



## Niagara River (0412010406)

### Water Index Number

Ont 158-E (portion 1)  
 Ont 158 (portion 2)  
 Ont 158 (portion 3)  
 Ont 158 (portion 4)  
 Ont 158- 1 thru 5  
 Ont 158 G.I.-1 thru 6  
 Ont 158- 6  
 Ont 158- 6-P1a  
 Ont 158- 7 thru 11  
 Ont 158- 8  
 Ont 158- 8-1  
 Ont 158-13  
 Ont 158-14  
 Ont 158-15  
 Ont 158-15  
 Ont 158-15  
 Ont 158-15-P25

### Waterbody Segment

Lake Erie (Erie Basin) (0104-0032)  
 Niagara River, Upper, Main Stem (0101-0006)  
 Chippewa (West) Channel (0101-0028)  
 Black Rock Canal (0101-0025)  
 Minor Tribs to Niagara River (0101-0029)  
 Grand Island (all tribs to Niagara R)(0101-0011)  
 Gill Creek and tribs (0101-0002)  
 Hyde Park Lake (0101-0030)  
 Minor Tribs to Niagara River (0101-0031)  
 Cayuga Creek and minor tribs (0101-0001)  
 Bergholtz Creek and tribs (0101-0004)  
 Two Mile Creek and tribs (0101-0005)  
 unnamed trib to Niagara River (0101-0032)  
 Scajaquada Creek, Lower, and tribs (0101-0023)  
 Scajaquada Creek, Middle, and tribs(0101-0033)  
 Scajaquada Creek, Upper, and tribs (0101-0034)  
 Delaware Park Pond (0101-0026)

### Category

**Impaired Seg**  
**Impaired Seg**  
**Impaired Seg**  
**Impaired Seg**  
 UnAssessed  
**Need Verific**  
**Impaired Seg**  
**Impaired Seg**  
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**Impaired Seg**  
**Impaired Seg**

# Lake Erie (Erie Basin) ( 0104-0032)

Impaired Seg

## Waterbody Location Information

Revised: 05/07/2010

**Water Index No:** Ont 158-E (portion 1)  
**Hydro Unit Code:** 04120103/ **Str Class:** C  
**Waterbody Type:** G.Lakes  
**Waterbody Size:** 4.4 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

### Overview

Fish consumption in this portion of Lake Erie Shoreline is considered to be impaired due to PCB contamination from Lake sediments attributed to past/historic industrial discharges.

### Fish Consumption Advisories

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, May 2010).

### Section 303d Listing

This segment of Lake Erie Shoreline is included on the NYS 2010 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a fish consumption water. This waterbody was first listed on the 2002 Section 303(d) List. (DEC/DOW, BWAM/WQAS, January 2010)

#### Segment Description

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.

# Niagara River, Upper, Main Stem (0101-0006)

**Impaired**

## Waterbody Location Information

Revised: 7/10/2015

**Water Index No:** Ont 158 (portion 2)      **Drain Basin:** Lake Erie-Niagara River  
**Unit Code:**      **Class:** A-Spcl      **Reg/County:** Niagara River Main Stem  
**Water Type/Size:** River/Stream      24.8 Miles      **Reg/County:** 9/Niagara (32)  
**Description:** from Niagara Falls to Lake Erie

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	Threatened	Unconfirmed
Public Bathing	Unassessed	-
Recreation	Unassessed	-
Aquatic Life	Stressed	Suspected
Fish Consumption	Impaired	Known

### Conditions Evaluated

Habitat/Hydrology	Poor
Aesthetics	Unassessed

### Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBS)  
Suspected: Pathogens, PESTICIDES (ORG.CHLOR.PEST/HCB), PRIORITY ORGANICS (PAHS),  
Restricted Passage, Water Level/Flow  
Unconfirmed: Nonpriority Organics (PAHs)

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

Known: Habitat Alteration, Tox/Contam. Sediment  
Suspected: Comb. Sewer Overflow, Landfill/Land Disp., Other Non-Permitted Sanitary Disch,  
Urban/Storm Runoff  
Unconfirmed:

## Management Information

**Management Status:** Verification of Sources Needed  
**Lead Agency/Office:** DEC/Reg9  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)

## Further Details

### Overview:

Fish consumption and habitat/hydrologic uses in this portion of the Niagara River are impaired due to toxic contaminants that restrict fish consumption and degrade benthic habitat (sediments). Other habitat modifications such as shoreline development, bulkheading and dredging impact the habitat along the river. Aquatic life is thought to experience impacts as well. Current information does not indicate any impacts to water supply, but the use of the resources as a water supply and the activities in the watershed suggest additional protection efforts are appropriate.

### Fish Consumption Advisories:

Fish consumption in the Niagara River (above Niagara Falls) 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 source of this contamination is considered to be contaminated sediment and hazardous waste sites, the result of primarily past industrial discharges. These advisories are a result of elevated PCBs, mirex and dioxin in Lake Ontario sediments. (2009–10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, January 2010).

#### Water Quality Sampling:

Biological (macroinvertebrate) assessment of the Niagara River in Buffalo (south of Strawberry Island) was conducted as part of the RIBS biological screening effort in 2005. Multiplate sampling results indicated the lower range of slightly impacted conditions. In such samples some replacement of sensitive ubiquitous species by more tolerant species occurs, although the sample also includes a balanced distribution of all expected species. Aquatic life is considered to be fully supported in the stream, however the community composition and nutrient biotic evaluation suggest conditions and levels of enrichment are sufficient to cause some stress to aquatic life. Impact source determination found the fauna to be most similar to communities influenced by nonpoint toxics from urban sources, stormwater runoff. (DEC/DOW, BWAM/SBU, June 2010)

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring (water chemistry) of the Niagara River in Fort Niagara, Niagara County, is conducted annually downstream of this reach at the US Coast Guard Dock. In addition, when RIBS Intensive Network monitoring is conducted in a targeted basin every five years (most recently in 2006), additional sampling methods are employed to gain an overall assessment of water quality. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, toxicity testing, sediment assessment and macroinvertebrate tissue analysis. Biological (macroinvertebrate) sampling using multiplate samplers indicate slightly impacted conditions at this site. Samples were dominated by midges and scuds. The invertebrate communities were similar to previous collections at this site since 1982. Water column chemistry indicates no contaminants are present at levels that constitute parameters of concern. Toxicity testing using water from this location detected no significant mortality but reproductive effects were noted in one of three test conducted. Sediment was not collected at this site for analysis. Based on the consensus of these established assessment indicators, overall water quality at this site shows that in spite of some concerns that should continue to be monitored, aquatic life and recreational uses are considered to be fully supported in the stream. However sediment contamination continues to cause fish consumption and sediment impairment. (DEC/DOW, BWAM/RIBS, June 2010)

#### Source (Drinking) Water Assessment:

A source water assessment of the Upper Niagara River, above this reach, found an elevated susceptibility to contamination for this source of drinking water. This level of susceptibility is typical of many water supplies that experience no impacts to water supply use and reflects the need to protect the resource. The amount of residential land in the assessment area results in elevated potential for microbials, turbidity, DBP precursors, and pesticides contamination. There is also a high density of sanitary wastewater discharges which results in elevated susceptibility for numerous contaminant categories. There is also considerable contamination susceptibility associated with other discrete contaminant sources, including inactive hazardous waste sites and landfills. This assessment was conducted through the NYSDOH Source Waters Assessment Program (SWAP) which compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination and do not address the quality of treated finished potable tap water. This water supply source provides water to Niagara County Water District, Erie County Water Authority, Niagara Falls, Tonawanda, North Tonawanda and Lockport. (NYSDOH, Source Water Assessment Program, 2005)

Although there are no specific water quality impacts, the segment is considered a highly valued water resource due to its drinking water supply classification and the need to provide additional protection, which may result in an assessment of threatened (possible) for drinking water use. The class A–Special designation reflects that the river is an international boundary water. (DEC/DOW, BWAM/WQAS, May 2010)

#### Watershed Management:

The Niagara River Area of Concern (AOC), located in Erie and Niagara counties in western New York, extends from Smokes Creek near the southern end of the Buffalo Harbor, north to the mouth of the Niagara River at Lake Ontario. 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. Contamination originating from discharges within Lake Erie's watershed contributes to effects in the Niagara River and Lake Ontario.

A Final Remedial Action Plan (RAP) for the Niagara River Area of Concern was completed in 1994. The most recent update/status report for the RAP was completed in 2002. Implementation of the New York State portion of this binational RAP is currently being coordinated by NYSDEC with assistance for the combined committee of the Buffalo/Niagara Riverkeeper (formerly Friends of the Niagara/Buffalo Rivers). Current remedial activities include land-based hazardous waste site remediation at 21 of the 26 sites identified as contributing 99% of the pollutant load from the US side. The other 5 sites are currently in varying stages of remediation. Other RAP activities focus on the removal of contaminated river sediments, point source discharge controls and nonpoint source reductions. (USEPA/Great Lakes Program Office, June 2010)

Efforts to address sanitary sewer overflows from the Town of Grand Island collection systems are ongoing (DEC/DOW, Region 9, July 2015)

The Niagara River is also subject to a joint US-Canadian Niagara River Toxics Management Plan to reduce toxic contributions to the basin. In it, eighteen priority pollutants were targeted for reduction, with a 50% reduction in point and nonpoint sources of ten of these toxic chemicals called for by 1996. In 1996, the Four Parties re-affirmed their commitment to the NRTMP in a Letter of Support that called for continued reductions of toxic pollutants to achieve ambient water quality that will protect human health, aquatic life, and wildlife, and while doing so, improve and protect water quality in Lake Ontario as well. In addition to source trackdown and remediation, reporting and public involvement are parts of the implementation process. A Niagara River Toxics Management Plan progress report and workplan is produced annually. (USEPA/Great Lakes Program Office, June 2010)

#### Section 303d Listing:

This portion of the Niagara River is included on the NYS 2010 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a fish consumption water and on Part 3 of the List as an impaired for which TMDL development may be deferred. 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 and pesticides, 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.” (DEC/DOW, BWAM/WQAS, June 2010)

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. (DEC/DOW, BWAM/WQAS, June 2005)

**Segment Description:**

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: 05/10/2010

**Water Index No:** Ont 158 (portion 3)      **Drain Basin:** Lake Erie-Niagara River  
**Hydro Unit Code:** 04120104/100      **Str Class:** A-Spcl      Niagara River  
**Waterbody Type:** River      **Reg/County:** 9/Niagara Co. (32)  
**Waterbody Size:** 12.8 Miles      **Quad Map:** NIAGARA FALLS (I-04-3)  
**Seg Description:** entire channel (in NYS)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Possible
FISH CONSUMPTION	Impaired	Known

### Type of Pollutant(s)

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

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

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

## Resolution/Management Information

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

## Further Details

### Overview

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. Current information does not indicate any impacts to water supply, but the use of the resources as a water supply and the activities in the watershed suggest additional protection efforts are appropriate.

### Fish Consumption Advisory

Fish consumption in Chippewa Channel 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 source of this contamination is considered to be contaminated sediment and hazardous waste sites, the result of past industrial discharges/other. The advisory for this lake was first issued prior to 1998-99. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, May 2010).

### Watershed Management

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.

#### Source (Drinking) Water Assessment

A source water assessment of the Niagara River found an elevated susceptibility to contamination for this source of drinking water. This level of susceptibility is typical of many water supplies that experience no impacts to water supply use and reflects the need to protect the resource. The amount of residential land in the assessment area results in elevated potential for microbials, turbidity, DBP precursors, and pesticides contamination. There is also a high density of sanitary wastewater discharges which results in elevated susceptibility for numerous contaminant categories. There is also considerable contamination susceptibility associated with other discrete contaminant sources, including inactive hazardous waste sites and landfills. This assessment was conducted through the NYSDOH Source Waters Assessment Program (SWAP) which compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination and do not address the quality of treated finished potable tap water. This water supply source provides water to Niagara County Water District, Erie County Water Authority, Niagara Falls, Tonawanda, North Tonawanda and Lockport. (NYSDOH, Source Water Assessment Program, 2005)

Although there are no specific water quality impacts, the segment is considered a highly valued water resource due to its drinking water supply classification and the need to provide additional protection, which may result in an assessment of threatened (possible) for drinking water use. The class A-Special designation reflects that the river is an international boundary water. (DEC/DOW, BWAM/WQAS, May 2010)

#### Segment Description

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:** 2.2 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/HYDROLOGY	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/Storm 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

### Overview

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.

### Fish Consumption Advisory

Fish consumption in Black Rock Canal 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 source of this contamination is considered to be contaminated sediment and hazardous waste sites, the result of past industrial discharges/other. The advisory for this lake was first issued prior to 1998-99. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, May 2010).

### Watershed Management

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.

#### Segment Description

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: 05/06/2010

**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/Hydrology	Threatened	Suspected

### Type of Pollutant(s)

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

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

Known: ---  
Suspected: HYDRO MODIFICATION, Urban/Storm Runoff  
Possible: ---

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

### Overview

Natural resources (fishery) habitat and aquatic life in the tribs of Grand Island are thought to be 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 possible impacts need to be verified.

### Water Quality Sampling

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.

### Segment Description

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:** 12.3 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/STORM RUNOFF  
Suspected: TOX/CONTAM. SEDIMENT  
Possible: Landfill/Land Disp., Municipal, Other Sanitary Disch

## Resolution/Management Information

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

**Resolution Potential:** Medium

## Further Details

### Overview

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.

### Water Quality Sampling

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) Remediation Activities

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)

#### Section 303d Listing

Gill Creek is included on the NYS 2010 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL to attain water quality standards due to aquatic toxicity presumed to be from urban runoff sources. This waterbody was first listed on the 2004 Section 303(d) List. (DEC/DOW, BWAM/WQAS, May 2010)

#### Segment Description

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.

# Hyde Park Lake (0101-0030)

# Impaired Seg

## Waterbody Location Information

Revised: 09/22/2010

**Water Index No:** Ont 158- 6-P1a  
**Hydro Unit Code:** 04120104/110      **Str Class:** B  
**Waterbody Type:** Lake  
**Waterbody Size:** 28.1 Acres  
**Seg Description:** entire lake

**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
PUBLIC BATHING	Impaired	Known
Aquatic Life	Stressed	Suspected
RECREATION	Impaired	Known

### Type of Pollutant(s)

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

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

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

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DEC/Reg9  
**TMDL/303d Status:** n/a->1\*

**Resolution Potential:** Medium

## Further Details

### Overview

Public bathing and recreational uses in Hyde Park Lake are considered to be impaired due to nutrient loadings and resulting algal growth attributed to urban stormwater runoff and other nonpoint sources. The lake appears to be typical of shallow, highly urbanized lakes.

### Water Quality Sampling

Hyde Park Lake was sampled as part of the NYSDEC Lake Classification and Inventory (LCI) sampling effort, a component of the Rotating Intensive Basin Studies (RIBS) Program, in 2006. Nutrient, chlorophyll and clarity measurements taken at that time revealed the lake was best characterized as eutrophic. Phosphorus levels in the lake easily exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements also fail to meet the recommended minimum for swimming beaches. Chlorophyll a measurements were also typical of eutrophic lakes. The pH of the lake is somewhat high but typically falls within the state water quality range of 6.5 to 8.5. The lake water is highly colored, which could be the result of wind-induced turbidity or natural organic acids. The recreational suitability of the lake was judged to be unfavorable, due to high algal levels. Aquatic plants were not observed to grow to the lake surface and do not appear to impact recreational uses. Non-native invasive plants have

been noted, but the lake is dominated by native species. (DEC/DOW, BWAM/RIBS, August 2010)

#### Section 303d Listing

Hyde Park Lake is not currently included on the NYS 2010 Section 303(d) List of Impaired/TMDL Waters. However this updated assessment suggests it is appropriate to include this waterbody on the next List. It is recommended that this waterbody be added to Part 1 of the List as a waterbody requiring TMDL development due to phosphorus levels.

#### Segment Description

This segment includes the entire area of the lake.

# Cayuga Creek and minor tribs (0101-0001)

Impaired Seg

## Waterbody Location Information

Revised: 05/06/2010

**Water Index No:** Ont 158- 8  
**Hydro Unit Code:** 04120104/110      **Str Class:** C  
**Waterbody Type:** River  
**Waterbody Size:** 21.6 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	Precluded	Known
AQUATIC LIFE	Impaired	Known
RECREATION	Impaired	Known
Aesthetics	Stressed	Known

### Type of Pollutant(s)

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

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

Known: TOX/CONTAM. SEDIMENT, URBAN/STORM RUNOFF  
Suspected:  
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/Reg9      **Resolution Potential:** Medium  
**TMDL/303d Status:** 2b,1\* (Multiple Segment/Categorical Water, Fish Consumption, more)

## Further Details

### Overview

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

### Fish Consumption Advisories

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 source of this contamination is considered to be contaminated sediments attributed to inactive hazardous waste sites and historical discharges. The advisory for this lake was first issued prior to 1998-99. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, January 2010).

### Water Quality Sampling

A biological (macroinvertebrate) assessment of Cayuga Creek in Niagara Falls (at Route 182) was conducted as part of the RIBS biological screening effort in 2005. Sampling results indicated moderately impacted conditions. In such samples

sensitive species are markedly reduced or missing and the distribution of major groups is significantly unbalanced relative to what would be expected. Samples are dominated by more tolerant species. The nutrient biotic index indicates elevated enrichment. and impact source determination reveals the fauna to be most similar to communities influenced by sewage waste. Water quality is considered to be poor and aquatic life is not fully supported in the stream. This segment is considered to be impaired. (DEC/DOW, BWAM/SBU, May 2010)

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network (mini-study) monitoring of Cayuga Creek in Niagara Falls (at Route 62 and Route 182) 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. 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. 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 at 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)

#### Environmental Remediation

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)

#### Section 303d Listing

Cayuga Creek is included on the NYS 2010 Section 303(d) List of Impaired Waters. The stream is included on Part 2b of the List as a fish consumption water. This waterbody was first listed on the 1998 Section 303(d) List. It may also be appropriate to consider an additional listing for this waterbody during the development of the 2012 List due to aquatic life impacts and toxicity. (DEC/DOW, BWAM/WQAS, May 2010)

#### Segment Description

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/STORM RUNOFF  
Suspected: - - -  
Possible: Landfill/Land Disp., Municipal, Other Sanitary Disch

## Resolution/Management Information

**Issue Resolvability:** 1 (Needs Verification/Study (see STATUS))  
**Verification Status:** 4 (Source Identified, Strategy Needed)  
**Lead Agency/Office:** DOW/Reg9  
**TMDL/303d Status:** 1 (Individual Waterbody Impairment Requiring a TMDL)

**Resolution Potential:** Medium

## Further Details

### Overview

Aquatic life 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. Fish consumption is also restricted due to a health advisory in place for Cayuga Creek that extends into this tributary.

### Water Quality Sampling

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)

### Fish Consumption Advisory

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/DFWMR, Habitat, October 2002)

#### Environmental Remediation

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)

#### Section 303d Listing

Bergholtz Creek is included on the NYS 2010 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL to attain water quality standards for phosphorus and pathogens due to urban runoff sources. In previous Section 303(d) Lists, Bergholtz Creek was also listed as a Fish Consumption Water, but since there is not waterbody-specific health advisory for the creek, the impairment is more appropriately captured as a trib of Cayuga Creek. This waterbody was first listed on the 2004 Section 303(d) List. (DEC/DOW, BWAM/WQAS, May 2010)

#### Segment Description

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.

# Two Mile Creek and tribs (0101-0005)

**Impaired**

## Waterbody Location Information

Revised: 7/6/2015

**Water Index No:** Ont 158-13  
**Unit Code:** **Class:** B  
**Water Type/Size:** River/Stream 7.1 Miles  
**Description:** entire stream and tribs  
**Drain Basin:** Lake Erie-Niagara River  
**Reg/County:** Niagara River Main Stem  
9/Erie (15)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	Impaired	Known
Recreation	Impaired	Known
Aquatic Life	Impaired	Known
Fish Consumption	Unassessed	-
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Unassessed	
Aesthetics	Fair	

### Type of Pollutant(s)

Known: AESTHETICS (ODORS, FLOATABLES), LOW D.O./OXYGEN DEMAND, PATHOGENS  
Suspected: Nutrients, Priority Organics  
Unconfirmed:

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

Known: Municipal Discharges (Kenmore, Tonawanda(T)), OTHER NON-PERMITTED SANITARY DISCH, URBAN/STORM RUNOFF  
Suspected: Industrial Discharges, Tox/Contam. Sediment  
Unconfirmed:

## Management Information

**Management Status:** Strategy Development Needed  
**Lead Agency/Office:** DEC/Reg9  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)

## Further Details

### Overview

Two Mile Creek is assessed as an impaired waterbody due to public bathing and other recreational uses and aquatic life that are known to be impaired by pathogens, low dissolved oxygen and aesthetics from wet-weather overflows from inadequate sewer collection systems. Industrial inputs and urban stormwater runoff are also cited as contributing to the poor water quality of the stream.

### Use Assessment

Two Mile Creek is a Class B waterbody, suitable for public bathing, general recreation use and support of aquatic life,

but not as a water supply.

Aquatic life is evaluated as impaired based on biological sampling that shows significant impacts. This sampling can also be used to infer that there are impacts to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. Additional (bacteriological) sampling is needed to more fully evaluate public bathing and other recreational uses. (DEC, DOW, BWAM, July 2014)

Fish Consumption use is considered to be unassessed. There are no health advisories limiting the consumption of fish from this waterbody (beyond the general advice for all waters). However due to the presence of impacts/contaminants in the stream and the uncertainty as to whether the lack of a waterbody-specific health advisory is based on actual sampling, fish consumption use is noted as unassessed, rather than fully supported but unconfirmed. (NYS DOH Health Advisories and DEC/DOW, BWAM, December 2014)

#### Water Quality Information

A biological (macroinvertebrate) assessment of Two Mile Creek in Tonawanda (at Fletcher Road) was conducted as part of the RIBS biological screening effort in 2005. Sampling results reflect moderately impacted (poor) water quality, with sensitive taxa reduced, and the distribution of major taxonomic groups significantly different from what is naturally expected. Aquatic life is considered to be impaired. This evaluation is consistent with results from previous sampling at the site conducted in 2000. (DEC/DOW, BWAM/SBU, January 2015)

#### Source Assessment

Based on the biologic community composition, surrounding land use and other knowledge of the waterbody, the most likely sources of impacts to the waterbody are municipal sewer system overflows and/or illegal connections. Biological community composition suggest impacts attributed to from sewage or animal wastes.

#### Management Actions

Sanitary Sewer Overflows from the City of Tonawanda, the Town of Tonawanda and the Village of Kenmore are considered to be a (significant) source of pathogens to the segment. These communities remain under Consent Orders to correct sewer system inadequacies. Kenmore (V) has had a sump pump program to inspect and disconnect flow from the sanitary sewer in place and is moving ahead on other SSO abatement projects. Tonawanda has a large number of SSOs to be addressed through a SSO action plan. (DEC/DOW, BWC and Region 9, July 2015)

Two Mile Creek is also included on the Section 303(d) List for eventual development of a TMDL or other restoration strategy (see below).

#### Section 303(d) Listing

Two Mile Creek is included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. The waterbody is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL or other strategy for low dissolved oxygen, pathogens and floatables. This waterbody was first listed on the 2004 List. (DEC/DOW, BWAM/WQAS, January 2010)

#### Segment Description

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: 11/02/2009

**Water Index No:** Ont 158-15  
**Hydro Unit Code:** 04120104/010      **Str Class:** B  
**Waterbody Type:** River  
**Waterbody Size:** 0.3 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	Precluded	Known
AQUATIC LIFE	Precluded	Known
RECREATION	Impaired	Known
Habitat/Hydrology	Stressed	Known
Aesthetics	Stressed	Known

### Type of Pollutant(s)

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

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

Known: COMB. SEWER OVERFLOW, URBAN/STORM RUNOFF, Habitat Modification  
Suspected: , Hydro Modification, Tox/Contam. Sediment  
Possible: Chemical Leak/Spill, 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/Reg9  
**TMDL/303d Status:** 1 (Individual Waterbody Impairment Requiring a TMDL)

**Resolution Potential:** Medium

## Further Details

### Overview

Aquatic life, public bathing and other recreational uses and aesthetics of Scajaquada Creek are impaired by due to low dissolved oxygen, nutrient enrichment, pathogens, floatables and other aesthetic impacts from CSOs, wet weather sewer collection systems overflows and storm runoff along this highly urbanized stream. Industrial inputs, hazardous waste site impacts and roadway runoff also contribute to poor water quality of the stream.

### Water Quality Sampling

A biological (macroinvertebrate) assessment of Scajaquada Creek in Buffalo (at West Avenue) was conducted as part of the RIBS biological screening effort in 2005. Sampling results indicated severely impacted conditions. In such samples the fauna is extremely altered and comprised of tolerant species. Diversity and abundance of organisms is significantly reduced. The nutrient biotic index indicates elevated enrichment and impact source determination reveals a community that reflects impacts due to sewage inputs. Water quality is considered to be very poor and aquatic life is not supported in

the stream. This segment is considered to be impaired. These results are somewhat worse but generally consistent with sampling results from this site in 2000 which reflected moderately impacted conditions. (DEC/DOW, BWAM/SBU, January 2009)

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

#### Section 303d Listing

Scajaquada Creek is included on the NYS 2010 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as a waterbody segment requiring the development of a TMDL or other strategy to attain water quality standards for dissolved oxygen, phosphorus and pathogens. The water is also listed for floatables. This waterbody was first listed on the 2004 Section 303(d) List; the listing for phosphorus was added in 2010. (DEC/DOW, BWAM, WQAS, November 2009)

#### Segment Description

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.

# Scajaquada Creek, Middle, and tribs (0101-0033)

**Impaired**

## Waterbody Location Information

Revised: 7/6/2015

**Water Index No:** Ont 158-15      **Drain Basin:** Lake Erie-Niagara River  
**Unit Code:**      **Class:** C      **Reg/County:** 9/Erie (15)  
**Water Type/Size:** River/Stream      8.3 Miles  
**Description:** stream and tribs, from Main Street to Cheektowaga

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Impaired	Known
Aquatic Life	Precluded	Known
Fish Consumption	Unassessed	-
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Fair	
Aesthetics	Fair	

### Type of Pollutant(s)

Known: AESTHETICS (FLOATABLES), LOW D.O./OXYGEN DEMAND, NUTRIENTS (PHOSPHORUS), PATHOGENS  
Suspected: Priority Organics, Silt/Sediment  
Unconfirmed:

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

Known: Habitat Alteration, OTHER NON-PERMITTED SANITARY DISCH, URBAN/STORM RUNOFF  
Suspected: Tox/Contam. Sediment  
Unconfirmed:

## Management Information

**Management Status:** Verification of Sources Needed  
**Lead Agency/Office:** DOW/Reg9  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)

## Further Details

### Overview

This portion of Scajaquada Creek is assessed as an impaired waterbody due to recreational uses and aquatic life that are known to be precluded/impaired by low dissolved oxygen, nutrient enrichment, and pathogens and floatables and other aesthetic impacts from wet weather sewer collection systems overflows and storm runoff along this highly urbanized stream. Industrial inputs, hazardous waste site impacts and roadway runoff also contribute to poor water quality of the stream.

### Use Assessment

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

Aquatic life is evaluated as impaired based on biological sampling that shows significant impacts. This sampling can also be used to infer that there are significant impacts to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. (DEC, DOW, BWAM, July 2014)

Fish Consumption use is considered to be unassessed. There are no health advisories limiting the consumption of fish from this waterbody (beyond the general advice for all waters). However due to the presence of impacts/contaminants in the stream and the uncertainty as to whether the lack of a waterbody-specific health advisory is based on actual sampling, fish consumption use is noted as unassessed, rather than fully supported but unconfirmed. (NYS DOH Health Advisories and DEC/DOW, BWAM, December 2014)

### Water Quality Information

A biological (macroinvertebrate) assessment of Scajaquada Creek in Buffalo (at West Avenue), just below this reach, was conducted as part of the RIBS biological screening effort in 2005. Sampling results indicated severely impacted conditions. In such samples the fauna is extremely altered and comprised of tolerant species. Diversity and abundance of organisms is significantly reduced. The nutrient biotic index indicates elevated enrichment and impact source determination reveals a community that reflects impacts due to sewage inputs. Water quality is considered to be very poor and aquatic life is not supported in the stream. This segment is considered to be impaired. A biological (macroinvertebrate) assessment of Scajaquada Creek in Depew (at Ledyard Street), above this segment, was also conducted as part of the RIBS biological screening effort in 2005. Sampling results reflect moderately impacted (poor) water quality, with sensitive taxa reduced, and the distribution of major taxonomic groups significantly different from what is naturally expected. Aquatic life is considered to be impaired. These sites are downstream and upstream of the specific waterbody segment, but are considered to be representative of conditions in the middle segment. (DEC/DOW, BWAM/SBU, November 2009)

### Source Assessment

Based on the biologic community composition, surrounding land use and other knowledge of the waterbody, the most likely sources of impacts to the waterbody are municipal sewer system overflows and/or illegal connections. Sanitary sewer overflows from the Town of Cheektowaga are suspected to be a significant source of pathogens to the segment. Biological community composition suggest impacts attributed to from sewage or animal wastes. Urban stormwater runoff is also believed to contribute to the impacts.

### Management Actions

Efforts to address sanitary sewer overflows from the Town of Cheektowaga collection systems are ongoing. (DEC/DOW, Region 9, July 2015)

Scajaquada Creek is also included on the Section 303(d) List for eventual development of a TMDL or other restoration strategy (see below).

### Section 303(d) Listing

Middle Scajaquada Creek is included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. The waterbody is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL or other strategy for low dissolved oxygen, pathogens, phosphorus and floatables. This waterbody was first listed on the 2004 List. (DEC/DOW, BWAM/WQAS, January 2010)

### Segment Description

This segment includes the portion of the stream and all tribs from Main Street in Buffalo to unnamed trib (-4) in

Cheektowaga. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C.

# Scajaquada Creek, Upper, and tribs (0101-0034)

**Impaired**

## Waterbody Location Information

Revised: 7/6/2015

**Water Index No:** Ont 158-15      **Drain Basin:** Lake Erie-Niagara River  
**Unit Code:**      **Class:** B      **Reg/County:** 9/Erie (15)  
**Water Type/Size:** River/Stream      15.1 Miles  
**Description:** stream and tribs, above Cheektowaga

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	Impaired	Known
Recreation	Impaired	Known
Aquatic Life	Impaired	Known
Fish Consumption	Unassessed	-
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

### Type of Pollutant(s)

Known: NUTRIENTS (PHOSPHORUS), PATHOGENS  
Suspected: LOW D.O./OXYGEN DEMAND, Silt/Sediment  
Unconfirmed: Priority Organics

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

Known: OTHER NON-PERMITTED SANITARY DISCH, URBAN/STORM RUNOFF  
Suspected:  
Unconfirmed:

## Management Information

**Management Status:** Verification of Sources Needed  
**Lead Agency/Office:** DOW/Reg9  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)

## Further Details

### Overview

This portion of Scajaquada Creek is assessed as an impaired waterbody due to public bathing and other recreational uses and aquatic life that are known to be impaired by due to low dissolved oxygen, nutrient enrichment and pathogens from wet weather sewer collection systems overflows and storm runoff along this highly urbanized stream. Industrial inputs, hazardous waste site impacts and roadway runoff also contribute to poor water quality of the stream.

### Water Quality Information

A biological (macroinvertebrate) assessment of Scajaquada Creek in Depew (at Ledyard Street) was also conducted as part of the RIBS biological screening effort in 2005. Sampling results indicated moderately impacted conditions. In such samples sensitive species are markedly reduced or missing and the distribution of major groups is significantly

unbalanced relative to what would be expected. Samples are dominated by more tolerant species. The nutrient biotic index indicates highly elevated levels of enrichment. Water quality of the Scajaquada Creek at this site is somewhat improved from downstream locations where water quality is severely impacted, but conditions in this reach are still considered to be poor and aquatic life is not fully supported in the stream. This segment is considered to be impaired. (DEC/DOW, BWAM/SBU, November 2009)

#### Section 303d Listing:

This portion of Scajaquada Creek was added to the NYS 2010 Section 303(d) List of Impaired Waters; the lower reach of Scajaquada Creek has been included on the List since 2004. The creek is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL to attain water quality standards for low dissolved oxygen, phosphorus, pathogens and floatables. (DEC/DOW, BWAM/WQAS, May 2010)

#### Segment Description:

This segment includes the portion of the stream and all tribs above/including trib -4 in Cheektowaga. The waters of this portion of the stream are Class B. Tribs to this reach/segment are Class C.

#### Use Assessment

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

Aquatic life is evaluated as impaired based on biological sampling that shows significant impacts. This sampling can also be used to infer that there are significant impacts to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. (DEC, DOW, BWAM, July 2014)

Fish Consumption use is considered to be unassessed. There are no health advisories limiting the consumption of fish from this waterbody (beyond the general advice for all waters). However due to the presence of impacts/contaminants in the stream and the uncertainty as to whether the lack of a waterbody-specific health advisory is based on actual sampling, fish consumption use is noted as unassessed, rather than fully supported but unconfirmed. (NYS DOH Health Advisories and DEC/DOW, BWAM, December 2014)

#### Water Quality Information

A biological (macroinvertebrate) assessment of Scajaquada Creek in Depew (at Ledyard Street) was conducted as part of the RIBS biological screening effort in 2005. Sampling results reflect moderately impacted (poor) water quality, with sensitive taxa reduced, and the distribution of major taxonomic groups significantly different from what is naturally expected. Aquatic life is considered to be impaired. (DEC/DOW, BWAM/SBU, November 2009)

#### Source Assessment

Based on the biologic community composition, surrounding land use and other knowledge of the waterbody, the most likely sources of impacts to the waterbody are municipal sewer system overflows and/or illegal connections. Sanitary Sewer Overflows from the Village of Depew are suspected to be a (significant) source of pathogens to the segment. Biological community composition suggest impacts attributed to from sewage or animal wastes. Urban stormwater runoff is also believed to contribute to the impacts.

#### Management Actions

Efforts to address sanitary sewer overflows from the Village of Depew collection systems are ongoing. (DEC/DOW, Region 9, July 2015)

Scajaquada Creek is also included on the Section 303(d) List for eventual development of a TMDL or other restoration strategy (see below).

#### Section 303(d) Listing

Upper Scajaquada Creek is included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. The waterbody is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL or other strategy for low dissolved oxygen, pathogens, and phosphorus. This waterbody was first listed on the 2010 List. (DEC/DOW, BWAM/WQAS, January 2010)

#### Segment Description

This segment includes the portion of the stream and all tribs above/including unnamed trib (-4) in Cheektowaga. The waters of this portion of the stream are Class B. Tribs to this reach/segment are Class C.

# Delaware Park Pond ( 0101-0026)

# Impaired Seg

## Waterbody Location Information

Revised: 09/22/2010

**Water Index No:** Ont 158-15-P25  
**Hydro Unit Code:** 04120104/010      **Str Class:** B  
**Waterbody Type:** Lake  
**Waterbody Size:** 1.3 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
PUBLIC BATHING	Impaired	Known
FISH CONSUMPTION	Impaired	Known
RECREATION	Impaired	Known

### Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus), PRIORITY ORGANICS (PCBs)  
Suspected: D.O./Oxygen Demand  
Possible: - - -

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

Known: TOX/CONTAM. SEDIMENT, URBAN/STORM RUNOFF  
Suspected: - - -  
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:** 2b,1\* (Multiple Segment/Categorical Water, Fish Consumption, more)

## Further Details

### Overview

Public bathing and recreational uses in Delaware Park (Hoyt) Pond are considered to be impaired due to nutrient loadings and resulting algal growth attributed to urban stormwater runoff and other nonpoint sources. Fish consumption is also impaired due to PCB levels that result in health advisories. The lake appears to be typical of shallow, highly urbanized lakes.

### Water Quality Sampling

Delaware Park Pond was sampled as part of the NYSDEC Lake Classification and Inventory (LCI) sampling effort, a component of the Rotating Intensive Basin Studies (RIBS) Program, in 2006. Nutrient, chlorophyl and clarity measurements taken at that time revealed the lake was best characterized as eutrophic. Phosphorus levels in the lake easily exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements also fail to meet the recommended minimum for swimming beaches. Chlorophyll a measurements were also typical of eutrophic lakes. The pH of the lake typically falls within the state water quality range of 6.5 to 8.5. The lake water is highly colored, which could be the result of wind-induced turbidity or natural organic acids. The recreational suitability of the lake was judged to be unfavorable, due to high algal levels. Aquatic plants were not observed to grow to the lake surface and do not appear to impact recreational uses. Non-native invasive plants have been noted, but the lake is dominated by native species. (DEC/DOW, BWAM/RIBS, August 2010)

#### Fish Consumption Advisories

Fish consumption in Delaware Park Pond 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. The advisory for this lake was first issued prior to 1998-99. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, January 2010).

#### Water Quality Management

The lake has been the focus of a number of remediation efforts. In August of 2010, the NYSDEC announced that it will use a \$150,000 state grant to address low oxygen levels in Delaware Park Lake by upgrading groundwater wells and three pumps along the lake to bring in 1.85 million gallons of fresh clean water per day. The grant from the state's Environmental Protection Fund is a direct result of an initiative studying water quality in both the lake and creek. This will support a long term plan to fix the myriad of problems in Delaware Park Lake and Scajaquada Creek, including sewer runoff from Buffalo and surrounding municipalities.

A previous Clean Lakes project that was completed in 1985 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)

#### Section 303d Listing

Delaware Park Pond is included on the NYS 2010 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a fish consumption water. This waterbody was first listed on the 2002 Section 303(d) List. This updated assessment suggests it is also appropriate to include this waterbody on the next List for phosphorus. It is recommended that this pollutant listing be added to Part 1 of the List as a waterbody requiring TMDL development. (DEC/DOW, BWAM/WQAS, August 2010)

#### Segment Description

This segment includes the entire area of the lake.