



Eighteenmile Creek (0412010305)

Water Index Number

Ont 158..E-13
 Ont 158..E-13
 Ont 158..E-13
 Ont 158..E-13- 4
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 Ont 158..E-13- 6

Waterbody Segment

Eighteenmile Creek, Lower, minor tribs (0104-0030)
 Eighteenmile Creek, Middle, and tribs (0104-0017)
 Eighteenmile Creek, Upper, and tribs (0104-0039)
 South Br. Eighteenmile, Lower, and tribs (0104-0016)
 South Br. Eighteenmile, Upper, and tribs (0104-0040)
 Hampton Brook and tribs (0104-0041)

Category

MinorImpacts
 NoKnownImpct
 NoKnownImpct
 NoKnownImpct
 NoKnownImpct
 MinorImpacts

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

MinorImpacts

Waterbody Location Information

Revised: 06/01/2010

Water Index No: Ont 158..E-13
Hydro Unit Code: 04120103/020 **Str Class:** B(T)
Waterbody Type: River
Waterbody Size: 30.8 Miles
Seg Description: stream and selected tribs, from mouth to Hamburg

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

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Resolution Potential: Medium

Further Details

Overview

Recreational uses and fishery habitat in this portion of Eighteenmile Creek are thought to experience minor impacts due to nutrient enrichment, pathogens, silt/sediment loads and elevated temperatures from streambank erosion, residential development in the surrounding suburban area, urban and stormwater runoff. Impacts on fish consumption are also of some concern based on elevated levels of PCBs found in sediments. Despite these minor impacts, aquatic life and other uses are considered to be fully supported in the stream. Water quality appears to be slightly improved since 2001 sampling. The main branch is used by migratory rainbow trout from Lake Erie.

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Eighteenmile Creek in Evans, Erie County, (at Lake Shore Road) was conducted in 2005 and 2006. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, toxicity testing, sediment assessment and macroinvertebrate tissue analysis. Biological (macroinvertebrate) sampling indicated slightly to non-impacted conditions. Such samples are dominated by clean-water species with considerable similarity to a natural community with minimal

human impacts. Some sensitive species may not be present and the overall abundance of macroinvertebrates may be slightly lower. However, the effects on the fauna appear to be insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities influenced by nonpoint nutrients and agricultural sources. Aquatic life support is considered to be fully supported in the stream. Water column chemistry indicates pathogens and iron to be present at levels that constitute parameters of concern. However, iron is considered to be naturally occurring and not a source of water quality impacts. 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 possible 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. 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. (DEC/DOW, BWAM/RIBS, June 2010)

These results are somewhat more favorable than results from biological sampling conducted at this site in 2000 and 2001. Biological sampling results at the time indicated slightly impacted water quality conditions. The primary cause of impact was determined to be nonpoint source nutrient enrichment. Despite these minor impacts, aquatic life was considered to be fully supported in the stream. Water column sampling revealed no parameters of concern. Toxicity testing of the water column showed no significant mortality or reproductive impacts. However, bottom sediment sampling results revealed elevated levels of nickel, PAHs and PCBs. (DEC/DOW, BWAR/RIBS, January 2005)

Source Assessment

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

Segment Description

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

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

NoKnownImpct

Waterbody Location Information

Revised: 06/01/2010

Water Index No: Ont 158..E-13
Hydro Unit Code: 04120103/020 **Str Class:** A
Waterbody Type: River
Waterbody Size: 49.5 Miles
Seg Description: stream and tribs, from Hamburg to Patchin

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: HAMBURG (K-05-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

A biological (macroinvertebrate) survey/assessment of Eighteenmile Creek in North Boston (at Route 277) was conducted as part of the RIBS biological screening effort in 2005. Sampling results indicated slightly impacted conditions. In such samples the community is somewhat altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities influenced by nonpoint nutrients and agricultural sources. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2010)

These results are consistent with results from sampling conducted in 2000. Field sampling results at that time indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

A biological assessment of Neuman Creek in Hamburg (at Route 391) was also conducted as part of the RIBS biological screening effort in 2005. Sampling results in this trib indicated the upper range of slightly impacted conditions. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and the overall

abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate higher levels of enrichment in the stream and fauna that is most similar to (natural) communities influenced by nonpoint nutrients and silt and sediment loadings. (DEC/DOW, BWAM/SBU, June 2010)

Segment Description

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

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

NoKnownImpct

Waterbody Location Information

Revised: 06/01/2010

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

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

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

A biological (macroinvertebrate) survey/assessment of Eighteenmile Creek in North Boston (at Route 277) was conducted as part of the RIBS biological screening effort in 2005. Sampling results indicated slightly impacted conditions. In such samples the community is somewhat altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities influenced by nonpoint nutrients and agricultural sources. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2010)

These results are consistent with results from sampling conducted in 2000. Field sampling results at that time indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

Segment Description

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

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

Waterbody Location Information

Revised: 06/01/2010

Water Index No: Ont 158..E-13- 4
Hydro Unit Code: 04120103/020 **Str Class:** B
Waterbody Type: River
Waterbody Size: 77.8 Miles
Seg Description: stream and tribs, from mouth to New Oregon

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: HAMBURG (K-05-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of South Branch Eighteenmile Creek in Eden Valley, Erie County, (at Eden Valley Road) was conducted in 2005 and 2006. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, toxicity testing, sediment assessment and macroinvertebrate tissue analysis. Biological (macroinvertebrate) sampling indicated slightly to non-impacted conditions. Such samples are dominated by clean-water species with considerable similarity to a natural community with minimal human impacts. Some sensitive species may not present and the overall abundance of macroinvertebrates may be slightly lower. However, the effects on the fauna appear to be insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities influenced by nonpoint nutrients and agricultural sources. Aquatic life support is considered to be fully supported in the stream. Water column chemistry indicates pathogens and iron to be present at levels that constitute parameters of concern. However, iron is considered to be naturally occurring and not a source of water quality impacts. Toxicity testing using water from this location detected no significant mortality but reproductive effects on the test organism showed some toxicity in one of three tests. Sediment screening for acute toxicity indicated no sediment toxicity and some possible 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. 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. (DEC/DOW, BWAM/RIBS, June 2010)

These results are consistent with sampling conducted at the site in 2000. Field sampling results at that time indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

Segment Description

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

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

Waterbody Location Information

Revised: 06/01/2010

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

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

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of South Branch Eighteenmile Creek in Eden Valley, Erie County, (at Eden Valley Road) was conducted in 2005 and 2006. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, toxicity testing, sediment assessment and macroinvertebrate tissue analysis. Biological (macroinvertebrate) sampling indicated slightly to non-impacted conditions. Such samples are dominated by clean-water species with considerable similarity to a natural community with minimal human impacts. Some sensitive species may not present and the overall abundance of macroinvertebrates may be slightly lower. However, the effects on the fauna appear to be insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities influenced by nonpoint nutrients and agricultural sources. Aquatic life support is considered to be fully supported in the stream. Water column chemistry indicates pathogens and iron to be present at levels that constitute parameters of concern. However, iron is considered to be naturally occurring and not a source of water quality impacts. Toxicity testing using water from this location detected no significant mortality but reproductive effects on the test organism showed some toxicity in one of three tests. Sediment screening for acute toxicity indicated no sediment toxicity and some possible 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. 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. Though this sampling point is just below the described segment, it is considered representative of water quality in the upper reach. (DEC/DOW, BWAM/RIBS, June 2010)

These results are consistent with sampling conducted at the site in 2000. Field sampling results at that time indicated non-impacted water quality conditions. The sample satisfied field screening criteria and was returned to the stream. (DEC/DOW, BWAR/SBU, April 2003)

Segment Description

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

Hampton Brook and tribs (0104-0041)

MinorImpacts

Waterbody Location Information

Revised: 06/01/2010

Water Index No: Ont 158..E-13- 6
Hydro Unit Code: 04120103/020 **Str Class:** B
Waterbody Type: River
Waterbody Size: 16.7 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Erie-Niagara River
Buffalo/Eighteenmile
Reg/County: 9/Erie Co. (15)
Quad Map: HAMBURG (K-05-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/reg9
TMDL/303d Status: n/a

Resolution Potential: Medium

Further Details

Overview

Aquatic life in Hampton Brook is known to experience minor impacts due to excessive nutrient levels attributed to nonpoint sources. Municipal/industrial point sources are also suggested as contributing as well.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Hampton Brook in Hamburg (at Eckardt Road) was conducted as part of the RIBS biological screening effort in 2005. 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 nutrients and agricultural sources as well as municipal and urban point and nonpoint sources. (DEC/DOW, BWAM/SBU, June 2010)

Segment Description

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