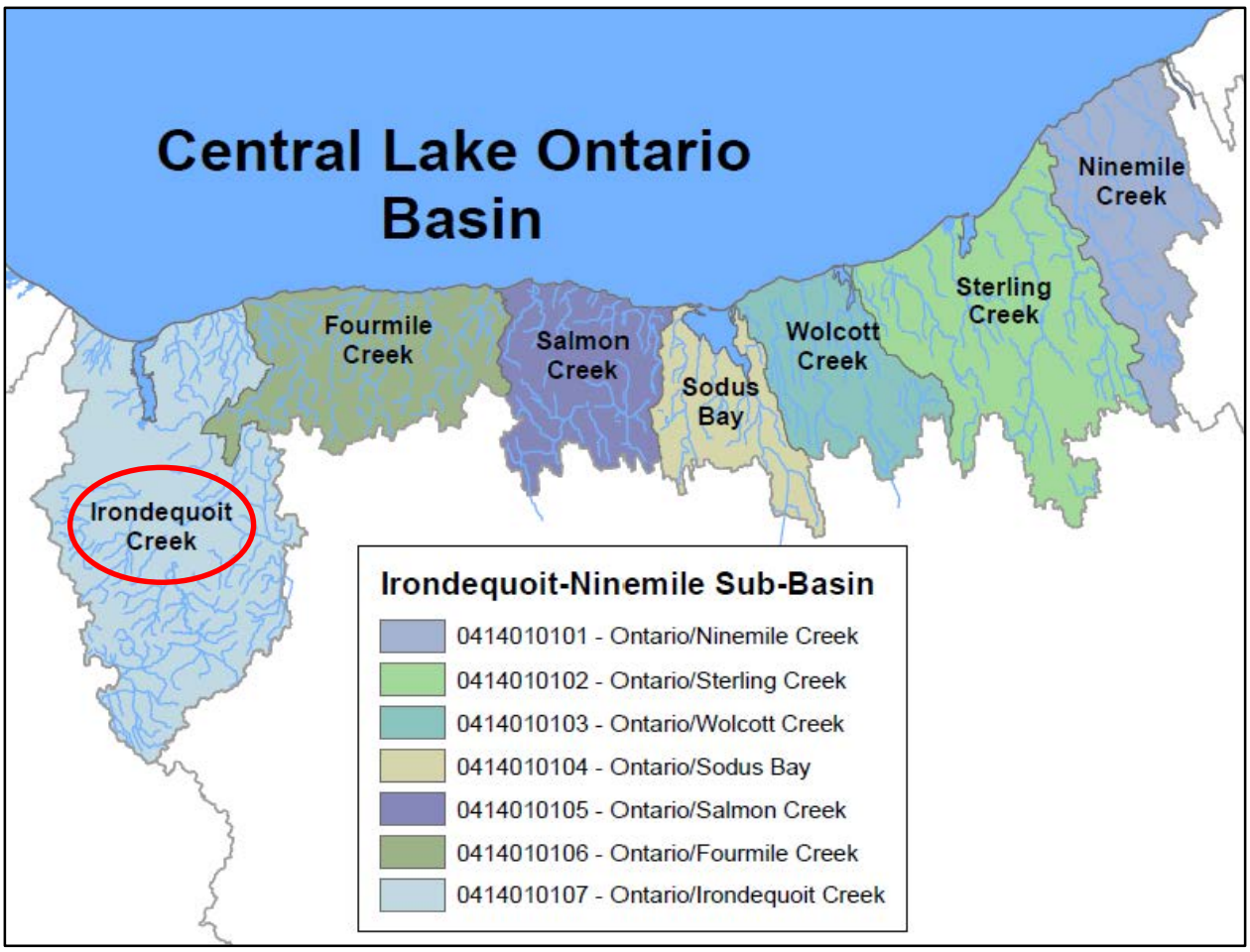

Lake Ontario/Irondequoit Creek Watershed
(0414010107)

Water Index Number	Waterbody Segment	Category
Ont (portion 16)	Rochester Embayment East (0302 0002)	Impaired Seg
Ont 100	Mill Creek and tribs (0302 0025)	Impaired Seg
Ont 101 thru 106	Minor Tribs to Lake Ontario (0302 0028)	UnAssessed
Ont 107	Shipbuilders Creek and tribs (0302 0026)	Impaired Seg
Ont 108/P113	Irondequoit Bay (0302 0001)	Impaired Seg
Ont 108/P113 1 thru 6 (selected)	Minor Tribs to Irondequoit Bay (0302 0038)	Impaired Seg
Ont 108/P113 3	Irondequoit Cr, Lower, and minor tribs (0302 0024)	MinorImpacts
Ont 108/P113 3	Irondequoit Cr, Upper, and tribs (0302 0029)	MinorImpacts
Ont 108/P113 3 8	Allen Creek and tribs (0302 0022)	MinorImpacts
Ont 108/P113 3 12	Thomas Creek/White Brook (0302 0023)	Impaired Seg
Ont 108/P113 3 12	White Brook, Upper, and tribs (0302 0030)	UnAssessed
Ont 108/P113 3 23 1a P132	Lake Lacoma (0302 0031)	UnAssessed
Ont 108/P113 3 33 P141	Quaker Pond (0302 0032)	UnAssessed
Ont 108/P113 3 33 P142	Deep Pond (0302 0033)	UnAssessed
Ont 108/P113 3 33 P143	Hundred Acre Pond (0302 0034)	Impaired Seg
Ont 108/P113...P118	Cobbs Hill Reservoir (0302 0035)	UnAssessed
Ont 109 thru 116	Minor Tribs to Lake Ontario (0302 0036)	UnAssessed
Ont 111 P148a,P148e	Durand, Eastman Lakes (0302 0037)	MinorImpacts
NYS Barge Canal (portion 4)	NYS Barge Canal (portion 4) (0302 0074)	UnAssessed

Rochester Embayment - East (0302-0002) Impaired

Waterbody Location Information

Revised: 7/30/2015

Water Index No:	Ont (portion 16)			**Drain Basin:**	Lake Ontario
Unit Code:	04140101	**Class:**	A		Lake Ontario Central
Water Type/Size:	G Lakes Shore	10 Miles		**Reg/County:**	8/Monroe (28)
Description:	nearshore area of Lake Ontario in Monroe Co.				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	Fully Supported	Known
Public Bathing	Impaired	Known
Recreation	Impaired	Known
Aquatic Life	Fully Supported	Known
Fish Consumption	Impaired	Known
Conditions Evaluated		
Habitat/Hydrology	Fair	
Aesthetics	Fair	

Type of Pollutant(s)

Known:	ALGAL/PLANT GROWTH, NATIVE (CLADOPHORA), PATHOGENS, PESTICIDES (MIREX), PRIORITY ORGANICS (PCBS), PRIORITY ORGANICS (DIOXIN), Silt/Sediment
Suspected:	NUTRIENTS (PHOSPHORUS), Problem Species (zebra mussels)
Unconfirmed:	Low D.O./Oxygen Demand

Source(s) of Pollutant(s)

Known:	Streambank Erosion, TOX/CONTAM. SEDIMENT, URBAN/STORM RUNOFF, Atmospheric Deposition
Suspected:	Comb. Sewer Overflow, Municipal Discharges, HABITAT ALTERATION
Unconfirmed:	Agriculture, Industrial Discharges

Management Information

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

Further Details

Overview

This portion of the Lake Ontario Shoreline is assessed as an impaired waterbody due to public bathing and other recreational uses, as well as fish consumption that is also considered to be impaired. Recreational uses are impaired by indicators of pathogens that result in periodic public bathing beach advisories and/or closures and nutrient levels that result in dense algal and plant growth, while fish consumption is impaired by contamination from the past/historic discharge of organics (PCBs, dioxin) and pesticides (mirex).

Use Assessment
This waterbody segment is a Class A waterbody, suitable for water supply, public bathing and general recreation use and support of aquatic life.

Public water supply use of Lake Ontario is fully supported. The waterbody is used as a public supply for numerous municipalities in Niagara, Orleans and and Monroe Counties, including Rochester. The most recent annual water quality reports indicate no contaminants in finished (treated) water exceed regulatory limits. A Source Water Assessment by the NYSDOH conducted in the early 2000s found that, in general, public water supplies that use Great Lakes sources are not very susceptible to contaminants because of the size and quality of the Great Lakes. (NYSDOH, Source Water Assessment Program, 2005)

Public bathing and general recreational uses of this waterbody are considered to be impaired based on monitoring at area beaches that show elevated levels of pathogen indicators that result in occasional beach advisories or closures and due to the well-documented occurrence of algal blooms, particularly Cladophora, in the shallower nearshore waters. In recent years during which beach monitoring results are available, advisories/closures have been issues for twenty or more days at beaches (Durand Beach, Ontario Beach). Beaches within this reach include Durand Beach, as well as other smaller beaches. Ontario Beach lies just to the west of this reach. (NYSDOH and OPRHP, Sanitary Beach Survey, 2010)

Cladophora is considered a nuisance, rather than harmful (toxic), algal species that creates aesthetic problems for recreational users of the nearshore waters and shoreline. Elevated levels of phosphorus are widely considered to be contributing to algal growth in these waters. These conditions also impact public bathing along the shore, although bacteriological sampling at western Lake Ontario Beaches reveal water quality conditions that are typically fully supporting of this use.

Lake Ontario supports a diverse and world-class recreational sporting fishery which includes trophy-sized trout, salmon and walleye in the open lake, as well as superb near-shore angling for smallmouth bass and panfish. However fish consumption in this portion of Lake Ontario (and all tribs to the first impassable barrier) is impaired due to a NYS DOH health advisory that recommends eating no channel catfish or carp, and eating no more than one meal per month of white sucker, larger lake trout (over 25 inches), or larger brown trout (over 20 inches) because of elevated levels of PCBs, dioxin and mirex. The advisory also recommends eating no more than on meal per month of white perch for portions of the lake east of Point Breeze. Harvest/possession of American eel is also prohibited. Restrictions for some species have been reduced in recent years. The source of organics/pesticides is contaminated lake sediments, the result of past/historic industrial discharges to the lake, the Niagara River and the Upper Great Lakes. The advisory for this lake was first issued prior to 1998-99. (2014-15 NYS DOH Health Advisories and DEC/DFWMR, Habitat, January 2014)

Habitat concerns include the impact of invasive species, including zebra/quagga mussels, round goby, fishook and spiney waterflea, on the biologic community, as well as on other uses of the waterbody.

Water Quality Information
The Great Lakes are the focus of considerable national and international study. This assessment relies on monitoring data and information from the USEPA Great Lakes Program, the NYSDEC Great Lakes Program, and other participants in the Binational Great Lakes Water Quality Agreement, as well the work of numerous academic researchers. Monitoring of public bathing beaches along the Lake Ontario shore is conducted by NYS and local health departments.

Source Assessment
The primary sources of chemical pollutants that have the greatest impact on the waterbody include contaminated sediments and atmospheric deposition that result in health advisories for fish consumption. Pathogen sources are

assumed to be result of urban/storm runoff, combined sewer overflows (CSOs) and other wet-weather nonpoint sources. Habitat alteration, specifically the presence of ecosystem-altering invasive species, is also a source of impacts.

Management Actions

Efforts to restore and protect the waters of Lake Ontario are coordinated by the NYSDEC Great Lakes Program. Working with stakeholders throughout the basin, the Program has developed a new, fully integrated action plan that guides restoration and conservation activities in New York's Great Lakes region. This action plan, or interim Great Lakes Action Agenda, is a multi-agency, multi-program, and cross-region strategic plan to support innovative programs and build new partnerships at multiple levels of local, state, and federal government across the state's Great Lakes basin. The plan identifies high priority actions and focuses federal and state funding opportunities to address the most critical challenges unique to this region, including contamination clean-up, restoration of fish and wildlife, waterfront and economic development, climate change resiliency strategies, and recreation and tourism development. (DEC, Great Lakes Program, July 2015)

The NYSDEC Great Lakes Program supports the commitments made by the governments of the United States and Canada, as part of the 1987 Great Lakes Water Quality Agreement (GLWQA) as amended in 2013, to develop a Lakewide Action and Management Plan (LAMP) for each of the five Great Lakes. The Lake Ontario LAaMP is a binational, cooperative effort that also involves a large number of local, statewide and federal partners. The goals of the LAMP are to restore and protect the health of Lake Ontario’s water and aquatic ecosystem by reducing chemical pollutants entering the lake and addressing the biological and physical factors impacting the lake. The LAMP is being revised to reflect new Lake Ecosystem Objectives that will assess and address specific environmental stressors that adversely affect water quality and ecosystem health. (DEC, Great Lakes Program, July 2015)

Section 303(d) Listing

This portion of Lake Ontario shoreline is included on the current (2015) NYS Section 303(d) List of Impaired/TMDL Waters. The waterbody is included on Part 1 of the List as a waterbody requiring development of a TMDL or other strategy to address pathogens, on Part 2b of the List as a waterbody impaired for fish consumption due to elevated PCBs, dioxin and mirex, and on Part 3b as a water for which TMDL development may be deferred pending verification of the cause/pollutant (phosphorus). In this case, verification relates to completion of the nutrient standards development effort as well as ongoing studies to identify the multiple factors contributing to the algal blooms. Based on the results of this verification, it may be appropriate to move the listings to another part of the list, or – if restoration measures other than a TMDL are found to be more appropriate – the waterbody listings could be modified or delisted as Category 4b waters. This waterbody was first listed for pathogens in 2012, for organics in 1998 and for phosphorus in 2010. (DEC/DOW, BWAM/WQAS, January 2015)

Segment Description

This segment includes the portion of the Lake Ontario shoreline from Ninemile Point near the mouth of Fourmile Creek to the Genesee River in Rochester. The waters of this portion of the shoreline are Class A. Tribs to this reach/segment are listed separately.

Mill Creek and tribs (0302-0025) Impaired Seg

Waterbody Location Information

Revised: 05/04/2007

Water Index No: Ont 100
Hydro Unit Code: 04140101/020 **Str Class:** B
Waterbody Type: River
Waterbody Size: 25.2 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Ontario
Irondequoit/Ninemile
Reg/County: 8/Monroe Co. (28)
Quad Map: WEBSTER (I-11-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: Priority Organics (PCBs, dioxin), Pesticides (mirex)
Suspected: D.O./OXYGEN DEMAND, NUTRIENTS, PATHOGENS, Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: INDUSTRIAL, MUNICIPAL (unknown), ON-SITE/SEPTIC SYST, Construction (residential develop), Urban/Storm Runoff
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg8 **Resolution Potential:** Medium
TMDL/303d Status: 3a*

Further Details

Aquatic life support, public bathing and other recreational uses are thought to be impaired by various nonpoint sources related to urban runoff and suburban development. Municipal and industrial sources have also been indicated. Fish consumption is restricted as a result of the Lake Ontario advisory.

A biological (macroinvertebrate) assessment of Mill Creek in Webster (at Lake Road) was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated that municipal and/or industrial sources were the likely factors influencing the assessment. Poor habitat was noted and was likely to have influenced the results as well. However odors and other visual indications of sewage inputs to the stream were obvious during sampling. A biological assessment of Mill Creek at the same site was conducted in 1999. Sampling results at that time indicated severely impacted water quality conditions. (DEC/DOW, BWAM/SBU, June 2005)

The entire watershed experiences considerable development pressures. A county streambank erosion assessment effort has documented severe erosion in various places along the creek. (Monroe County Health Department, April 2001)

This segment includes the entire stream and all tribs. The waters of the stream are Class B from the mouth to trib -3, and Class C for the remainder of the reach. Tribs to this reach/segment are primarily Class C; some tribs to the lower portion are Class B. (May 2001)

Shipbuilders Creek and tribs (0302-0026) Impaired Seg

Waterbody Location Information

Revised: 05/04/2007

Water Index No: Ont 107
Hydro Unit Code: 04140101/020 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 20.3 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Ontario
Irondequoit/Ninemile
Reg/County: 8/Monroe Co. (28)
Quad Map: WEBSTER (I-11-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: D.O./OXYGEN DEMAND, NUTRIENTS, PATHOGENS, Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: INDUSTRIAL, MUNICIPAL (unknown), ON-SITE/SEPTIC SYST, Construction, Urban/Storm Runoff
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg8 **Resolution Potential:** Medium
TMDL/303d Status: 3a*

Further Details

Aquatic life support and recreational uses (swimming, fishing, etc) are thought to be impaired by various nonpoint sources related to urban runoff and suburban development. Municipal and industrial sources have also been indicated. Fish consumption is restricted as a result of the Lake Ontario advisory.

A biological (macroinvertebrate) assessment of Shipbuilders Creek in Webster was conducted in 2001. Sampling results indicated moderately impacted water quality conditions. Impact source determination identified municipal and/or industrial sources as affecting the fauna. However poor sampling habitat (sandy substrate) also influenced the assessment. Biological sampling at the same site in 1999 found similar conditions. (DEC/DOW, BWAM/SBU, January 2001)

The entire watershed experiences considerable development pressures. A county streambank erosion assessment effort has documented severe erosion in various places along the creek. (Monroe County Health Department, April 2001)

This segment includes the entire stream and all tribs. The waters of the stream are primarily Class C, with portions designated Class B. Tribs to this reach/segment are Class C. (May 2001)

Irondequoit Bay (0302-0001) Impaired Seg

Waterbody Location Information

Revised: 05/16/2007

Water Index No: Ont 108/P113
Hydro Unit Code: 04140101/020 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 1715.1 Acres
Seg Description: entire bay

Drain Basin: Lake Ontario
Irondequoit/Ninemile
Reg/County: 8/Monroe Co. (28)
Quad Map: ROCHESTER EAST (I-10-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Public Bathing	Stressed	Known
FISH CONSUMPTION	Impaired	Known
Recreation	Stressed	Known

Type of Pollutant(s)

Known: PRIORITY ORGANICS (PCBs), PESTICIDES (mirex), Algal/Weed Growth (algal blooms, weeds)
Suspected: Nutrients, Silt/Sediment
Possible: Pathogens

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT, Urban/Storm Runoff
Suspected: Agriculture, Construction, On-Site/Septic Syst, Streambank Erosion
Possible: Comb. Sewer Overflow, Habitat Modification

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/Reg8 **Resolution Potential:** Medium
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Fish consumption in Irondequoit Bay is known to be impaired due to a fish consumption advisory, the result of past/historic discharges. Additionally, public bathing and various recreational uses (fishing, boating, etc) experience minor impacts from algal blooms, excessive aquatic weed growth and other inputs from various urban/stormwater sources and other nonpoint sources in the watershed.

Fish consumption in Irondequoit Bay is impaired due to a NYS DOH health advisory that recommends eating no CARP because of elevated PCB and Mirex levels. The source of PCBs and Mirex is contaminated sediments from past/historic industrial discharges. The advisory for this lake was first issued prior to 1998-99. An advisory for Lake Ontario (and all tribs to the first barrier) also applies to the bay. The Lake Ontario advisory recommends eating no American eel, channel catfish, carp, chinook salmon, lake trout (over 25") or brown trout (over 20"). The advisory also recommends that consumption of white perch, white sucker, rainbow trout, smaller lake and brown trout, and coho salmon (over 25") be limited to no more than one meal per month. The fish consumption advisories are a result of PCB, mirex and dioxin contamination of lake sediments. (2006-07 NYS DOH Health Advisories and DEC/DFWMR, Habitat, December 2006).

Irondequoit Bay is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a Fish Consumption Water.

Algal blooms affect the potential for bathing and other recreation in the bay by reducing water clarity. Although swimming and other contact recreation does occur in the bay, no public bathing areas have been developed. The algal growth, resulting poor clarity, excessive aquatic growth in shallow portions of the bay and suspected pathogen impacts (particularly during and after rain events) reduce the appeal of public bathing.

Urban and stormwater runoff has been identified as the primary source of nutrients and other pollutants to the bay. Agricultural activities in the upper watershed, impacts from failing and/or inadequate on-site septic systems, tributary stream erosion and residential and commercial development throughout the watershed are also thought to contribute to nutrient and silt/sediment loadings. Some phosphorus load has been attributed to nutrient laden bay sediments deposited by past CSO and municipal discharges. However Monroe County Pure Waters programs of the 1970s and 1980s eliminated sewage discharges to the bay and its tribs and significantly reduced CSO impacts. Remaining bay sediments were sealed with alum in 1986 to prevent the release of phosphorus to the water column. (Monroe County WQCC, May 2001)

Considerable bay and watershed water quality management and monitoring efforts are continuing. The Irondequoit Bay Coordinating Committee involves the Towns of Webster, Irondequoit and Penfield and Monroe County. Since the mid-1980s, IBCC has established management measures and reviewed development proposals for the bay. A harbor management plan to evaluate capacities and appropriate uses of the bay is also being developed. An Irondequoit Bay Pedestrian Access Plan was completed in 2000. The Monroe County Environmental Management Council has inventoried environmentally sensitive areas in and around the bay. This has led to the acquisition by the county of lands along the shore and in the wetlands to the south of the bay. Land use an revitalization plans for both the south end of the bay and the Sea Breeze area to the north have also been developed by area towns. (Monroe County WQCC, May 2001)

The Monroe County Environmental Health Laboratory has maintained a cooperative monitoring program with USGS which grew out of a Nationwide Urban Runoff Program effort on Irondequoit Bay in 1980s. Subsequent USGS reports on water quality in the bay have been published in 1996, 1997 and 1999. (Monroe County Environmental Health Laboratory, May 2001)

Minor Tribs to Irondequoit Bay (0302-0038) Impaired Seg

Waterbody Location Information

Revised: 05/04/2007

Water Index No: Ont 108/P113- 1 thru 6 (selected)
Hydro Unit Code: 04140101/020 **Str Class:** C
Waterbody Type: River (Low Flow)
Waterbody Size: 9.7 Miles
Seg Description: total length of smaller/selected tribs

Drain Basin: Lake Ontario
Irondequoit/Ninemile
Reg/County: 8/Monroe Co. (28)
Quad Map: ROCHESTER EAST (I-10-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
AQUATIC LIFE	Impaired	Suspected
RECREATION	Impaired	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: MUNICIPAL (unknown), ON-SITE/SEPTIC SYST
Possible: Other Sanitary Disch

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg8 **Resolution Potential:** Medium
TMDL/303d Status: 3b*

Further Details

Aquatic life support and recreational uses of Densmore Creek is thought to be limited by sewage inputs and various urban runoff impacts. Various nonpoint urban and stormwater runoff sources are suspected of causing water quality impacts to most of the smaller minor tribs to the bay.

A biological (macroinvertebrate) assessment of Densmore Creek in Newport (at Bayshore Drive) was conducted in 1999. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination identified sewage wastes as the primary factor affecting the fauna. (DEC/DOW, BWAM/SBU, January 2001)

This segment includes the total length of selected/smaller tribs to Irondequoit Bay. Tribs within this segment, including Densmore Creek (-5), are Class C. Irondequoit Creek (-3) is listed separately.

Irondequoit Cr, Lower, and minor tribs (0302-0024) MinorImpacts

Waterbody Location Information

Revised: 05/04/2007

Water Index No:	Ont 108/P113- 3			**Drain Basin:**	Lake Ontario
Hydro Unit Code:	04140101/020	**Str Class:**	B		Irondequoit/Ninemile
Waterbody Type:	River			**Reg/County:**	8/Monroe Co. (28)
Waterbody Size:	50.3 Miles			**Quad Map:**	ROCHESTER EAST (I-10-2)
Seg Description:	stream and selected tribs, fr mouth to NYS Barge Canal				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Public Bathing	Stressed	Suspected
Fish Consumption	Stressed	Known
Aquatic Life	Stressed	Known
Recreation	Stressed	Known

Type of Pollutant(s)

Known: NUTRIENTS, Priority Organics (PCBs), Pesticides (mirex)
Suspected: PATHOGENS, Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF, Tox/Contam. Sediment (Lk Ont/Irondequoit Bay)
Suspected: MUNICIPAL, Agriculture, Construction, Streambank Erosion, Other Sanitary Disch
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, aquatic life support, recreational uses (fishing, boating, etc) and fish consumption in this portion of Irondequoit Creek are known to experience minor impacts from various urban/stormwater sources and other nonpoint sources in the watershed. Fish consumption is also restricted as a result of a health advisory for Irondequoit Bay that extends to tribs up to the first impassable barrier.

A biological (macroinvertebrate) assessment of Irondequoit Creek in Penfield (at Route 153) was conducted in 1999. Sampling results indicated slightly impacted water quality conditions. Impact Source Determination indicated influences from nonpoint source nutrient enrichment. Municipal and/or industrial inputs were identified as possible sources. Previous NYSDEC sampling of the site in 1995 found similar results. A 1998 assessment conducted by Dr. William Sutton in cooperation with NYSDEC found slight to moderate impacts along this reach north of the barge canal. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, January 2001)

Fish consumption advisories for Irondequoit Bay and Lake Ontario (and all tribs to the first barrier) also applies to this tributary water. A NYSDOH health advisory recommends eating no carp taken from the Irondequoit Bay due to PCB and mirex contamination. The Lake Ontario advisory recommends eating no American eel, channel catfish, carp, chinook salmon, lake trout (over 25") or brown trout (over 20"). The advisory also recommends that consumption of white perch, white sucker, rainbow trout, smaller lake and brown trout, and coho salmon (over 25") be limited to no more than one meal per month. The fish consumption advisories are a result of PCB, mirex and dioxin contamination of lake sediments. The advisory for the Bay was first issued prior to 1998-99. (2006-07 NYS DOH Health Advisories and DEC/DFWMR, Habitat, December 2006).

Urban and stormwater runoff has been identified as the primary source of nutrients and other pollutants (pathogens, oil and grease, floatables) to the creek. Agricultural activities in the upper watershed, impacts from failing and/or inadequate on-site septic systems, tributary stream erosion and residential and commercial development throughout the watershed are also thought to contribute to nutrient and silt/sediment loadings. Significant areas of streambank erosion have been identified by the county. A major erosion site in the Town of Penfield was addressed with local and NYS Environmental Bond Act funding in 1998. (Monroe County WQCC, May 2001)

Considerable bay and watershed water quality management and monitoring efforts are continuing. Municipalities within the watershed have formed the Irondequoit Watershed Collaborative. IWC activities have focused on comprehensive stormwater management efforts and (with USGS) hydrologic modeling to predict the impact of land use changes. Efforts within Monroe County include the establishment of a collaborative to assist with the implementation of phase II stormwater regulations. The Monroe County WQCC has evaluated road salt use and conducted a residential lawn care education project. (Monroe County WQCC, May 2001)

The Monroe County Environmental Health Laboratory has maintained a cooperative monitoring program with USGS which grew out of a Nationwide Urban Runoff Program effort on Irondequoit Basin in 1980s. Subsequent USGS reports on water quality in the basin have been published in 1996, 1997 and 1999. (Monroe County Environmental Health Laboratory, May 2001)

This segment includes the portion of the stream and selected/smaller tribs from the mouth at Irondequoit Bay to the NYS Barge Canal. The waters of the stream are Class B, B(T),B(TS). Tribs to this reach/segment, including Grass Creek (-3) are primarily Class C. Allen Creek (-8) and Thomas/White Brook (-12) are listed separately. (May 2001)

Irondequoit Cr, Upper, and tribs (0302-0029) MinorImpacts

Waterbody Location Information

Revised: 05/04/2007

Water Index No: Ont 108/P113- 3
Drain Basin: Lake Ontario
Hydro Unit Code: 04140101/020 **Str Class:** C* Irondequoit/Ninemile
Waterbody Type: River **Reg/County:** 8/Monroe Co. (28)
Waterbody Size: 139.6 Miles **Quad Map:** FAIRPORT (I-11-4)
Seg Description: stream and tribs above NYS Barge Canal

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: MUNICIPAL, Agriculture, Streambank Erosion, Other Sanitary Disch
Possible: - - -

Resolution/Management Information

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

Further Details

Aquatic life support and recreational uses (fishing, boating, etc) in this portion of Irondequoit Creek are known to experience minor impacts from various urban/stormwater sources and other nonpoint sources in the watershed.

A biological (macroinvertebrate) assessment of Irondequoit Creek in Bushnell Basin (at Park Road) was conducted in 1999. Sampling results indicated slightly impacted water quality conditions. Impact Source Determination indicated influences from nonpoint source nutrient enrichment. Municipal and/or industrial inputs were identified as possible sources. A 1998 assessment conducted by Dr. William Sutton in cooperation with NYSDEC also found slightly impacted conditions along this reach south of the barge canal. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, January 2001)

Urban and stormwater runoff has been identified as the primary source of nutrients and other pollutants (pathogens, oil and grease, floatables) to the creek. Agricultural activities in the upper watershed, impacts from failing and/or inadequate on-site septic systems, tributary stream erosion and residential and commercial development throughout the watershed

are also thought to contribute to nutrient and silt/sediment loadings. Significant areas of streambank erosion have been identified by the county. A major erosion site in the Town of Penfield was addressed with local and NYS Environmental Bond Act funding in 1998. (Monroe County WQCC, May 2001)

Considerable bay and watershed water quality management and monitoring efforts are continuing. Municipalities within the watershed have formed the Irondequoit Watershed Collaborative. IWC activities have focused on comprehensive stormwater management efforts and (with USGS) hydrologic modeling to predict the impact of land use changes. Efforts within Monroe County include the establishment of a collaborative to assist with the implementation of phase II stormwater regulations. The Monroe County WQCC has evaluated road salt use and conducted a residential lawn care education project. (Monroe County WQCC, May 2001)

The Monroe County Environmental Health Laboratory has maintained a cooperative monitoring program with USGS which grew out of a Nationwide Urban Runoff Program effort on Irondequoit Basin in 1980s. Subsequent USGS reports on water quality in the basin have been published in 1996, 1997 and 1999. (Monroe County Environmental Health Laboratory, May 2001)

This segment includes the portion of the stream and all tribs above the NYS Barge Canal. The waters of the stream are primarily Class C, C(T), C(TS); with some small portions designated Class B(TS). Tribs to this reach/segment are primarily Class C, C(T); with a few tribs waters Class B. (May 2001)

Allen Creek and tribs (0302-0022) MinorImpacts

Waterbody Location Information

Revised: 03/19/2002

Water Index No: Ont 108/P113- 3- 8
Hydro Unit Code: 04140101/010 **Str Class:** B
Waterbody Type: River
Waterbody Size: 59.8 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Ontario
Irondequoit/Ninemile
Reg/County: 8/Monroe Co. (28)
Quad Map: ROCHESTER EAST (I-10-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF, Construction, Other Sanitary Disch
Suspected: Agriculture, Deicing (stor/appl), Streambank Erosion
Possible: - - -

Resolution/Management Information

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

Further Details

Aquatic life support, public bathing and various recreational uses (fishing, boating, etc) in Allen Creek are affected by impacts from various urban/stormwater sources and other nonpoint sources in the watershed.

A biological (macroinvertebrate) assessment of Allen Creek near Penfield was conducted in 1999 and again in 2004. Field sampling results indicated slightly impacted water quality conditions in 1999. The field assessment was verified by laboratory-sorting of the sample to order level. In 2004 the stream was found to have been significantly altered - perhaps relocated - due to construction in the area. Moderate impacts were indicated, but these results may have been influenced by habitat conditions. Additional monitoring to verify the impacts is recommended. A 1998 assessment conducted by Dr. William Sutton in cooperation with NYSDEC found slight to moderate impacts. Both assessments indicate the presence of nutrient enrichment in the stream. (DEC/DOW, BWAM/SBU, January 2001)

Urban and stormwater runoff related to the high degree of impervious surface area (shopping plazas, parking lots, roadways, etc) has been identified as the primary source of nutrients and other pollutants (pathogens, oil and grease,

floatables) to the creek. A significant portion of one tributary (Buckland Creek) is enclosed and serves primarily as a storm sewer for Elmwood Avenue. Agricultural activities in the upper watershed, impacts from failing and/or inadequate on-site septic systems, tributary stream erosion and residential and commercial development throughout the watershed are also thought to contribute to nutrient and silt/sediment loadings. (Monroe County WQCC, May 2001)

Considerable bay and watershed water quality management and monitoring efforts are continuing. Municipalities within the watershed have formed the Irondequoit Watershed Collaborative. IWC activities have focused on comprehensive stormwater management efforts and (with USGS) hydrologic modeling to predict the impact of land use changes. Efforts within Monroe County include the establishment of a collaborative to assist with the implementation of phase II stormwater regulations. The Monroe County WQCC has evaluated road salt use and conducted a residential lawn care education project. A town highway facility is the focus of a pollutant removal demonstration project being conducted with NYS DEC funding. (Monroe County WQCC, May 2001)

The Monroe County Environmental Health Laboratory has maintained a cooperative monitoring program with USGS which grew out of a Nationwide Urban Runoff Program effort on Irondequoit Basin in 1980s. Subsequent USGS reports on water quality in the basin have been published in 1996, 1997 and 1999. (Monroe County Environmental Health Laboratory, May 2001)

This segment includes the entire stream and all tribs. The waters of the stream are primarily Class B, B(T); the upper reaches are Class C. Tribs to this reach/segment, including West Brook (-1), are Class B, B(TS) and C. (May 2001)

Thomas Creek/White Brook (0302-0023) Impaired Seg

Waterbody Location Information

Revised: 05/08/2007

Water Index No: Ont 108/P113- 3-12
Hydro Unit Code: 04140101/020 **Str Class:** B
Waterbody Type: River
Waterbody Size: 28.7 Miles
Seg Description: stream and tribs, from mouth to NYS Barge Canal

Drain Basin: Lake Ontario
Irondequoit/Ninemile
Reg/County: 8/Monroe Co. (28)
Quad Map: FAIRPORT (I-11-4)

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

Type of Pollutant(s)

Known: Silt/Sediment
Suspected: NUTRIENTS, UNKNOWN TOXICITY
Possible: Pathogens

Source(s) of Pollutant(s)

Known: OTHER SANITARY DISCH, URBAN/STORM RUNOFF, Construction
Suspected: Agriculture, Streambank Erosion
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 2 (Problem Verified, Cause Unknown)
Lead Agency/Office: DOW/Reg8 **Resolution Potential:** Medium
TMDL/303d Status: 3b*

Further Details

Aquatic life support, public bathing and recreational uses in Thomas/White Creek are impaired by unspecified toxicity, nutrients and various other pollutants likely from urban/stormwater runoff and other nonpoint sources in the watershed.

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Thomas Creek in East Rochester, Monroe County, (at Baird Road) was conducted in 2000. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated toxicity to be the primary factor affecting the fauna. Nutrient Biotic Indices also indicated nutrient levels corresponding to eutrophic conditions in the stream. Water column sampling revealed dissolved solids to be a parameter of concern, with values often slightly above the assessment criterion. Bottom sediment sampling results revealed no substances to be exceeding the Probable Effects Level - a level at which adverse impacts are expected. However several PAHs were found at levels exceeding the Threshold Effects Level - levels at which adverse impacts occasionally occur. Toxicity testing of the water column found one of three

samples showed severe reproductive impacts and indications of significant mortality as well. (DEC/DOW, BWAM/RIBS, September 2005)

A biological (macroinvertebrate) assessment of Thomas Creek in East Rochester was also conducted in 1999 during the Biological Screening effort in the basin. Sampling results also indicated moderately impacted water quality conditions and strongly suggested the presence of toxicity, the source of which was undetermined. A 1998 assessment conducted by Dr. William Sutton in cooperation with NYSDEC found slight to moderate impacts. Both assessments indicate the presence of nutrient enrichment in the stream. (DEC/DOW, BWAM/SBU, January 2001)

Urban and stormwater runoff related to the high degree of impervious surface area (shopping plazas, parking lots, roadways, etc) has been identified as the primary source of nutrients and other pollutants (pathogens, oil and grease, floatables) to the creek. Agricultural activities in the upper watershed, impacts from failing and/or inadequate on-site septic systems, tributary stream erosion and residential and commercial development throughout the watershed are also thought to contribute to nutrient and silt/sediment loadings. (Monroe County WQCC, May 2001)

Considerable bay and watershed water quality management and monitoring efforts are continuing. Municipalities within the watershed have formed the Irondequoit Watershed Collaborative. IWC activities have focused on comprehensive stormwater management efforts and (with USGS) hydrologic modeling to predict the impact of land use changes. Efforts within Monroe County include the establishment of a collaborative to assist with the implementation of phase II stormwater regulations. The Monroe County WQCC has evaluated road salt use and conducted a residential lawn care education project. A town highway facility is the focus of a pollutant removal demonstration project being conducted with NYS DEC funding. (Monroe County WQCC, May 2001)

The Monroe County Environmental Health Laboratory has maintained a cooperative monitoring program with USGS which grew out of a Nationwide Urban Runoff Program effort on Irondequoit Basin in 1980s. Subsequent USGS reports on water quality in the basin have been published in 1996, 1997 and 1999. (Monroe County Environmental Health Laboratory, May 2001)

This segment includes the portion of the stream and all tribs from the mouth to the NYS Barge Canal. The waters of the stream are Class B. Tribs to this reach/segment, including Commission Ditch (-3), are Class B and C. (May 2001)

Hundred Acre Pond (0302-0034) Impaired Seg

Waterbody Location Information

Revised: 09/20/2002

Water Index No: Ont 108/P113- 3-33-P143
Hydro Unit Code: 04140101/020 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 102.3 Acres
Seg Description: entire lake

Drain Basin: Lake Ontario
Irondequoit/Ninemile
Reg/County: 8/Monroe Co. (28)
Quad Map: PITTSFORD (I-10-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH (aquatic weeds), PATHOGENS, PROBLEM SPECIES (Eurasian milfoil, other), Nutrients
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)

Known: OTHER SOURCE (waterfowl)
Suspected: Agriculture, On-Site/Septic Syst
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: ext/WQCC **Resolution Potential:** Medium
TMDL/303d Status: 4c (Impaired by Pollution, Not Pollutant(s), Not Listed)

Further Details

Public bathing, other recreational uses (fishing, boating) and aesthetics are restricted in Hundred Acres Pond. Pathogen contamination is the primary concern, but invasive and nuisance aquatic growth also contributes to problems in the lake.

A public beach on the pond was closed in the late 1980s for reasons other than water quality. However, the Monroe County Health Department has monitored the pond since then and found fecal coliform levels that would preclude re-opening the area to swimming. The primary source of the contamination is thought to be resident Canadian geese that began using the pond as a nesting area in the 1990s. The Monroe County Department of Parks has tried, under a NYSDEC permit, various methods of reducing the population of geese. The pond is also choked with excessive and invasive/non-native aquatic vegetation (Eurasian milfoil, Myriophyllum spicatum, other) which limits boating and other recreation. Former septic systems are thought to be a source of nutrients to the pond, although agricultural runoff within the watershed may also contribute. Pit toilets that were previously implicated as nutrient and pathogen sources have been replaced. (Monroe County WQCC, April 2001)

Durand, Eastman Lakes (0302-0037) MinorImpacts

Waterbody Location Information

Revised: 03/20/2002

Water Index No: Ont 111-P148a,P148e
Hydro Unit Code: 04140101/020 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 38.6 Acres
Seg Description: total area of both lakes

Drain Basin: Lake Ontario
Irondequoit/Ninemile
Reg/County: 8/Monroe Co. (28)
Quad Map: ROCHESTER EAST (I-10-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH (algal blooms, weeds), PATHOGENS, Species Alteration (Eurasian milfoil), Silt/Sediment
Suspected: Nutrients
Possible: D.O./Oxygen Demand

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: OTHER SOURCE (waterfowl, wildlife), OTHER SANITARY DISCH, Roadbank Erosion, Streambank Erosion
Possible: On-Site/Septic Syst

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, other recreational uses (fishing, boating) and aesthetics in Durand, Eastman Ponds are limited by pathogen contamination and excessive weed growth and algal blooms.

High fecal coliform levels have been documented in these and the other ponds of the Durand-Eastman Park by the Monroe County Health Department (1999). The primary sources appear to be waterfowl, wildlife and domestic pets. Not surprisingly, the highest pathogen levels occur after storm events. Other impediments to recreational use of the ponds include algal blooms and occasional associated odors during the summer season. Silt, sediment and nutrient loads from streambank erosion, and urban runoff also impact recreation uses. Aerial photography has been used to document decreases in pond size and depth. On-site septic systems and golf course runoff have been suggested as nutrient sources. Invasive aquatic plants (Eurasian milfoil) and downed trees and other debris from past ice storms affect the aesthetics of the ponds. (Monroe County Health Department, April 2001)

The Town of Irondequoit is working to establish a drainage district to address drainage issues in the watershed. The town is also working with NYS DEC on a Spring Valley Flood Control Project. Additional monitoring data and water quality information can be found in the 1999 Durand Eastman Park Beach Monitoring Report (Monroe County Environmental Health Laboratory, 2000) and a 1993 Clean Lakes grant application. (Monroe County Health Department, April 2001)

This segment includes the total area of both Durand (P148a) and Eastman Lakes (P148e); similar conditions have been noted in smaller ponds in the Durand Eastman Park (Johnson Pond, Sherry Swamp, Lily Pond).