NYS Barge Canal (portion 7) (1201-0064) MinorImpacts

Waterbody Location Information

Revised: 04/16/2010

Water Index No: H-240 (portion 12a)
Hydro Unit Code: 02020004/ **Str Class:** C
Waterbody Type: River (High Flow)
Waterbody Size: 21.3 Miles
Seg Description: from East Schuyler to Rome

Drain Basin: Mohawk River
Mohawk River
Reg/County: 6/Oneida Co. (33) ...
Quad Map: ILION (I-20-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, PATHOGENS
Suspected: Water Level/Flow, Nutrients, Priority Organics (PCBs), Silt/Sediment
Possible: Oil and Grease

Source(s) of Pollutant(s)

Known: COMB. SEWER OVERFLOW
Suspected: LANDFILL/LAND DISP., OTHER SANITARY DISCH, URBAN/STORM RUNOFF, Agriculture, Hydro Modification, Streambank Erosion, Tox/Contam. Sediment
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 1 (Waterbody Nominated, Problem Not Verified)
Lead Agency/Office: DOW/Reg6
TMDL/303d Status: n/a
Resolution Potential: Medium

Further Details

Overview

Aquatic life, recreational uses (fishing, boating) and aesthetics in this reach of the Mohawk River/Barge Canal are known to experience some impacts due to sanitary and combined sewer overflows (SSOs and CSOs), various former industrial point sources and continuing urban nonpoint runoff. Fish consumption is also considered to experience minor impacts. These sources are known to impair uses in the parallel reach of the Mohawk River, however it is not clear that the impacts in this portion of the canal reach the level of impairment.

Water Quality Sampling

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring (water chemistry) of the Mohawk River in West Schuyler, Oneida County, is conducted annually at Dyke Road. In addition, when RIBS Intensive Network monitoring is conducted in a targeted basin every five years, additional sampling methods are employed to gain an overall assessment of water quality. This Intensive Network sampling typically includes macroinvertebrate community analysis, sediment assessment, macroinvertebrate tissue analysis and toxicity testing, in addition to water chemistry. The most recent Intensive Network

monitoring was conducted during 2005 (multiplates) and 2006. Biological (macroinvertebrate) sampling revealed moderately impacted water quality, with municipal and industrial discharge identified as the primary source of the impacts. Water column chemistry sampling indicates pathogens (total and fecal coliform), chloroform, phenols and iron to be present at levels that constitute parameters of concern. Toxicity testing using water from this location detected no significant mortality or reproductive effects on the test organism. Sediment screening for acute toxicity indicated some slightly elevated sediment toxicity but not at a level where impacts are expected. Bottom sediments collected from this site in previous years revealed somewhat elevated levels of PAHs and some metals. PAHs and PCBs were also noted in macroinvertebrate tissue collected at this site. Based on the consensus of these established assessment methods, overall water quality at this site reflects impaired conditions. Although this site lies outside the bounds of this segment on the adjoining Mohawk River, it is considered to be somewhat representative of water quality conditions in the canal. (DEC/DOW, BWAM/RIBS, January 2010)

Biological community assessments along this reach of the Mohawk River/Barge Canal have consistently shown aquatic life to be moderately impacted over recent years. Impact Source Determination, an analytical tool that uses invertebrate community composition to identify types of stressors, indicated the communities are most similar to those influenced by municipal and/or industrial discharges; results that are consistent with the known SSO and CSO issues. Though still impaired, these results show some indication of steady water quality improvement over previous years. Historically (1970s thru mid 80s), water quality in this reach of the river was severely impacted by raw sewage, and samples were dominated by pollution tolerant worms and midges indicating gross degradation. Improvements were first noted in 1986 and 1989 and were attributed to construction and upgrade of the Oneida County WWTP. (Twenty Year Trends in Water Quality, Bode et.al., DEC/DOW, BWAR/SBU, 1993).

Source Assessment
The Oneida County WWTP which was constructed in 1972 and upgraded in 1987 replaced 13 primary sewage treatment plants that served area communities and significantly reduced raw sewage discharge from the Utica area. However sanitary and combined sewer overflows (SSOs and CSOs) remain a source of water quality problems. Work by the City of Utica and Oneida County to eliminate some overflow points and reduce overflows continues. However limited capacity at the WWTP and carrying capacity bottlenecks in the sewer collection system results in significant wet-weather discharges, particularly from the Sauquoit Creek Pump Station sanitary sewer overflow and the railroad and Grace Creek interceptors. These overflows are responsible for high levels of pathogens and floatables discharges which impair recreational uses. The SSO and CSOs also contribute other pollutants that result in reduced dissolved oxygen and other impacts that affect aquatic life in the Mohawk River. (DEC/DOW, Region 6, January 2010)

Water quality in the harbor is also affected by the Niagara Mohawk Harbor Point hazardous waste site (6-33-021). The site is a former coal gas production facility, which operated between 1845 and the 1950s. The site is located on a peninsula between the NYS Barge Canal and the neck of the harbor and harbor itself. Dredge spoils areas consisting of sediments dredged from the harbor and canal border the harbor and harbor neck. The primary contaminants in the spoils and harbor sediments are polycyclic aromatic hydrocarbons (PAHs), benzene, xylene and other organics. A Remedial Investigation and Feasibility Study was completed and a Record of Decision was issued for the site in 2002. The ongoing cleanup is being conducted in phases over several years. (DEC/DER, January 2010)

Fish Consumption
Fish consumption in the Mohawk River along and connected to this reach is impaired due to a NYS DOH health advisory that recommends eating no carp and no more than one meal per month of largemouth bass and tiger muskellunge because of elevated PCB levels. The sources of PCBs are attributed to contaminated sediments. Industrial hazardous waste sites and landfills along the river corridor may be contributing some additional loading. The advisory is based on sampling conducted in the river rather than the canal, but the contamination is thought to result in some impacts on the canal segment as well. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, October 2002).

Previous NYSDEC sampling using PISCES samplers along much of this reach of the Mohawk River/Barge Canal found a number of PCB sources in current and former industrial areas. (DEC/DFWMR, Habitat, April 2002)

Section 303(d) Listing
This portion of the Barge Canal is not currently included on the NYS 2010 Section 303(d) List of Impaired Waters. Although

monitoring in the adjoining Mohawk River suggests impacts and possible impairment, monitoring within this segment is necessary to determine if a future listing is appropriate. (DEC/DOW, BWAM/WQAS, January 2010)

Segment Description
This segment includes the portion of the canal from Pratt Creek (-196) confluence with the NYS Barge Canal near East Schuyler to the edge of the drainage basin at the confluence of the Upper Mohawk River in Rome. The Mohawk River is listed separately.

Utica Harbor (1201-0228) Impaired Seg

Waterbody Location Information

Revised: 01/26/2010

Water Index No: H-240 (portion 12b)
Hydro Unit Code:
Str Class: C
Waterbody Type: Bay
Waterbody Size: 21.7 Acres
Seg Description: entire harbor
Drain Basin: Mohawk River
Reg/County: 6/Oneida Co. (33)
Quad Map: UTICA EAST (I-20-4)

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: AESTHETICS (odors, floatables), PRIORITY ORGANICS (PCBs,PAHs,etc), PATHOGENS
Suspected: D.O./OXYGEN DEMAND, Metals, Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP. (NiMo/Harbor Point), TOX/CONTAM. SEDIMENT
Suspected: URBAN/STORM RUNOFF
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DEC/DER
Resolution Potential: Medium
TMDL/303d Status: 1,2b (Individual Waterbody Impairment Requiring a TMDL, more)

Further Details

Overview
Fish consumption, aquatic life support, recreational uses (fishing, boating) and aesthetics in this reach of the Mohawk River are considered impaired by contaminated sediments, sanitary and combined sewer overflows (SSOs and CSOs), various former industrial point sources and continuing urban nonpoint runoff.

Fish Consumption
Fish consumption in the Mohawk River from Oriskany to West Canada Creeks is impaired due to a NYS DOH health advisory that recommends eating no carp and no more than one meal per month of largemouth bass and tiger muskellunge because of elevated PCB levels. The sources of PCBs are attributed to contaminated sediments. Industrial hazardous waste sites and landfills along the river corridor may be contributing some additional loading. This advisory was first issued prior to 1998-99. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, October 2002).

Water Quality Sampling

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring (water chemistry) of the Mohawk River in West Schuyler, Oneida County, is conducted annually at Dyke Road. In addition, when RIBS Intensive Network monitoring is conducted in a targeted basin every five years, additional sampling methods are employed to gain an overall assessment of water quality. This Intensive Network sampling typically includes macroinvertebrate community analysis, sediment assessment, macroinvertebrate tissue analysis and toxicity testing, in addition to water chemistry. The most recent Intensive Network monitoring was conducted during 2005 (multiplates) and 2006. Biological (macroinvertebrate) sampling revealed moderately impacted water quality, with municipal and industrial discharge identified as the primary source of the impacts. Water column chemistry sampling indicates pathogens (total and fecal coliform), chloroform, phenols and iron to be present at levels that constitute parameters of concern. Toxicity testing using water from this location detected no significant mortality or reproductive effects on the test organism. Sediment screening for acute toxicity indicated some slightly elevated sediment toxicity but not at a level where impacts are expected. Bottom sediments collected from this site in previous years revealed somewhat elevated levels of PAHs and some metals. PAHs and PCBs were also noted in macroinvertebrate tissue collected at this site. Based on the consensus of these established assessment methods, overall water quality at this site reflects impaired conditions. Although this site is downstream of this reach of the river, it is considered to be representative of water quality conditions in the upper reach. (DEC/DOW, BWAM/RIBS, January 2010)

Biological community assessments along this reach of the Mohawk River have consistently shown aquatic life to be moderately impacted over recent years. Impact Source Determination, an analytical tool that uses invertebrate community composition to identify types of stressors, indicated the communities are most similar to those influenced by municipal and/or industrial discharges; results that are consistent with the known SSO and CSO issues. Though still impaired, these results show some indication of steady water quality improvement over previous years. Historically (1970s thru mid 80s), water quality in this reach of the river was severely impacted by raw sewage, and samples were dominated by pollution tolerant worms and midges indicating gross degradation. Improvements were first noted in 1986 and 1989 and were attributed to construction and upgrade of the Oneida County WWTP. (Twenty Year Trends in Water Quality, Bode et.al., DEC/DOW, BWAR/SBU, 1993).

Previous NYSDEC sampling using PISCES samplers along much of this reach of the Mohawk River/Barge Canal found a number of PCB sources in current and former industrial areas. (DEC/DFWMR, Habitat, April 2002)

Source Assessment

The Oneida County WWTP which was constructed in 1972 and upgraded in 1987 replaced 13 primary sewage treatment plants that served area communities and significantly reduced raw sewage discharge from the Utica area. However sanitary and combined sewer overflows (SSOs and CSOs) remain a source of water quality problems. Work by the City of Utica and Oneida County to eliminate some overflow points and reduce overflows continues. However limited capacity at the WWTP and carrying capacity bottlenecks in the sewer collection system results in significant wet-weather discharges, particularly from the Sauquoit Creek Pump Station sanitary sewer overflow and the railroad and Grace Creek interceptors. These overflows are responsible for high levels of pathogens and floatables discharges which impair recreational uses. The SSO and CSOs also contribute other pollutants that result in reduced dissolved oxygen and other impacts that affect aquatic life in the Mohawk River. (DEC/DOW, Region 6, January 2010)

Water quality in the harbor is also affected by the Niagara Mohawk Harbor Point hazardous waste site (6-33-021). The site is a former coal gas production facility, which operated between 1845 and the 1950s. The site is located on a peninsula between the NYS Barge Canal and the neck of the harbor and harbor itself. Dredge spoils areas consisting of sediments dredged from the harbor and canal border the harbor and harbor neck. The primary contaminants in the spoils and harbor sediments are polycyclic aromatic hydrocarbons (PAHs), benzene, xylene and other organics. A Remedial Investigation and Feasibility Study was completed and a Record of Decision was issued for the site in 2002. The ongoing cleanup is being conducted in phases over several years. (DEC/DER, January 2010)

Section 303(d) Listing

The Utica Harbor section of the Mohawk River is included on the NYS 2008 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 pathogens, Dissolved Oxygen and floatables. The segment is also included on Part 2b as a Fish

Consumption Water. This waterbody was first listed on the 2004 Section 303(d) List. (DEC/DOW, BWAM/WQAS, January 2010)

Segment Description
This segment includes the entire harbor and harbor neck. The NYS Barge Canal and Mohawk River are listed separately.

Minor Tribs to Mohawk River (1201-0205) Need Verific

Waterbody Location Information

Revised: 12/04/2009

Water Index No: H-240-212,213,215,216
Hydro Unit Code: 02020004/060 **Str Class:** C
Waterbody Type: River (Low Flow)
Waterbody Size: 39.0 Miles
Seg Description: entire stream and tribs

Drain Basin: Mohawk River
Mohawk River
Reg/County: 6/Oneida Co. (33)
Quad Map: UTICA EAST (I-20-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)
Known: - - -
Suspected: NUTRIENTS (phosphorus)
Possible: D.O./Oxygen Demand

Source(s) of Pollutant(s)
Known: - - -
Suspected: URBAN/STORM RUNOFF, Agriculture
Possible: - - -

Resolution/Management Information

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

Further Details

Overview
Aquatic life in Reall Creek are known to experience minor impacts/threats due to elevated nutrients and possibly organic inputs. Nonpoint sources, including urban/storm runoff and agricultural activities, are the likely sources.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Reall Creek in Deerfield (at Firehouse Road) 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 some enrichment. However low flow at the time of the sampling may have been the reason the assessment at this site slipped into the range of moderate impact. Further investigation and/or other indicators are required to determine the extent of water quality impacts. (DEC/DOW, BWAM/SBU, December 2009)

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Reall Creek in Utica was conducted in 2001. This sampling was part of a mini-study of four urban streams in the Utica area. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis. Analysis of water column samples indicated that high pH was a parameter of concern for this stream. A biological (macroinvertebrate)

assessment of Reall Creek in Deerfield was conducted in 2000 as part of the RIBS effort. Sampling results indicated slightly impacted water quality conditions. The fauna was diverse, but dominated by facultative midges, although clean-water mayflies, stoneflies, and caddisflies were collected at this site. Impact Source Determination indicated possible effects of organic wastes, but no sources are known. (DEC/DOW, BWAR/SBU, April 2003)

Segment Description
This segment includes the total length of selected/smaller tribs to and north of the Mohawk River near Utica. Tribs within this segment, including Reall Creek (-212), are Class C.

Minor Tribs to Mohawk River (1201-0224) NoKnownImpct

Waterbody Location Information

Revised: 08/08/2002

Water Index No:	H-240-220 thru 239	**Drain Basin:**	Mohawk River
Hydro Unit Code:	02020004/060 **Str Class:** C		Mohawk River
Waterbody Type:	River (Low Flow)	**Reg/County:**	6/Oneida Co. (33)
Waterbody Size:	52.1 Miles	**Quad Map:**	ORISKANY (I-19-2) ...
Seg Description:	total length of selected tribs, from Utica to Rome		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling
A biological (macroinvertebrate) assessment of Crane Creek in Marcy was conducted in 2000. Sampling results indicated non-impacted water quality conditions. Mayflies, stoneflies and caddisflies were well-represented. (DEC/DOW, BWAR/SBU, July 2002)

Segment Description
This segment includes the total length of selected/smaller tribs to the Mohawk River between Utica and Rome. Tribs within this segment, including Crane Creek (-222), are Class C,C(T),C(TS). Oriskany Creek (-223), Ninemile Creek (-227), Sixmile Creek (-231), Threemile Creek (-234) and Wheelers Creek (-240) are listed separately.

Ninemile Creek, Lower, and tribs (1201-0014) MinorImpacts

Waterbody Location Information

Revised: 04/13/2010

Water Index No:	H-240-227	**Drain Basin:**	Mohawk River
Hydro Unit Code:	02020004/020 **Str Class:** B(T)		Mohawk River
Waterbody Type:	River (Low Flow)	**Reg/County:**	6/Oneida Co. (33)
Waterbody Size:	96.7 Miles	**Quad Map:**	ORISKANY (I-19-2)
Seg Description:	stream and tribs, from mouth to South Trenton		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known:	THERMAL CHANGES
Suspected:	SILT/SEDIMENT
Possible:	PATHOGENS, Water Level/Flow, Nutrients

Source(s) of Pollutant(s)

Known:	HABITAT MODIFICATION, Hydro Modification
Suspected:	Agriculture, 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: 1->n/a?,4c

Further Details

Overview
Natural resources (fishery) habitat in Ninemile Creek due to the loss of riparian vegetation and other habitat modifications. Agricutural activity in the watershed is the source of the problem. Increasing urbanization and development are also concerns. However more recent sampling suggests these threats are not atypical of many other streams in the state.

Source Assessment
Agricultural activity, including unrestricted cattle access to the stream, destabilize banks and eliminated bank vegetation and cover. Due to the loss of streambank vegetation, the stream has become wider and shallower. As a result the shallower, non-shaded waters experience higher temperatures in the summer and provide insufficient cover for fish. The trout fishery is managed as a "put and take" fishery due to the poor habitat and high temperatures. Fishery surveys over the years have documented poor survival of spring stocked trout by mid-summer. Despite the loss, stocking is continued because of good public access. The Region has done work to replace the riparian vegetation. However, increasing urbanization and open agriculture continue to destroy stream bank vegetation. This stream also receives water from West Canada Creek to supplement flow to the barge canal. (DEC/DFWMR, Region 6, April 2002)

Water Quality Sampling
A biological (macroinvertebrate) assessment of Ninemile Creek in Marcy (at River Road) was conducted as part of the

RIBS biological screening effort in 2005. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and are most similar to a natural community with minimal human impacts. Some additional species, including sensitive non-native species, and additional biomass may be present; the samples reveal no, or only incidental, anomalies. Aquatic life community is fully supported. These results represent an improvement from conditions found during sampling at this site in 2000 and 2001. (DEC/DOW, BWAM/SBU, January 2010)

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Ninemile Creek in Marcy (at Richie Road) was also conducted in 2000 and 2001. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis. Biological sampling indicated slightly impacted water quality in 2000, from nonpoint source nutrient enrichment. The 2001 sampling resulted in an assessment of non-impacted, although nutrient enrichment was still indicated to be present. No significant parameters of concern were identified in the water column. Sediments contained cadmium and DDE at levels considered elevated, and of concern, but not above concentrations known to affect aquatic life. No toxicity was found in two tests conducted on different dates, and no metals or organic compounds were found in invertebrates tissues. (DEC/DOW, BWAR/RIBS, April 2003)

Previous Assessment
Concerns were raised during previous assessment efforts in 2002 regarding the impact of numerous failed on-site septic systems in Holland Patent and raw sewage discharges to tribs of Ninemile Creek. However, since then the village has received funding to implement corrective action, and has sewered the community and connected these residences to the Oneida County sewer system in 2005. (DEC/DOW, Region 6, April 2010)

Section 303d Listing
Ninemile Creek is included on the NYS 2008 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 pathogens. However due to the resolution of the failing onsite wastewater (septic) systems in Holland Patent, this waterbody should be considered for delisting. (DEC/DOW, BWAM/WQAS, April 2010)

Segment Description
This segment includes the portion of the stream and all tribs from the mouth to/including the Trenton Falls Feeder Canal (-23a) near South Trenton. The waters of this portion of the stream, are Class B(T). Tribs to this reach/segment, including Dry Creek (-8), Vaughn Brook (-13), Great Gulf Creek (-16) and Willow Creek (-20) are primarily Class C,C(T); the Trenton Falls Feeder Canal (-23a) is designated Class B. Upper Ninemile Creek and Beaver Brook (-21-1) are listed separately.

Mohawk River, Main Stem (1201-0093) Impaired Seg

Waterbody Location Information

Revised: 01/26/2010

Water Index No: H-240 (portion 12)
Hydro Unit Code: 02020004/ **Str Class:** C
Waterbody Type: River (High Flow)
Waterbody Size: 13.6 Miles
Seg Description: from East Schuyler to Whitesboro

Drain Basin: Mohawk River
Mohawk River
Reg/County: 6/Herkimer Co. (22) ...
Quad Map: ILION (I-20-3)

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: AESTHETICS (odors, floatables), PRIORITY ORGANICS (PCBs), PATHOGENS, Metals (copper, other)
Suspected: D.O./OXYGEN DEMAND, Nutrients, Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: COMB. SEWER OVERFLOW, LANDFILL/LAND DISP. (Utica/Leland Ave Landfill), TOX/CONTAM. SEDIMENT
Suspected: INDUSTRIAL, URBAN/STORM RUNOFF, 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: DOW/Reg6 **Resolution Potential:** Medium
TMDL/303d Status: 1,2b (Individual Waterbody Impairment Requiring a TMDL, more)

Further Details

Overview
Fish consumption, aquatic life support, recreational uses (fishing, boating) and aesthetics in this reach of the Mohawk River are considered impaired by contaminated sediments, sanitary and combined sewer overflows (SSOs and CSOs), various former industrial point sources and continuing urban nonpoint runoff.

Fish Consumption
Fish consumption in the Mohawk River from Oriskany to West Canada Creeks is impaired due to a NYS DOH health advisory that recommends eating no carp and no more than one meal per month of largemouth bass and tiger muskellunge because of elevated PCB levels. The sources of PCBs are attributed to contaminated sediments. Industrial hazardous waste sites and landfills along the river corridor may be contributing some additional loading. This advisory was first issued prior to 1998-99. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, October 2002).
Water Quality Sampling

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring (water chemistry) of the Mohawk River in West Schuyler, Oneida County, is conducted annually at Dyke Road. In addition, when RIBS Intensive Network monitoring is conducted in a targeted basin every five years, additional sampling methods are employed to gain an overall assessment of water quality. This Intensive Network sampling typically includes macroinvertebrate community analysis, sediment assessment, macroinvertebrate tissue analysis and toxicity testing, in addition to water chemistry. The most recent Intensive Network monitoring was conducted during 2005 (multiplates) and 2006. Biological (macroinvertebrate) sampling revealed moderately impacted water quality, with municipal and industrial discharge identified as the primary source of the impacts. Water column chemistry sampling indicates pathogens (total and fecal coliform), chloroform, phenols and iron to be present at levels that constitute parameters of concern, although the median values for these substances are below the applicable assessment criteria. Toxicity testing using water from this location detected no significant mortality or reproductive effects on the test organism. Sediment screening for acute toxicity indicated some slightly elevated sediment toxicity but not at a level where impacts are expected. Bottom sediments collected from this site in previous years revealed somewhat elevated levels of PAHs and some metals. PAHs and PCBs were also noted in macroinvertebrate tissue collected at this site. Based on the consensus of these established assessment methods, overall water quality at this site reflects impaired conditions. (DEC/DOW, BWAM/RIBS, January 2010)

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of the Mohawk River was also conducted in Utica, Oneida County, (at Barnes Avenue) in 2005 and 2006. Water column chemistry also indicated pathogens (total and fecal coliform) to be a parameter of concern. Toxicity testing using water from this location detected no significant mortality or reproductive effects on the test organism. Sediment screening for acute toxicity indicated some sediment toxicity and no porewater toxicity was indicated. Bottom sediments analysis based on sediment quality guidelines developed for freshwater ecosystems revealed overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. (DEC/DOW, BWAM/RIBS, January 2010)

Biological community assessments along this reach of the Mohawk River have consistently shown aquatic life to be moderately impacted over recent years. Impact Source Determination, an analytical tool that uses invertebrate community composition to identify types of stressors, indicated the communities are most similar to those influenced by municipal and/or industrial discharges; results that are consistent with the known SSO and CSO issues. Though still impaired, these results show some indication of steady water quality improvement over previous years. Historically (1970s thru mid 80s), water quality in this reach of the river was severely impacted by raw sewage, and samples were dominated by pollution tolerant worms and midges indicating gross degradation. Improvements were first noted in 1986 and 1989 and were attributed to construction and upgrade of the Oneida County WWTP. (Twenty Year Trends in Water Quality, Bode et.al., DEC/DOW, BWAR/SBU, 1993).

Previous NYSDEC sampling using PISCES samplers along much of this reach of the Mohawk River/Barge Canal found a number of PCB sources in current and former industrial areas. (DEC/DFWMR, Habitat, April 2002)

Source Assessment

The Oneida County WWTP which was constructed in 1972 and upgraded in 1987 replaced 13 primary sewage treatment plants that served area communities and significantly reduced raw sewage discharge from the Utica area. However sanitary and combined sewer overflows (SSOs and CSOs) remain a source of water quality problems. Work by the City of Utica and Oneida County to eliminate some overflow points and reduce overflows continues. However limited capacity at the WWTP and carrying capacity bottlenecks in the sewer collection system results in significant wet-weather discharges, particularly from the Sauquoit Creek Pump Station sanitary sewer overflow and the railroad and Grace Creek interceptors. These overflows are responsible for high levels of pathogens and floatables discharges which impair recreational uses. The SSO and CSOs also contribute other pollutants that result in reduced dissolved oxygen and other impacts that affect aquatic life in the Mohawk River. (DEC/DOW, Region 6, January 2010)

Environmental remediation sites may also impact water quality in the river. There are a number of class 2 sites (i.e., sites where hazardous wastes have been confirmed and which pose a threat to the environment) in the area including NiMo Harbor Point (6-33-021), the Utica City Dump (6-33-015), Monarch Chemical (6-33-030), and others. These sites are in varying stages of remediation. (DEC/DER, Environmental Remediation Database, January 2010)

Water Quality Management

The NYSDEC has recently initiated a focused effort to conserve, preserve, and restore the environmental quality of the Mohawk River and its watershed, while helping to manage the resources of the region for a sustainable future. The establishment of a Mohawk River Basin Program to act as coordinator of basin-wide activities to achieve these goals is a key component of this effort. However the success of the program will require the involvement of stakeholders and the creation of partnerships with established programs and organizations throughout the basin. To this end, the Mohawk River Basin Program will follow the successful model of the Hudson River Estuary Program. Adopting a similar model will help accomplish the goal of developing a "whole Hudson" ecosystem-based management approach to managing the Hudson River Estuary. At the same time, a separate Mohawk River Basin Program promotes needed focus on the Mohawk Valley and its own unique culture, history, resources and concerns and a regional approach would help to address the unique challenges of the Basin. The first steps in fulfilling this mission are outlined in the Mohawk River Basin Program Action Agenda 2009-2014. (DEC/DOW, BWAM, January 2009).

Section 303(d) Listing

This reach of the Mohawk River is included on the NYS 2008 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 pathogens, dissolved oxygen and floatables. The segment is also included on Part 2b as a Fish Consumption Water. This waterbody was first listed on the 2004 Section 303(d) List. (DEC/DOW, BWAM/WQAS, January 2010)

Segment Description

This segment includes the portion of the river from Bonny Brook (-195) near East Schuyler to Sauquoit Creek (-219) in Whitesboro. The NYS Barge Canal and Utica Harbor are listed separately.