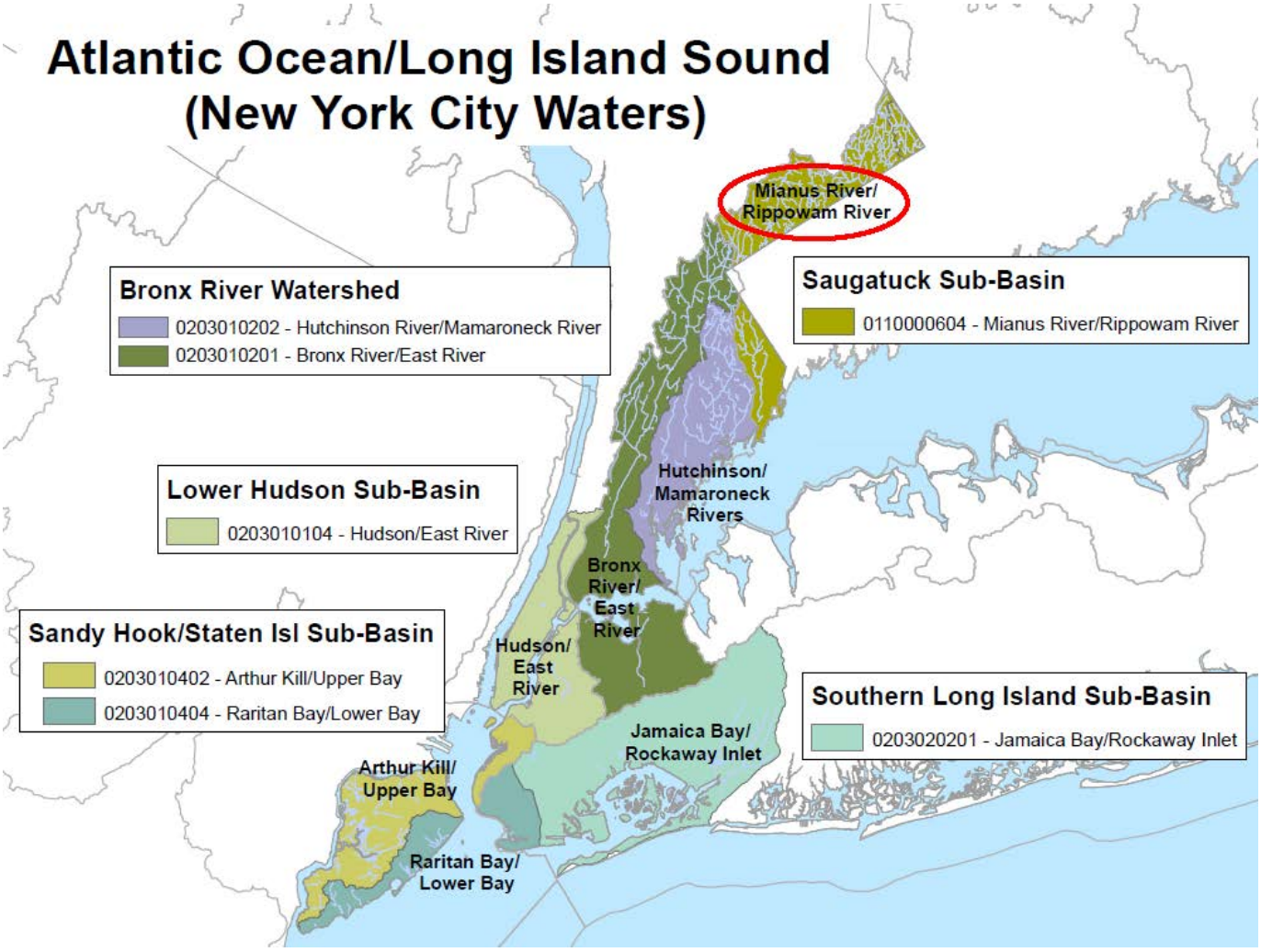

Mianus River/Rippowam River Watershed

(0110000604)

Water Index Number	Waterbody Segment	Assessment Category
(MW3.4) LIS (portion 2c)	Milton Harbor (1702-0063)	Impaired Seg
(MW3.4) LIS-11	Blind Brook, Lower (1702-0062)	Impaired Seg
(MW3.4) LIS-11	Blind Brook, Upper, and tribs (1702-0130)	Impaired Seg
(MW3.5) LIS-12	Playland Lake (1702-0131)	UnAssessed
(MW3.6) LIS (portion 2d)	Port Chester Harbor (1702-0260)	Impaired Seg
(MW3.6) LIS-13	Byram River, Lower (1702-0132)	Impaired Seg
(MW3.6) LIS-13	Byram River, Middle, and tribs (1702-0055)	MinorImpacts
(MW3.6) LIS-13	Byram River, Upper, and minor tribs (1702-0133)	NoKnownImpct
(MW3.6) LIS-13-11	Wampus River and tribs (1702-0057)	NoKnownImpct
(MW3.6) LIS-13-11-P1104	Wampus Lake (1702-0056)	MinorImpacts
(MW3.6) LIS-13-P1106	Byram Lake Reservoir (1702-0134)	UnAssessed
(MW3.7) Conn- 1 thru 10 (selected)	Minor Tribs to Connecticut (1702-0135)	UnAssessed
(MW3.7) Conn- 2-P1106v	Converse Lake (1702-0249)	UnAssessed
(MW3.7) Conn- 4	Mianus River and tribs (1702-0136)	MinorImpacts
(MW3.7) Conn- 4-P1106d	Mianus Reservoir (1702-0255)	UnAssessed
(MW3.7) Conn- 4-P1106g-k (select)	Minor Lake Tribs to Mianus Reservoir (1702-0248)	UnAssessed
(MW3.7) Conn- 4..P1108k-q (select)	Minor Lake Tribs to Upper Mianus River (1702-0250)	UnAssessed

Water Index Number	Waterbody Segment	Assessment Category
(MW3.7) Conn- 6	Mill River and tribs (1702-0137)	NoKnownImpct
(MW3.7) Conn- 6-1-3-PP1108u	Mallard Lake (1702-0251)	UnAssessed
(MW3.7) Conn- 6-P1109	Trinity Lake (1702-0252)	UnAssessed
(MW3.7) Conn- 9-P1110	Siscowit Reservoir (1702-0253)	UnAssessed
(MW3.7) Conn-10-P1110a,1110g,1111	John DeMilne/Browns/Scotts Reservoirs (1702-0254)	UnAssessed

Segment Description

This segment includes the freshwater portion of the stream and tribs above unnamed trib (-1) in Mamaroneck. The waters of (this portion of) the stream are Class C. Tribs to this reach/segment are also Class C. Lower Beaver Swamp Brook is listed separately.

Milton Harbor (1702-0063) Impaired Seg

Waterbody Location Information

Revised: 08/19/2010

Water Index No: (MW3.4) LIS (portion 2c)
Hydro Unit Code: 02030102/060 **Str Class:** SB
Waterbody Type: Estuary
Waterbody Size: 139.7 Acres
Seg Description: entire harbor

Drain Basin: Atlantic-Long Island Sound
Long Isl Sound/Bronx
Reg/County: 3/Westchester Co. (60)
Quad Map: MAMARONECK (R-26-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
PUBLIC BATHING	Impaired	Known
Fish Consumption	Stressed	Suspected
Aquatic Life	Stressed	Known
RECREATION	Impaired	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: AESTHETICS (floatables), PATHOGENS
Suspected: D.O./Oxygen Demand, Nutrients (nitrogen), Oil and Grease, Priority Organics (PCBs/migratory fish), Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF, Other Source (boat pollution)
Suspected: OTHER SOURCE (migratory fish species), Industrial, Municipal (Mamaroneck, NYC WWTPs)
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: ext/muni **Resolution Potential:** High
TMDL/303d Status: 1 (Individual Waterbody Impairment Requiring a TMDL)

Further Details

Overview
Public bathing and recreation in Milton Harbor are impaired due to pathogen levels that results in shellfishing restrictions and periodic beach closures in the surrounding waters. Floatable debris has also been cited as impacting recreation and aesthetics. Urban stormwater runoff is the primary sources of pathogens, although various other sources such as boat discharges, waterfowl may also contribute. Aquatic life in the harbor also experiences minor impacts due to periodic low dissolved oxygen, the result of elevated nitrogen loadings. Municipal wastewater discharges, urban storm runoff and other nonpoint sources including atmospheric deposition, and tidal exchange with Long Island Sound and Connecticut waters are sources of the nutrients. Fish consumption in this embayment to Long Island Sound is also considered to experience minor impacts due to precautionary health advisories limiting the

consumption of certain species due to elevated PCB levels. These advisories are the result of the migratory range of these fish species, and not related to any known contamination in this specific waterbody.

Bathing Beach Assessment

Public bathing and other recreational uses are also considered to be impaired due to periodic bathing beach closures in surrounding waters. The majority of these are pre-emptive closures during heavier rainstorms that are known to wash pollutants into the waterways. Though Milton Harbor is classified for public bathing use, there are currently no beaches in this waterbody. (summary of local 2008 beach monitoring data as cited in Testing the Waters, NRDC, 2009)

Shellfishing Use

Shellfish harvesting for consumption purposes in Milton Harbor (a portion of Shellfish Growing Area #55) is designated as uncertified for the taking of shellfish for use as food. Shellfish that grow in contaminated waters can accumulate disease-causing microorganisms (bacteria, viruses) that can be eaten with the shellfish. This designation is based on results of water quality monitoring and evaluation of data against New York State and National Shellfish Sanitation Program monitoring criteria for pathogens. Certified/uncertified shellfish area designations are revised regularly; for detailed descriptions of current designations, go to www.dec.ny.gov/regs/4014.html. (DEC/DFWMR, Region 1, July 2010)

Although this waterbody is monitored through the shellfish program, its class SB designation does not include shellfishing as an appropriate use so these waters are not assessed for support of shellfishing use. However, based on the shellfishing restrictions, other recreational uses are considered to be impacts/impaired. (DEC/DFWMR, BMR and DEC/DOW, BWAM/WQAS, July 2010)

Long Island Sound Hypoxia

The Long Island Sound Study found that nitrogen from area WWTPs and other sources promote algal growth, die-off, settlement to the sediment, and create and oxygen demand which results in low dissolved oxygen and hypoxia in the bottom waters of the Sound. Atmospheric deposition also contributes nitrogen to the Sound. The resulting low dissolved oxygen conditions have caused crustacean kills and limits the fishery in this passageway for diadromous fish. While this problem is most severe in the Western Sound, similar impacts are also a concern in these adjacent waters. (DEC/DOW and FWMR, Region 1, August 2010)

Fish Consumption Advisories

NYS DOH has issued precautionary health advisories recommending limiting consumption of American eel, bluefish, striped bass and weakfish from Long Island Sound and tributary waters, including Milton Harbor, due to possible elevated levels of PCBs. These advisories are largely precautionary and are related to the specific habits and characteristics of these species, specifically the wide migratory range, predatory nature and high lipid/fat content that make them more likely to accumulate contaminants. Because possible contamination is more a result of the migratory range and other factors rather than any known sources of PCBs in this waterbody, fish consumption use in this segment is considered to be stressed. In addition, for some species the advisories recommend limiting consumption to no more than one meal per week which is no more stringent than the general statewide advisory for all New York waters and does not result in significant impact to uses. Health advisories regarding the consumption of fish are revised regularly; for the most current advisories, go to www.nyhealth.gov/environmental/outdoors/fish/fish.htm. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, January 2010)

Water Quality Management (NYC Nitrogen Consent Judgment)

Since 2006, New York City has been under a Nitrogen Consent Judgment to reduce nitrogen loads associated with the discharge of treated effluent to the Long Island Sound and Upper East River. Under the current Consent Judgment, which was amended in 2011, the City must install new nitrogen control technologies at four wastewater

treatment plants that discharge effluent to these waterbodies in order to reduce nitrogen loads in accordance with the Long Island Sound nitrogen TMDL. The treatment plants being upgraded are: Wards Island, Bowery Bay, Tallman Island, and Hunts Point. The first upgrades under the Consent Judgment will become operational starting in 2010 and all improvements required under the Consent Judgment will be completed by 2020. The requirements added to the amended Consent Judgment in 2011 are valued at $115 million, of which $15 million be used for marshland restoration. The $115 million represents only a portion of the value of all the upgrades and related environmental benefit projects being executed under the Nitrogen Consent Judgment.

Watershed Management/TMDL

A Total Maximum Daily Load (TMDL) plan for to reduce nitrogen loadings and address low dissolved oxygen in the Western Long Island Sound was developed and approved in 2001. This TMDL plan calls for point and nonpoint source nitrogen reductions throughout the Long Island Sound Watershed.

Long Island Sound Study

This waterbody is included in the Long Island Sound Study (LISS), a bi-state partnership consisting of federal and state agencies, user groups, concerned organizations, and individuals dedicated to fully restoring and protecting the waters of the Sound. The LISS was formed by EPA, New York, and Connecticut in 1985 to focus on the overall ecosystem. In 1994, the LISS completed a Comprehensive Conservation and Management Plan that identified seven issues - low dissolved oxygen (hypoxia), toxic contamination, pathogen contamination, floatable debris, living resources and habitat management, land use and development, public involvement and education. The LISS partners have made significant strides to restore and protect Long Island Sound, giving priority to hypoxia, habitat restoration, public involvement and education, and water quality monitoring. (DEC/DOW, BWAM/WQMS, July 2010)

Section 303(d) Listing

Milton Harbor is included on the NYS 2010 Section 303(d) List of Impaired Waters. The harbor is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL to attain water quality standards for pathogens and for floatables. This waterbody was first included on the Section 303(d) List in 2002. (DEC/DOW, BWAM/WQAS, August 2010)

Segment Description

This segment includes harbor waters north of a line from the tip of Maries Neck Peninsula to Milton Point.

Blind Brook, Lower (1702-0062) Impaired Seg

Waterbody Location Information

Revised: 05/20/2011

Water Index No:	(MW3.4) LIS-11			**Drain Basin:**	Atlantic-Long Island Sound
Hydro Unit Code:	02030102/060	**Str Class:**	SC		Long Isl Sound/Bronx
Waterbody Type:	Estuary			**Reg/County:**	3/Westchester Co. (60)
Waterbody Size:	17.2 Acres			**Quad Map:**	MAMARONECK (R-26-1)
Seg Description:	stream from mouth to end of tidal portion				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
AQUATIC LIFE	Impaired	Known
Recreation	Stressed	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known:	Aesthetics (floatables), Pathogens
Suspected:	SILT/SEDIMENT, D.O./Oxygen Demand, Nutrients
Possible:	- - -

Source(s) of Pollutant(s)

Known:	URBAN/STORM RUNOFF
Suspected:	OTHER SANITARY DISCH, Industrial, Municipal
Possible:	Deicing (stor/appl)

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 (Individual Waterbody Impairment Requiring a TMDL)

Further Details

Overview
Aquatic life support and recreational uses in this tidal portion of Blind Brook are considered to be impaired by various pollutants from stormwater and urban nonpoint runoff.

Shellfishing Use
Year-round shellfishing restrictions apply to the tidal portion of Blind Brook due to pathogens from surrounding stormwater and urban runoff and recreational boating/marinas. Because these are Class SC waters, they are not assessed for support of shellfishing use. However, based on the shellfishing restrictions, other recreational uses are considered to be stressed. (DEC/FWMR, Region 1, October 2000)

Water Quality Sampling
NYSDEC Rotating Integrated Basin Studies (RIBS) monitoring of Blind Brook in Rye was conducted in 2003 and 2004. Intensive Network sampling typically includes macroinvertebrate community analysis, water column

chemistry, toxicity testing, sediment assessment and macroinvertebrate tissue analysis. Biological (macroinvertebrate) sampling indicated moderately impacted conditions. Impact Source Determination identified several stressors, including nonpoint source nutrient enrichment, toxic/industrial and organic inputs as possible sources of water quality impact. The Nutrient Biotic Index indicated eutrophic conditions for both phosphorus and nitrogen. Water column chemistry indicates no chemical contaminants were present at levels that constitute parameters of concern. However total and fecal coliform concentrations were high in all collected samples. Chronic toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism. Sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Levels of lead and several PAHs (polycyclic aromatic hydrocarbons) exceed threshold effect concentrations, but it is unlikely that they cause adverse biological effects to sediment-dwelling organisms at this site. Macroinvertebrate tissue collected at this site and chemically analyzed showed PAHs to be elevated and should continue to be monitored. Although this site is just upstream of the reach, it is considered to be representative of water quality in the lower segment of the stream. (DEC/DOW, BWAM/RIBS, May 2011)

A biological (macroinvertebrate) survey of Blind Brook at multiple sites between Rye and Purchase in Westchester County was conducted in 1999. Sampling results indicated water quality to be moderately impacted at all sites. Impact Source Determination indicated multiple sources of impact, including nutrient additions, organic wastes, complex (municipal/industrial) sources, and siltation. (Blind Brook Stream BioAssessment, Bode etal, DEC/DOW, BWAR/SBU, September 2000)

Section 303(d) Listing

This portion of Blind Brook is included on the NYS 2010 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL to attain water quality standards for Silt/Sediment. This updated assessment suggests that the waterbody could be considered for additional pollutants, however additional monitoring is likely required to verify the specific causes of impairment. This waterbody was first listed on the 2002 Section 303(d) List. (DEC/DOW, BWAM/WQAS, May 2011)

Segment Description

This segment includes the entire tidal portion of lower Blind Brook, from the mouth of the stream to the Cross County Parkway in Rye.

Blind Brook, Upper, and tribs (1702-0130) Impaired Seg

Waterbody Location Information

Revised: 05/20/2011

Water Index No: (MW3.4) LIS-11
Drain Basin: Atlantic-Long Island Sound
Hydro Unit Code: 02030102/060 **Str Class:** C
Long Isl Sound/Bronx
Waterbody Type: River
Reg/County: 3/Westchester Co. (60)
Waterbody Size: 15.4 Miles
Quad Map: MAMARONECK (R-26-1) ...
Seg Description: stream and tribs above Cross County Parkway

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
AQUATIC LIFE	Impaired	Known
Recreation	Stressed	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: - - -
Suspected: SILT/SEDIMENT, D.O./Oxygen Demand, Nutrients, Priority Organics (PAHs), Pathogens
Possible: - - -

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: Industrial, Municipal, Other Source (airport 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: ext/WQCC **Resolution Potential:** Medium
TMDL/303d Status: 1 (Individual Waterbody Impairment Requiring a TMDL)

Further Details

Overview
Aquatic life in this portion of Blind Brook is considered to be impaired due to nutrient and organic inputs attributed to urban stormwater runoff and municipal point and nonpoint sources.

Water Quality Sampling
NYSDEC Rotating Integrated Basin Studies (RIBS) monitoring of Blind Brook in Rye was conducted in 2003 and 2004. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, toxicity testing, sediment assessment and macroinvertebrate tissue analysis. Biological (macroinvertebrate) sampling indicated moderately impacted conditions. Impact Source Determination identified several stressors, including nonpoint source nutrient enrichment, toxic/industrial and organic inputs as possible sources of water quality impact. The Nutrient Biotic Index indicated eutrophic conditions for both phosphorus and nitrogen. Water column chemistry indicates no chemical contaminants were present at levels that constitute parameters of concern. However total and fecal coliform concentrations were high in all collected samples. Chronic

toxicity testing using water from this location detected no significant reproductive or mortality effects on the test organism. Sediment quality, while not likely to cause chronic toxicity to sediment-dwelling organisms, is of concern. Levels of lead and several PAHs (polycyclic aromatic hydrocarbons) exceed threshold effect concentrations, but it is unlikely that they cause adverse biological effects to sediment-dwelling organisms at this site. Macroinvertebrate tissue collected at this site and chemically analyzed showed PAHs to be elevated and should continue to be monitored. (DEC/DOW, BWAM/RIBS, May 2011)

A biological (macroinvertebrate) survey of Blind Brook at multiple sites between Rye and Purchase in Westchester County was conducted in 1999. Sampling results indicated water quality to be moderately impacted at all sites. Impact Source Determination indicated multiple sources of impact, including nutrient additions, organic wastes, complex (municipal/industrial) sources, and siltation. (Blind Brook Stream BioAssessment, Bode etal, DEC/DOW, BWAR/SBU, September 2000)

Section 303(d) Listing

This portion of Blind Brook is included on the NYS 2010 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL to attain water quality standards for Silt/Sediment. This updated assessment suggests that the waterbody could be considered for additional pollutants, however additional monitoring is likely required to verify the specific causes of impairment. This waterbody was first listed on the 2002 Section 303(d) List. (DEC/DOW, BWAM/WQAS, May 2011)

Segment Description

This segment includes the portion of the stream and all tribs above the Cross County Parkway in Rye. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C. Lower Blind Brook is listed separately.

Port Chester Harbor (1702-0260) Impaired Seg

Waterbody Location Information

Revised: 08/19/2010

Water Index No: (MW3.6) LIS (portion 2d)
Hydro Unit Code: 02030102/070 **Str Class:** SB
Waterbody Type: Estuary
Waterbody Size: 24.1 Acres
Seg Description: entire harbor, as described below

Drain Basin: Atlantic-Long Island Sound
Long Isl Sound/Bronx
Reg/County: 3/Westchester Co. (60)
Quad Map: MAMARONECK (R-26-1) ...

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
PUBLIC BATHING	Impaired	Known
Fish Consumption	Stressed	Suspected
Aquatic Life	Stressed	Known
RECREATION	Impaired	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: AESTHETICS (floatables), PATHOGENS
Suspected: D.O./Oxygen Demand, Nutrients (nitrogen), Oil and Grease, Priority Organics (PCBs/migratory fish)
Possible: - - -

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF, Other Source (boat pollution)
Suspected: OTHER SOURCE (migratory fish species), Industrial, Municipal (Port Chester NYC WWTPs)
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: ext/muni **Resolution Potential:** High
TMDL/303d Status: 1,4b? (Individual Waterbody Impairment Requiring a TMDL, more)

Further Details

Overview

Public bathing and recreation in Port Chester Harbor are impaired due to pathogen levels that results in shellfishing restrictions and periodic beach closures in the surrounding waters. Floatable debris has also been cited as impacting recreation and aesthetics. Urban stormwater runoff is the primary sources of pathogens, although various other sources such as boat discharges, waterfowl may also contribute. Aquatic life in the harbor also experiences minor impacts due to periodic low dissolved oxygen, the result of elevated nitrogen loadings. Municipal wastewater discharges, urban storm runoff and other nonpoint sources including atmospheric deposition, and tidal exchange with Long Island Sound and Connecticut waters are sources of the nutrients. Fish consumption in this embayment to Long Island Sound is also considered to experience minor impacts due to precautionary health advisories limiting the consumption of certain species due to elevated PCB levels. These advisories are the result of the migratory range of these fish species, and not related to any known contamination in this specific waterbody.

Bathing Beach Assessment

Public bathing and other recreational uses are also considered to be impaired due to periodic bathing beach closures in surrounding waters. The majority of these are pre-emptive closures during heavier rainstorms that are known to wash pollutants into the waterways. Though Port Chester Harbor is classified for public bathing use, there are currently no beaches in this waterbody. (summary of local 2008 beach monitoring data as cited in Testing the Waters, NRDC, 2009)

Shellfishing Use

Shellfish harvesting for consumption purposes in Port Chester Harbor (a portion of Shellfish Growing Area #55) is designated as uncertified for the taking of shellfish for use as food. Shellfish that grow in contaminated waters can accumulate disease-causing microorganisms (bacteria, viruses) that can be eaten with the shellfish. This designation is based on results of water quality monitoring and evaluation of data against New York State and National Shellfish Sanitation Program monitoring criteria for pathogens. Certified/uncertified shellfish area designations are revised regularly; for detailed descriptions of current designations, go to www.dec.ny.gov/regs/4014.html. (DEC/DFWMR, Region 1, July 2010)

Although this waterbody is monitored through the shellfish program, its class SB designation does not include shellfishing as an appropriate use so these waters are not assessed for support of shellfishing use. However, based on the shellfishing restrictions, other recreational uses are considered to be impacts/impaired. (DEC/DFWMR, BMR and DEC/DOW, BWAM/WQAS, July 2010)

Long Island Sound Hypoxia

The Long Island Sound Study found that nitrogen from area WWTPs and other sources promote algal growth, die-off, settlement to the sediment, and create and oxygen demand which results in low dissolved oxygen and hypoxia in the bottom waters of the Sound. Atmospheric deposition also contributes nitrogen to the Sound. The resulting low dissolved oxygen conditions have caused crustacean kills and limits the fishery in this passageway for diadromous fish. While this problem is most severe in the Western Sound, similar impacts are also a concern in these adjacent waters. (DEC/DOW and FWMR, Region 1, August 2010)

Fish Consumption Advisories

NYS DOH has issued precautionary health advisories recommending limiting consumption of American eel, bluefish, striped bass and weakfish from Long Island Sound and tributary waters, including Port Chester Harbor, due to possible elevated levels of PCBs. These advisories are largely precautionary and are related to the specific habits and characteristics of these species, specifically the wide migratory range, predatory nature and high lipid/fat content that make them more likely to accumulate contaminants. Because possible contamination is more a result of the migratory range and other factors rather than any known sources of PCBs in this waterbody, fish consumption use in this segment is considered to be stressed. In addition, for some species the advisories recommend limiting consumption to no more than one meal per week which is no more stringent than the general statewide advisory for all New York waters and does not result in significant impact to uses. Health advisories regarding the consumption of fish are revised regularly; for the most current advisories, go to www.nyhealth.gov/environmental/outdoors/fish/fish.htm. (2009-10 NYS DOH Health Advisories and DEC/DFWMR, Habitat, January 2010)

Water Quality Management (NYC Nitrogen Consent Judgment)

Since 2006, New York City has been under a Nitrogen Consent Judgment to reduce nitrogen loads associated with the discharge of treated effluent to the Long Island Sound and Upper East River. Under the current Consent Judgment, which was amended in 2011, the City must install new nitrogen control technologies at four wastewater treatment plants that discharge effluent to these waterbodies in order to reduce nitrogen loads in accordance with the Long Island Sound nitrogen TMDL. The treatment plants being upgraded are: Wards Island, Bowery Bay, Tallman Island, and Hunts Point. The first upgrades under the Consent Judgment will become operational starting in 2010 and

all improvements required under the Consent Judgment will be completed by 2020. The requirements added to the amended Consent Judgment in 2011 are valued at $115 million, of which $15 million be used for marshland restoration. The $115 million represents only a portion of the value of all the upgrades and related environmental benefit projects being executed under the Nitrogen Consent Judgment.

Watershed Management/TMDL
A Total Maximum Daily Load (TMDL) plan for to reduce nitrogen loadings and address low dissolved oxygen in the Western Long Island Sound was developed and approved in 2001. This TMDL plan calls for point and nonpoint source nitrogen reductions throughout the Long Island Sound Watershed.

Watershed Management
The City of Port Chester is under an enforcement order to prepare, implement and enforce a stormwater management plan to identify and correct improper sources of bacteria discharges. Port Chester must also monitor stormwater discharges after the project has been established to ensure bacteria discharge problems have corrected. (USEPA, Region 2 and DEC/DOW, August 2009)

Long Island Sound Study
This waterbody is included in the Long Island Sound Study (LISS), a bi-state partnership consisting of federal and state agencies, user groups, concerned organizations, and individuals dedicated to fully restoring and protecting the waters of the Sound. The LISS was formed by EPA, New York, and Connecticut in 1985 to focus on the overall ecosystem. In 1994, the LISS completed a Comprehensive Conservation and Management Plan that identified seven issues - low dissolved oxygen (hypoxia), toxic contamination, pathogen contamination, floatable debris, living resources and habitat management, land use and development, public involvement and education. The LISS partners have made significant strides to restore and protect Long Island Sound, giving priority to hypoxia, habitat restoration, public involvement and education, and water quality monitoring. (DEC/DOW, BWAM/WQMS, July 2010)

Section 303(d) Listing
Port Chester Harbor is included on the NYS 2010 Section 303(d) List of Impaired Waters. The harbor is included on Part 1 of the List as an impaired waterbody requiring development of a TMDL to attain water quality standards for pathogens and for floatables. Because there is an enforcement action in place to address pathogens, it may be appropriate to consider this water for delisting as a Category 4b water during the next listing cycle. This waterbody was first included on the Section 303(d) List in 2002. (DEC/DOW, BWAM/WQAS, August 2010)

Segment Description
This segment includes harbor waters west of line from navigation light at end of breakwater off Byram Point to north tip of North Manursing Island, including Kirby Pond.

Byram River, Lower (1702-0132) Impaired Seg

Waterbody Location Information

Revised: 11/08/2010

Water Index No: (MW3.6) LIS-13
Drain Basin: Atlantic-Long Island Sound
Hydro Unit Code: 01100006/430 **Str Class:** SC
Waterbody Type: Estuary
Reg/County: 3/Westchester Co. (60)
Waterbody Size: 13.2 Acres
Quad Map: MAMARONECK (R-26-1) ...
Seg Description: river from mouth to Route 1 (tidal portion)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: PATHOGENS, Nutrients
Suspected: D.O./Oxygen Demand
Possible: - - -

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: OTHER SANITARY DISCH, On-Site/Septic Syst (illegal connections), Other Source (boat pollution)
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg3
Resolution Potential: Medium
TMDL/303d Status: 3b->1

Further Details

Overview

Recreational uses in this tidal portion of the Byram River are known to experience impacts due to pathogens that results in shellfishing restrictions and periodic beach closures in nearby waters. Elevate nutrient impacts are also a concerns. Urban stormwater runoff are the primary sources of pollutants; inadequate onsite septic treatment and various other sources such as boat discharges, waterfowl may also contribute.

Shellfishing Use

Shellfish harvesting for consumption purposes along the Westchester County shoreline of Long Island Sound (Shellfish Growing Area #55) is designated as uncertified for the taking of shellfish for use as food. Shellfish that grow in contaminated waters can accumulate disease-causing microorganisms (bacteria, viruses) that can be eaten with the shellfish. This designation is based on results of water quality monitoring and evaluation of data against New York State and National Shellfish Sanitation Program monitoring criteria for pathogens. Certified/uncertified

shellfish area designations are revised regularly; for detailed descriptions of current designations, go to www.dec.ny.gov/regs/4014.html. (DEC/DFWMR, Region 1, July 2010)

Since this waterbody is designated class SC it does not include shellfishing as an appropriate use so these waters are not assessed for support of shellfishing use. However, based on the shellfishing restrictions in nearby downstream waters, other recreational uses are considered to be stressed. (DEC/DFWMR, BMR and DEC/DOW, BWAM/WQAS, July 2010)

Water Quality Sampling

A biological (macroinvertebrate) assessment of the river just upstream in Pemberwick, CT was conducted in 2008. Sampling results 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 elevated enrichment in the stream and fauna that is most similar to communities influenced by impoundment effects as well as point and nonpoint municipal, industrial sources. (DEC/DOW, BWAM/SBU, July 2010)

These results are consistent with samples collected at this site in 2003 and 1999. Those samples found slightly impacted conditions with indications of nutrient effects. The fauna was dominated by snails and caddisflies, and filamentous algae were very abundant on the stream bottom. (DEC/DOW, BWAM/SBU, July 2010)

The Interstate Environmental Commission (IEC) conducted pathogen sampling along the Byram River in 2010. This sampling found elevated levels of pathogens at Mill Street and other sites within this reach. (IEC, October 2010)

Section 303(d) Listing

This reach of the Byram River was added to the 2004 Section 303d List (Part 3b) due to information provided by CT-DEP and the inclusion of the Connecticut portion of the river on their List. The segment is included on Part 3 of the List as an impaired waterbody for which TMDL development may be deferred (due to a need to verify the pollutant). However more recent sampling (conducted by IEC) suggests this listing could be considered for inclusion on Part 1 of the List during the next Section 303(d) Listing cycle. (DEC/DOW, BWAM/WQAS, November 2010)

Segment Description

This segment includes the tidal portion of the stream and tribs in New York from the mouth to Route 1 in Port Chester. The waters of this portion of the stream are Class SC. Tribs to this reach/segment are also Class SC.

Byram River, Middle, and tribs (1702-0055) MinorImpacts

Waterbody Location Information

Revised: 09/20/2010

Water Index No: (MW3.6) LIS-13
Drain Basin: Atlantic-Long Island Sound
Hydro Unit Code: 01100006/430 **Str Class:** C
Waterbody Type: River (Med. Flow)
Reg/County: 3/Westchester Co. (60)
Waterbody Size: 0.7 Miles
Quad Map: GLENVILLE (Q-26-4)
Seg Description: stream and tribs from Route 1 to NY-CT state line

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: NUTRIENTS, Algal/Weed Growth (algal blooms)
Suspected: D.O./Oxygen Demand
Possible: Pathogens

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: 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

Overview

Aquatic life support in this portion of the Byram River is thought to experience minor impacts due to nutrients and various other pollutants from stormwater and urban nonpoint runoff. Nutrient loadings are thought to contribute to summer algal blooms and low dissolved oxygen.

Water Quality Sampling

A biological (macroinvertebrate) assessment of the Byram River in Pemberwick, CT (at Comly Avenue) was conducted as part of the RIBS biological screening effort in 2008. Sampling results 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 elevated enrichment in the stream and fauna that is most similar to communities influenced by impoundment effects as well as point and nonpoint municipal, industrial sources. (DEC/DOW, BWAM/SBU, July 2010)

These results are consistent with samples collected at this site in 2003 and 1999. Those samples found slightly impacted conditions with indications of nutrient effects. The fauna was dominated by snails and caddisflies, and filamentous algae were very abundant on the stream bottom. (DEC/DOW, BWAM/SBU, July 2010)

Segment Description

This segment includes the portion of the stream and all tribs in New York above Route 1 in Port Chester to the New York-Connecticut state line. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C.

Byram River, Upper, and minor tribs (1702-0133) NoKnownImpct

Waterbody Location Information

Revised: 09/20/2010

Water Index No: (MW3.6) LIS-13
Drain Basin: Atlantic-Long Island Sound
Hydro Unit Code: 01100006/430 **Str Class:** B(T)
Waterbody Type: River
Reg/County: 3/Westchester Co. (60)
Waterbody Size: 8.7 Miles
Quad Map: ()
Seg Description: stream and selected/smaller tribs, above NY-CT line

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 Byram River in Armonk (at Route 22) was conducted as part of the RIBS biological screening effort in 2008. 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 2010)

A sample was collected at a different location near this site in 2003. However poor sampling habitat influenced that sample and an incomplete sample was collected.

Segment Description
This segment includes the portion of the stream and all tribs in New York above the New York-Connecticut state line. The waters of this portion of the stream are Class B(T) from the state line to the Wampus River (-11) and Class

C(T) for the remainder of the reach. Tribs to this reach/segment are also Class B(T), C(T). The Wampus River (-11) is listed separately.

Wampus River and tribs (1702-0057) NoKnownImpct

Waterbody Location Information

Revised: 08/19/2010

Water Index No: (MW3.6) LIS-13-11
Hydro Unit Code: 01100006/430 **Str Class:** C
Waterbody Type: River (Low Flow)
Waterbody Size: 9.4 Miles
Seg Description: entire stream and tribs

Drain Basin: Atlantic-Long Island Sound
Reg/County: 3/Westchester Co. (60)
Quad Map: MOUNT KISCO (Q-26-1)

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 Wampus River in Armonk (at Route 128) was conducted as part of the RIBS biological screening effort in 2008. Sampling results 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 low enrichment in the stream and fauna that is similar to communities influenced by impoundment effects and nonpoint sources. Sampling was also conducted at this site in 2003. Those results found conditions to be slightly to moderately impacts, but with evidence of impoundment effects that influence the sample results. (DEC/DOW, BWAM/SBU, January 2010)

Source Assessment
Previous assessments conducted in 2002 indicated that Wampus Brook is a small stream in an urban area which is experiencing impacts from urban growth and development. Increasing geese population, residential development, on-site septic systems are also concerns. (DEC/DOW, BWAM/WQAS, August 2010)

Wampus Lake (1702-0056) MinorImpacts

Waterbody Location Information

Revised: 04/19/2011

Water Index No: (MW3.6) LIS-13-11-P1104
Hydro Unit Code: 01100006/430 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 42.1 Acres
Seg Description: entire lake

Drain Basin: Atlantic-Long Island Sound
Reg/County: 3/Westchester Co. (60)
Quad Map: MOUNT KISCO (Q-26-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: - - -
Possible: Construction (residential develop)

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

Overview

Recreational uses and aquatic life in Wampus Pond are thought to experience minor impacts due to nutrient loads and resulting algal blooms. Urban stormwater runoff and other urban nonpoint sources are the likely sources of pollutants.

Water Quality Sampling

Wampus Lake was included in the 2009 intensive (once a month from June to September) Lake Classification and Inventory (LCI) survey of the Atlantic Ocean/Long Island Sound Drainage Basin. During these sampling visits, water quality conditions were evaluated through standard limnological indicators. The pond can be characterized as mesoeutrophic, or moderately to highly productive. The average water clarity reading (TSI = 47, typical of mesoeutrophic lakes) was in the expected range given the average phosphorus reading (TSI = 52, typical of mesoeutrophic lakes) and given the average chlorophyll a reading (TSI = 50, typical of mesoeutrophic lakes). These data suggest that baseline nutrient levels do not support persistent algae blooms, but there may be slightly elevated algae levels in the lake during the summer. (DEC/DOW, BWAM/LMAS, March 2011)

The lake appears to be typical of hardwater, weakly colored, alkaline lakes. The depth profile indicated the lake was thermally stratified at a depth of 3 to 4 meters, below which dissolved oxygen levels decreased rapidly, culminating in anoxia at the bottom of this 7 meter deep lake. High levels of soluble phosphorus, ammonia, iron and manganese levels were found in the bottom waters, as is typical in lakes experiencing oxygen deficits in the bottom waters. Chloride levels in the surface waters were high, indicating significant impacts from road salting or other runoff through developed areas. Rooted aquatic vegetation was observed in the shallow areas near the eastern shore as well as the shallower areas along the northern and sothern ends of the lake. The vegetation that was observed included the invasive species Myriophyllum spicatum. (DEC/DOW, BWAM/LMAS, March 2011)

Segment Description

Wampus Lake is part of Wampus Pond County Park operated by the county of Westchester. It is a Class B lake, in support of contact recreational uses. Visitors to the park use the lake for fishing and the county provides row boat rentals to allow people to see more of the lake. The park is also extensively used by lunchtime picnickers and people sunning themselves on the boat dock. The immediate area around the lake is forested, with the only development being a boathouse and small parking area at the county park. The watershed of the lake is partially forested with some residential developments and a golf course. (DEC/DOW, BWAM/LMAS, March 2011)

This segment includes the entire area of the pond/lake.

Mianus River and tribs (1702-0136) MinorImpacts

Waterbody Location Information

Revised: 05/19/2011

Water Index No: (MW3.7) Conn- 4 **Drain Basin:** Atlantic-Long Island Sound
Hydro Unit Code: 01100006/430 **Str Class:** AASpcl
Waterbody Type: River **Reg/County:** 3/Westchester Co. (60)
Waterbody Size: 42.7 Miles **Quad Map:** MOUNT KISCO (Q-26-1) ...
Seg Description: entire stream and tribs above Mianus Reservoir

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Possible
Aquatic Life	Stressed	Known

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: URBAN/STORM RUNOFF
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

Overview

Aquatic life in this portion of the Mianus River is known to experience minor impacts from nutrient loadings and some eutrophication due to urban stormwater runoff and other nonpoint sources. Current information does not indicate any specific impacts to water supply use, but additional protection efforts due to potential contaminants from various sources. The designation of this waterbody as a threatened water is reflective of a need to protect its particular resource value, rather than specifically identified threats.

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) monitoring of the Mianus River in Bedford was conducted in 2003 and 2004. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, toxicity testing, sediment assessment and macroinvertebrate tissue analysis. Biological (macroinvertebrate) sampling indicated the middle range of slightly impacted conditions. In such samples some replacement of sensitive ubiquitous species by more tolerant species may occur, 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 may sufficient to cause some stress to aquatic life. Water column chemistry indicates no chemical contaminants are present at levels that constitute parameters of concern. Total and fecal coliform levels were elevated over background during 3 of 10 sampling events. Toxicity testing using water from this location detected no significant mortality, but some reproductive effects on the test organism were noted. Sediment screening for acute toxicity indicated (no/some) sediment toxicity and (no/some) 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. Macroinvertebrate tissue collected at this site and chemically analyzed showed some metals and organics to be elevated and should continue to be monitored. Based on the consensus of these established assessment indicators, overall water quality at this site shows that in spite of some minor impacts and 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, May 2011)

A biological (macroinvertebrate) survey of the Mianus River at multiple sites between Riverbank, CT, and North Castle, NY was also conducted in 1991. Sampling results indicated water quality to be slightly impacted at all sites. An abundance of filter-feeding caddisflies at all sites indicates some slight enrichment, but no significant impairment is restricting uses of the stream. (Mianus River Stream BioAssessment, Bode etal, DEC/DOW, BWAR/SBU, October 1991)

Segment Description
This segment includes the stream and all tribs above the Mianus Reservoir.

Mill River and tribs (1702-0137) NoKnownImpct

Waterbody Location Information

Revised: 08/19/2010

Water Index No: (MW3.7) Conn- 6
Drain Basin: Atlantic-Long Island Sound
Hydro Unit Code: 01100006/430
Str Class: AASpcl
Waterbody Type: River
Reg/County: 3/Westchester Co. (60)
Waterbody Size: 34.8 Miles
Quad Map: ()
Seg Description: entire stream and 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 Mill River in Sarles Corners was conducted as part of the RIBS biological screening effort in 2008. Sampling results 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 low enrichment in the stream and fauna that is most similar to communities influenced by impoundment effects and nonpoint sources, although natural conditions were also strongly indicated. Similar conditions were also found in the stream at an alternate site in Pound Ridge (at stone bridge) in 2003. (DEC/DOW, BWAM/SBU, July 2010)

Segment Description
This segment includes the entire stream and all tribs.

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