..E-68	UnAssessed
Crooked Brook and tribs (0105-0019)	Ont 158..E-36	UnAssessed
Fredonia Reservoir (0105-0021)	Ont 158..E-37- 7-P160	UnAssessed
Hyde Creek and tribs (0105-0018)	Ont 158..E-34	UnAssessed
Lake Erie (Barcelona Harbor) (0105-0011)	Ont 158-E (portion 7b)	Impaired Seg
Lake Erie (Dunkirk Harbor) (0105-0009)	Ont 158-E (portion 7a)	Impaired Seg
Lake Erie (Main Lake, South) (0105-0033)	Ont 158-E (portion 7)	Impaired Seg
Little Canadaway Creek and tribs (0105-0023)	Ont 158..E-43	UnAssessed
Little Chautauqua Creek and tribs (0105-0028)	Ont 158..E-68- 1	UnAssessed
Minor Tribs to Lake Erie (0105-0015)	Ont 158..E-26 thru 41 (selected)	UnAssessed
Minor Tribs to Lake Erie (0105-0024)	Ont 158..E-44 thru 67 (selected)	UnAssessed
Minor Tribs to Lake Erie (0105-0030)	Ont 158..E-69 thru 95	UnAssessed
Minton Reservoir (0105-0029)	Ont 158..E-68- 2-P165a	UnAssessed
Scott Creek and tribs (0105-0017)	Ont 158..E-32	UnAssessed
Silver Creek Reservoir (0105-0014)	Ont 158..E-25- 8-P??	NoKnownImpct

Waterbody/Segment (ID)	Water Index Number	Category
Silver Creek, Lower, and minor tribs (0105-0007)	Ont 158..E-25	MinorImpacts
Silver Creek, Upper, and tribs (0105-0012)	Ont 158..E-25	UnAssessed
Slippery Rock Creek and tribs (0105-0010)	Ont 158..E-50	NoKnownImpct
Tribs to Brocton Reservoir (0105-0026)	Ont 158..E-50-P160k-	UnAssessed
Tribs to Fredonia Reservoir (0105-0022)	Ont 158..E-37- 7-P160-	UnAssessed
Twentymile Creek and minor tribs (0105-0003)	Ont 158..E-96	MinorImpacts
Upper Belson Creek/Gage Gulf and tribs (0105-0031)	Ont 158..E-96- 3	UnAssessed
Walnut Creek, Lower, and tribs (0105-0006)	Ont 158..E-25- 1	MinorImpacts
Walnut Creek, Upper, and tribs (0105-0013)	Ont 158..E-25- 1	UnAssessed
unnamed tribs to Pennsylvania (0105-0032)	Ont 158..E-97	UnAssessed