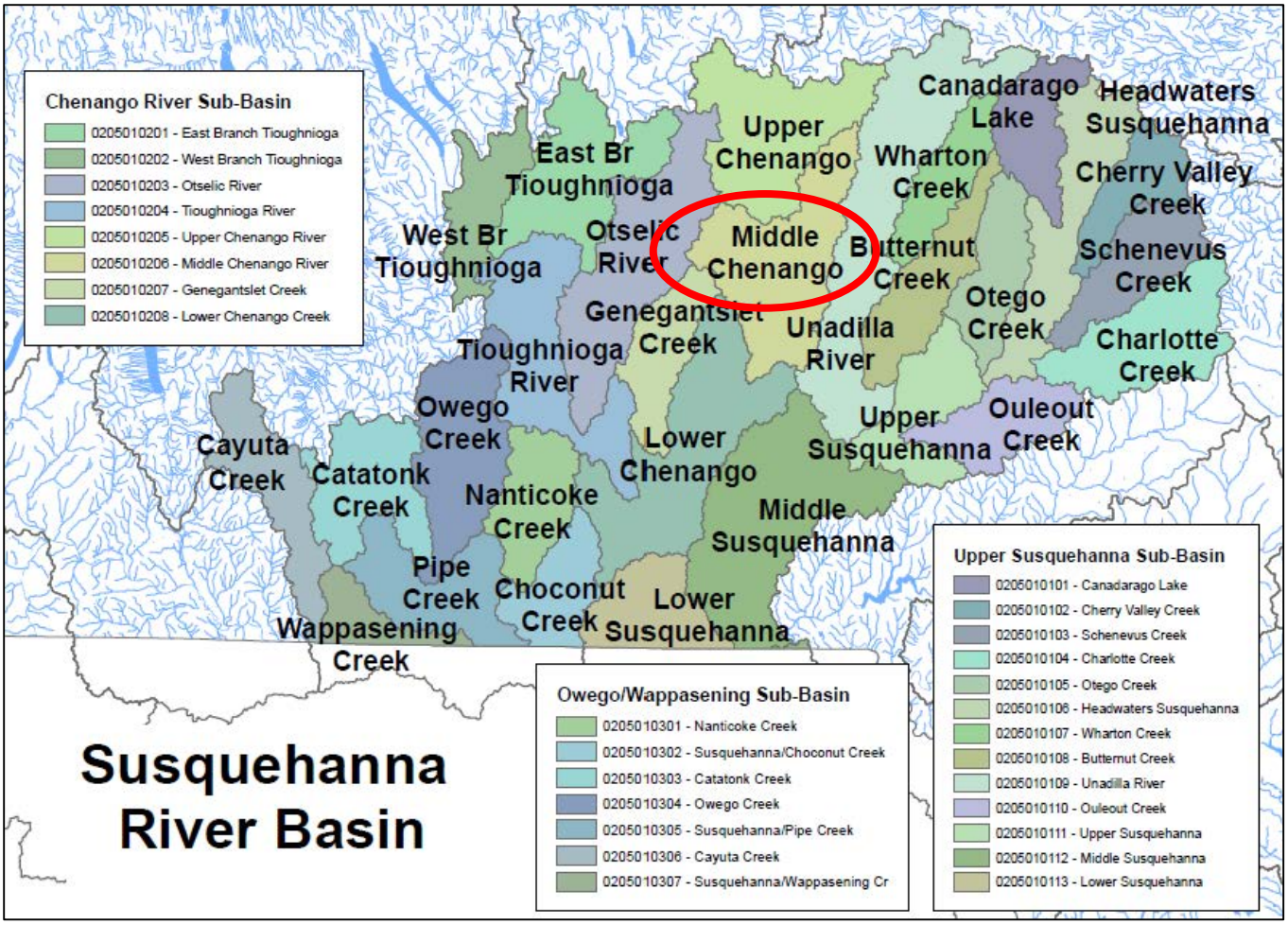

Middle Chenango River Watershed
(0205010206)

Water Index Number	Waterbody Segment	Category
SR- 44 (portion 3)	Chenango River, Middle, Main Stem (0602-0164)	Impaired Seg
SR- 44 (portion 4)	Chenango River, Upper, and minor tribs (0602-0069)	Impaired Seg
SR- 44-42 thru 57 (selected)	Minor Tribs to Middle Chenango River (0602-0151)	UnAssessed
SR- 44-44	Fly Meadow Creek and tribs (0602-0147)	UnAssessed
SR- 44-44- 2-P103	McCall Pond (0602-0102)	UnAssessed
SR- 44-45	Lyon Brook and tribs (0602-0148)	UnAssessed
SR- 44-45- 2-2-P106	North Pond (0602-0103)	UnAssessed
SR- 44-54	Canasawacta Creek, Lower and minor tribs (0602-0013)	Minor Impacts
SR- 44-54	Canasawacta Creek, Upper and tribs (0602-0149)	UnAssessed
SR- 44-54- 5	East Branch and tribs (0602-0150)	UnAssessed
SR- 44-54- 7-P107a	Round Pond (0602-0104)	UnAssessed
SR- 44-54- 8-P107	Plymouth Reservoir (0602-0014)	Minor Impacts
SR- 44-56-P108/P109	Norwich Reservoirs (0602-0010)	Need Verific

Water Index Number	Waterbody Segment	Category
SR- 44-68	Handsome Brook and minor tribs (0602-0070)	NoKnownImpct
SR- 44-68- 5	Pleasant Brook and tribs (0602-0154)	UnAssessed
SR- 44-68- 7-P124	Sears Pond (0602-0105)	UnAssessed
SR- 44-69a-P123 a	Rogers Game Farm Pond (0602-0106)	UnAssessed

Chenango River, Middle, Main Stem (0602-0164) Impaired Seg

Waterbody Location Information

Revised: 06/26/2009

Water Index No: SR- 44 (portion 3)
Hydro Unit Code: 02050102/050 **Str Class:** C
Waterbody Type: River
Waterbody Size: 16.1 Miles
Seg Description: from near Oxford to Norwich

Drain Basin: Susquehanna River
Chenango River
Reg/County: 7/Chenango Co. (9)
Quad Map: ()

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)
Known: METALS (mercury)
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)
Known: - - -
Suspected: ATMOSPH. DEPOSITION
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: ext/EPA **Resolution Potential:** Medium
TMDL/303d Status: 4a*

Further Details

Overview
Fish consumption in this portion of the Chenango River is known to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination.

Fish Consumption Advisories
Fish consumption in this portion of the Chenango River is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Chenango Forks and Norwich. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling
A biological (macroinvertebrate) assessment of Chenango River below Norwich (at RR Trestle) was conducted as part of the RIBS biological screening effort in 2003. 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. (DEC/DOW, BWAM/SBU, January 2009)

Section 303(d) Listing

Due to the fish consumption advisory this portion of Chenango River was included in the 2006 Section 303(d) List of Impaired Waters, but it is not included on the 2008 List. Though the waterbody remains impaired, it was delisted in 2008 due to the completion of the Northeast Regional Mercury TMDL which was approved in 2007 and provides coverage for this specific waterbody. (DEC/DOW, BWAM, January 2009)

Segment Description

This segment includes the main stem portion of the river from Mill Creek (-41) below Oxford to the Norwich-North Norwich Town line near Woods Corners. This reach of the river is Class C.

Chenango River, Upper, and minor tribs (0602-0069) Impaired Seg

Waterbody Location Information

Revised: 06/26/2009

Water Index No:	SR- 44 (portion 4)			**Drain Basin:**	Susquehanna River
Hydro Unit Code:	02050102/020	**Str Class:**	B(T)		Chenango River
Waterbody Type:	River			**Reg/County:**	7/Chenango Co. (9) ...
Waterbody Size:	43.4 Miles			**Quad Map:**	NORWICH (K-18-3) ...
Seg Description:	stream and select tribs, from Norwich to Randallville				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: METALS (mercury)
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: ATMOSPH. DEPOSITION
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: ext/EPA **Resolution Potential:** Medium
TMDL/303d Status: 4a (TMDL Complete, Being Implemented, Not Listed)

Further Details

Overview
Fish consumption in this portion of the Chenango River is known to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination.

Fish Consumption Advisories
Fish consumption in this portion of the Chenango River is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Chenango Forks and Norwich. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling
A biological (macroinvertebrate) assessment of Chenango River above Norwich (near Route 320) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated slightly impacted conditions. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and a 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 elevated enrichment in the stream yet fauna is most similar to natural communities. 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, January 2009)

A RIBS Intensive Network Monitoring site was located on the river in Sherburne in 1998. Chemical monitoring at the site indicates no significant parameters of concern and water quality was assessed as good. Although a fishery assessment found generally good habitat, silt and sedimentation from streambank erosion and agricultural runoff were noted. (DEC/DOW, RIBS, August 2000)

Biological samples taken in Sherburne in 1997 found slightly impacted conditions but indices were most closely aligned with natural communities, indicating possible habitat effects. (DEC/DOW, BWAR/SBU, January 1999)

Biological assessments of Cold Brook in North Norwich (at Route 12) and Fly Creek in North Norwich (at Route 12) were conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated slightly impacted conditions at both sites. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and a 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. The Fly Creek site was evaluated using low gradient (sandy stream) criteria due to the lack of a suitable sampling riffle. Aquatic life support is considered to be fully supported in the stream. (DEC/DOW, BWAM/SBU, January 2009)

Section 303(d) Listing

Due to the fish consumption advisory that extends for the entire length of the river this portion of the Chenango River remains impaired. However it is not included on the current (2008) Section 303(d) List due to the completion of the Northeast Regional Mercury TMDL which was approved in 2007 and provides coverage specifically for the Chenango River. (DEC/DOW, BWAM, January 2009)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from the Norwich-North Norwich Town line near Woods Corners to Payne Brook (-78) in Randallville. The waters of this portion of the stream are Class B,B(T). Tribs to this reach/segment, including Cold Brook (-59), Whapanaka Brook (-60), Fly Creek (-61), West Brook (-64), Pleasant Valley Creek (-65), Mad Brook (-66) and Kingsley Brook (-79), are primarily Class C,C(T),C(TS). Upper Mad Brook (-66), Handsome Brook (-68), Pleasant Brook (-71), Sangerfield River (-72), Stone Mill Brook (-74) and Payne Brook (-78) are listed separately.

Canasawacta Creek, Lower and minor tribs (0602-0013) MinorImpacts

Waterbody Location Information

Revised: 07/16/2009

Water Index No: SR- 44-54
Hydro Unit Code: 02050102/030 **Str Class:** B
Waterbody Type: River (Low Flow)
Waterbody Size: 11.6 Miles
Seg Description: stream and selected tribs from mouth to South Plymouth

Drain Basin: Susquehanna River
Chenango River
Reg/County: 7/Chenango Co. (9)
Quad Map: NORWICH (K-18-3) ...

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)
Known: - - -
Suspected: SILT/SEDIMENT
Possible: - - -

Source(s) of Pollutant(s)
Known: HYDRO MODIFICATION
Suspected: - - -
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DEC/Reg7
TMDL/303d Status: n/a
Resolution Potential: Medium

Further Details

Overview
Habitat/hydrology in Canasawacta Creek experiences impacts due to stream modification and silt/sedimentation from road work along Route 23.

Water Quality Sampling
Biological (macroinvertebrate) assessment of Canaswacta Creek in Norwich in 1997 passed field screening criteria and were assessed as non-impacted. However re-sampling of the stream is recommended in order to confirm water quality conditions. (DEC/DOW, BWAR/SBU, June 2009)

Stream Management
Concerns were raised by regional staff in previous (1998) assessment regarding roadway maintenance by NYS DOT along Route 23 that destabilized streambanks. More recently the USFWS in conjunction with NYSDEC, SWCD, DOT, and a local citizens group has received major funding for stream restoration work in a 4-5 mile stretch of the stream in the Town of Plymouth. Numerous rock vane structures are being installed in conjunction with the reconstruction of a more natural meander pattern in an effort to reduce erosion and flooding in the system. In many areas the stream is also being reconnected to it old flood plain or as well. When the project is complete, major improvements in the fishery are

expected and it is hoped that some flooding problems and road side maintenance issues will be resolved as well. (DEC/DFWMR, Region 7, June 2009)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to East Branch Canaswacta Creek (-5). The waters of this portion of the stream are Class B from the mouth to unnamed trib (-3) and Class C(T) for the remainder of the reach. Tribs to this reach/segment are Class C,C(T). East Branch (-5) and Upper Canaswacta Creek are listed separately.

Plymouth Reservoir (0602-0014) MinorImpacts

Waterbody Location Information

Revised: 07/07/2009

Water Index No: SR- 44-54- 8-P107
Hydro Unit Code: 02050102/030 **Str Class:** B
Waterbody Type: Lake (Mesotrophic)
Waterbody Size: 79.0 Acres
Seg Description: entire reservoir

Drain Basin: Susquehanna River
Chenango River
Reg/County: 7/Chenango Co. (9)
Quad Map: EAST PHARSALIA (K-18-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)
Known: ALGAL/WEED GROWTH (aquatic vegetation)
Suspected: Nutrients (phosphorus)
Possible: - - -

Source(s) of Pollutant(s)
Known: - - -
Suspected: HABITAT MODIFICATION
Possible: On-Site/Septic Syst

Resolution/Management Information

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

Further Details

Overview
Recreational uses (swimming, fishing, boating) in Plymouth Reservoir are thought to experience minor impacts due to algal and aquatic weed growth in the lake. The lake is very shallow, so weed growth could be somewhat natural; but might be exacerbated by excess nutrient input. Grass carp have been introduced into the lake in an effort to control the weeds.

Water Quality Sampling
Plymouth Reservoir has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1991 and continuing through 2006. An Interpretive Summary report of the findings of this sampling was published in 2007. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive. Lake productivity as reflected in phosphorus and algal measurements was lower than expected in 2006. Phosphorus levels in the lake are typically below the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements regularly exceed the recommended minimum for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is moderately to highly colored, and color does limit water transparency when algae levels are reduced. (DEC/DOW, BWAM/CSLAP,

March 2007)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be generally favorable, and more so in 2006. The recreational suitability of the lake is described most frequently as "excellent" for most uses. The lake itself is most often described as "not quite crystal clear" or having "definite algal greenness," an assessment that is consistent measured water quality characteristics. More recent assessments have noted that aquatic plants do not grow to the lake surface after June. Aquatic plants are dominated by a mix of native and non-native (Eurasian milfoil) species. Weed growth in the lake has been quite variable in recent years, perhaps related to the introduction of grass carp. (DEC/DOW, BWAM/CSLAP, March 2007)

Lake Uses

This lake waterbody is designated class B, suitable for use as a public bathing beach, for general recreation and aquatic life support, but not for drinking water supply. Water quality monitoring by NYSDEC focuses primarily on support of general recreation and aquatic life. Samples to evaluate the bacteriological condition and bathing use of the lake or to evaluate contamination from organic compounds, metals or other inorganic pollutants have not been collected as part of the CSLAP monitoring program. Monitoring to assess potable water supply and public bathing use is generally the responsibility of state and/or local health departments.

Segment Description

This segment includes the total area of the entire lake.

Norwich Reservoirs (0602-0010) Need Verific

Waterbody Location Information

Revised: 06/12/2009

Water Index No: SR- 44-56-P108/P109
Hydro Unit Code: 02050102/020 **Str Class:** A
Waterbody Type: Lake(R)
Waterbody Size: 15.1 Acres
Seg Description: total area of both reservoirs

Drain Basin: Susquehanna River
Chenango River
Reg/County: 7/Chenango Co. (9)
Quad Map: HOLMESVILLE (K-19-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Suspected

Type of Pollutant(s)
Known: - - -
Suspected: - - -
Possible: PATHOGENS, Algal/Weed Growth (algal blooms, turbidity)

Source(s) of Pollutant(s)
Known: - - -
Suspected: - - -
Possible: AGRICULTURE, On-Site/Septic Syst

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->B

Further Details

Overview
Water supply uses of the Norwich Reservoirs are thought to experience threats from pathogens due to the level of agricultural pasturelands in the watershed and the number of wastewater discharges. Current information does not indicate any significant impacts to water supply or other uses, but the use of the resources as a water supply and the activities in the watershed suggest additional protection efforts are appropriate.

Source (Drinking) Water Assessment
A source water assessment of the Norwich Reservoirs found an elevated susceptibility to pathogen contamination due to the high amount of pastureland in the watershed. This assessment was conducted through the NYSDOH Source Waters Assessment Program (SWAP) which compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination and do not address the quality of treated finished potable tap water. This water supply source provides water to the City of Norwich. (NYSDOH, Source Water Assessment Program, 2005)

Previous Assessments

The drinking water supply use of the Norwich Reservoirs was reported in previous assessments to be stressed by algal blooms and reduced water clarity. Lower dissolved oxygen levels were noted during a 1998 Lake Classification and Inventory (LCI) evaluation. (DEC/DOW, BWM/Lake Services, August 2000).

Section 303(d) Listing

Norwich Reservoirs are included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included among the waters listed in Appendix B - Waters Not Meeting Dissolved Oxygen Standards. This part of the List recognizes waterbodies where low dissolved oxygen in lake bottom waters may be the result of morphology and other natural conditions in thermally stratified lakes. This updated assessment suggests that there are no significant impacts to the fishery and other uses are fully supported. Based on this assessment the lake is assessed as having no known impacts. However because NYS water quality standards for dissolved oxygen do not include an explicit exception for natural conditions or averaging of dissolved oxygen over lake depth, USEPA requires that the Section 303(d) List recognize such waters. (DEC/DOW, BWAM/WQAS, June 2009)

Agricultural activity in the watershed and failing and/or inadequate on-site septic systems are suspected sources of nutrients to the reservoir. (Chenango County WQCC, 1998)

Handsome Brook and minor tribs (0602-0070) NoKnownImpct

Waterbody Location Information

Revised: 07/10/2009

Water Index No:	SR- 44-68			**Drain Basin:**	Susquehanna River
Hydro Unit Code:	02050102/020	**Str Class:**	C(T)		Chenango River
Waterbody Type:	River			**Reg/County:**	7/Chenango Co. (9) ...
Waterbody Size:	44.7 Miles			**Quad Map:**	SHERBURNE (K-19-1) ...
Seg Description:	entire stream and selected tribs				

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 Handsome Brook in Sherburne was conducted as part of the RIBS biological screening effort in 1997. Sampling results indicated slightly impacted conditions. In such samples the community is only slightly altered from natural conditions. Some sensitive species are not present and a 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 very low enrichment in the stream and fauna that is most similar to communities influenced by impoundment effects (which could skew the results toward poorer water quality than actually occurs) and some nonpoint 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, January 2009)

Segment Description
This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C,C(T). Tribs to this reach/segment are Class C,C(T),CT(S). Pleasant Brook (-5) is listed separately.