



Esopus Creek (0202000609)

Water Index Number

H-171 (portion 1)
 H-171 (portion 2)
 H-171- 2 thru 21 (selected)
 H-171-11
 H-171-11
 H-171-11-11
 H-171-11-11- 1
 H-171-17
 H-171-17
 H-171-17
 H-171-17 P837,P838a
 H-171-17- 7-P837a
 H-171-17-21-P839
 H-171-17-P841
 H-171-22-P843

Waterbody Name

Esopus Creek, Lower, Main Stem (1307-0010)
 Esopus Creek, Middle, and minor tribs (1307-0003)
 Minor Tribs to Lower Esopus Creek (1307-0012)
 Plattekill Creek, Lower, and minor tribs(1307-0013)
 Plattekill Creek, Upper, and tribs (1307-0014)
 Yager Stream and minor tribs (1307-0015)
 Washburn Creek and tribs (1307-0016)
 Saw Kill, Lower, and tribs (1307-0017)
 Saw Kill, Middle, and tribs (1307-0018)
 Saw Kill, Upper, adn tribs (1307-0019)
 Kingston Reservoirs 1 and 2 (1307-0020)
 Kingston Reservoir 4 (1307-0021)
 Cooper Lake (1307-0022)
 Echo Lake (1307-0023)
 Spring Lake (1307-0024)

Category

MinorImpacts
 MinorImpacts
 UnAssessed
 NoKnownImpact
 UnAssessed
 UnAssessed
 UnAssessed
 UnAssessed
 NoKnownImpact
 UnAssessed
 UnAssessed
 UnAssessed
 UnAssessed
 UnAssessed
 NoKnownImpact
 UnAssessed
 UnAssessed

H-171-25-P845	Onteora Lake (1307-0025)	UnAssessed
H-171-28	Stony Creek and tribs (1307-0026)	UnAssessed
H-171-30-P846	Stone Ridge Pond (1307-0027)	UnAssessed
H-171-P832	Lake Katrine (1307-0028)	UnAssessed
H-171 (portion 3)/P848	Ashokan Reservoir (1307-0004)	Impaired Seg
H-171 (portion 4)	Esopus Creek, Upper, and minor tribs(1307-0007)	Impaired Seg
H-171 (portion 5)	Esopus Creek, Upper, and minor tribs(1307-0011)	NoKnownImpct
H-171/P848- 1 thru 12 (selected)	Minor Tribs to Ashokan Reservoir (1307-0005)	UnAssessed
H-171/P848- 5	Bushkill and tribs (1307-0029)	UnAssessed
H-171/P848-11-P851	Kenozia Lake (1307-0030)	UnAssessed
H-171/P848-42	Little Beaverkill and tribs (1307-0031)	UnAssessed
H-171/P848-42-P853	Yankeetown Lake (1307-0032)	UnAssessed
H-171/P848-43	Beaverkill and tribs (1307-0033)	NoKnownImpct
H-171/P848-43	Mink Hollow Brook and tribs (1307-0034)	UnAssessed
H-171/P848-45	Stony Clove Brook and tribs (1307-0008)	NoKnownImpct
H-171/P848-46	Woodland Stream and tribs (1307-0035)	UnAssessed
H-171/P848-50	Bushnellsville Creek and tribs (1307-0036)	UnAssessed
H-171/P848-52	Birch Creek and tribs (1307-0037)	NoKnownImpct

Esopus Creek, Lower, Main Stem (1307-0010)

MinorImpacts

Waterbody Location Information

Revised: 12/13/2007

Water Index No: H-171 (portion 1) **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** B
Waterbody Type: River **Reg/County:** 3/Ulster Co. (56)
Waterbody Size: 12.7 Miles **Quad Map:** SAUGERTIES (M-25-4)
Seg Description: from mouth to Kingston

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH, NUTRIENTS (phosphorus)
Suspected: Thermal Changes
Possible: - - -

Source(s) of Pollutant(s)

Known: AGRICULTURE, HYDRO MODIFICATION, URBAN/STORM RUNOFF
Suspected: MUNICIPAL (Ulster County SIA WWTP)
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: n/a

Further Details

Overview

Public bathing, recreational uses and aquatic life support in this portion of Esopus Creek are known to experience minor impacts due to nutrient enrichment from urban runoff and agricultural nonpoint sources. These conditions result in heavy weed growth. Recreation is impacted by weeds throughout the reach, but is a particular problem behind Cantine Mill dam in Saugerties (V) where there is a bathing beach. There are also concerns regarding the impacts of the Ulster County Sewer Improvement Area WWTP which serves Kingston. However the stream has not been fully monitored and assessed since the plant was upgraded.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Esopus Creek in Glenerie (at Glasco Turnpike) was conducted in 1999 and 2002. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment was indicated, but slow-moving water and ponded reaches throughout the Lower Esopus are thought to impact sampling results as well. A 1993 Biological Stream Assessment found moderate impacts at sites below the Ulster County Sewer Improvement Area (Kingston) WWTP discharge. Prior to a plant upgrade in 1999, the plant had experienced occasional failure of both chronic and acute toxicity tests. Water quality at these sites have not been sampled since the upgrade. (DEC/DOW, BWAM and Region 3, December 2007 and Lower Esopus Creek Biological

Assessment Report, Bode et al, DEC/DOW, BWAM, November 1993)

Segment Description

This segment includes the portion of the stream from the mouth to Tannery Brook (-21) in Kingston. The waters of this portion of the stream are primarily Class B; except for a short reach from the mouth to the Cantine Dam in Saugerties that is Class C.

Esopus Creek, Middle, and minor tribs (1307-0003)

MinorImpacts

Waterbody Location Information

Revised: 12/13/2007

Water Index No: H-171 (portion 2) **Drain Basin:** Lower Hudson River
Hydro Unit Code: 02020006/210 **Str Class:** B(T) Middle Hudson River
Waterbody Type: River **Reg/County:** 3/Ulster Co. (56)
Waterbody Size: 89.0 Miles **Quad Map:** KINGSTON WEST (N-24-2)
Seg Description: stream and select tribs, from Kingston to Ashokan Reser

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH (aquatic vegetation), NUTRIENTS (phosphorus)
Suspected: Water Level/Flow
Possible: D.O./Oxygen Demand

Source(s) of Pollutant(s)

Known: AGRICULTURE, HYDRO MODIFICATION (Ashokan releases)
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: DOW/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview

Public bathing, recreational uses and aquatic life support in this portion of Esopus Creek are thought to experience minor impacts due to nutrient enrichment from various nonpoint sources. These conditions result in heavy weed growth which impacts recreation throughout the reach. Limited water releases from Ashokan Reservoir, low gradient resulting in slow-moving waters and numerous ponded areas also contribute to water quality conditions in the stream.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Esopus Creek in Hurley (at Route 29A) was conducted in 1999. Sampling results indicated slightly impacted water quality conditions. Complex stressors were indicated but no specific sources were identified. Nonpoint source nutrient enrichment also impacts the stream. A 1993 Biological Stream Assessment found moderate impacts at sites below the Ashokan dam, but these impacts were largely attributed to limited water releases from the Ashokan Reservoir, the low gradient of the stream and resulting high sluggish flow and elevated water temperatures. (DEC/DOW, BWAM, December 2007 and Lower Esopus Creek Biological Assessment Report, Bode et al, DEC/DOW, BWAM, November 1993)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from Tannery Brook (-21) in Kingston to the

Ashokan Reservoir Dam. The waters of this portion of the stream are Class B,B(T). Tribs to this reach/segment, including Keater Brook (-23), Praymayer Brook (-25) and Spillway Channel (-37), are Class C,C(T),C(TS). Stony Creek (-28) is listed separately.

(P834) in Blue Mountain. The waters of this portion of the stream are Class B,B(TS). Tribs to this reach/segment are Class B,C and D. Yager Stream (-11) and Upper Plattekill Creek are listed separately.

Ashokan Reservoir (1307-0004)

Impaired Seg

Waterbody Location Information

Revised: 05/29/2008

Water Index No: H-171 (portion 3)/P848
Hydro Unit Code: 02020006/200 **Str Class:** AA(T)
Waterbody Type: Lake(R) **Reg/County:** 3/Ulster Co. (56)
Waterbody Size: 8060.3 Acres **Quad Map:** ASHOKAN (N-24-1)
Seg Description: entire reservoir

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: METALS (mercury), SILT/SEDIMENT
Suspected: - - -
Possible: Nutrients

Source(s) of Pollutant(s)

Known: ATMOSPH. DEPOSITION, STREAMBANK EROSION
Suspected: - - -
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: ext/NYC **Resolution Potential:** Medium
TMDL/303d Status: 1,2b->4a (Individual Waterbody Impairment Requiring a TMDL, more)

Further Details

Overview

Water supply and fish consumption uses in Ashokan Reservoir are impaired by silt/sedimentation for streambank erosion and by mercury, assumed to be from atmospheric deposition.

Water Supply Impacts The water supply use of the Ashokan Reservoir is impaired by high levels of turbidity. At times turbidity in the reservoir has been sufficiently high to suspend use of the reservoir as a drinking water supply. Chemical treatment has been required at times to address the problem. The primary turbidity source is streambank erosion and runoff from tributary streams. While the sediment loads in these tribs contribute to the water quality problems in the reservoir, the fisheries in the tribs themselves appear to be fully supported. The Ashokan is the terminal reservoir of the Catskill System of New York City water supply reservoirs, and receives water from the Schoharie Reservoir via the Shandaken Tunnel. Turbidity from the tributary streams in the Schoharie Watershed is also significant. NYCDEP is currently identifying other sources and implementing management techniques to reduce turbidity in the reservoir. A Phase II Phosphorus Total Maximum Daily Load (TMDL) for Reservoirs in the New York City Water Supply Watershed was established in June 2000. This TMDL identified Ashokan Reservoir as having a current phosphorus load that is below the allowable load and is therefore not water quality limited. Average phosphorus concentrations in the reservoir at the time the TMDL was about 13 ug/l, below the applicable 15 ug/l criterion established for source water reservoirs. (NYCDEP, July 1999)

Fish Consumption Advisories

Impacts Fish consumption in Ashokan Reservoir is impaired due to a NYSDOH health advisory that recommends eating no more than one meal per month of larger smallmouth bass (over 16 inches) taken from the reservoir due to elevated levels of mercury. The source of mercury is considered to be atmospheric deposition, as there are no other apparent sources in the lake watershed. Mercury, even at low levels tends to bio-accumulate in the aquatic food chain. However, because of its low solubility mercury is not generally found in water and consequently there is no additional impact on the water supply. The advisory for this lake was first issued in 2000-2001. (2007-08 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2007).

New York City Watershed

The Ashokan Reservoir is a part of the Catskill/Delaware System of New York City water supply reservoirs. The Catskill/Delaware System provides about 90% of New York City water supply, the other 10% is supplied by the Croton System. The Ashokan Reservoir receives water from the 250 square mile watershed of the Upper Esopus Creek and serves as a collecting reservoir for the water from the other reservoir - Schoharie Reservoir - in the Catskill system. Water quality in this upstream reservoir influences water quality in the Ashokan Reservoir. (Water quality issues in the Schoharie Reservoir and its watershed are discussed more fully in the Mohawk River Waterbody Inventory and Priority Waterbody List.) The capacity of the Catskill water system is 550 MGD. Water from the Ashokan Reservoir travels through the Catskill Aqueduct to the Kensico Reservoir. In order to protect the New York City water supply, a comprehensive long-range watershed protection program is in place. These protections enable the city to receive a series of waivers from a federal requirement to filter water from the Catskill/Delaware supply. (NYCDEP, July 2006)

Section 303(d) Listing

The Ashokan Reservoir is included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as a waterbody segment requiring the development of a TMDL or other strategy to attain water quality standards for silt/sediment. The reservoir was also included on Part 2b of the 2006 List as a Fish Consumption Water/Atmospheric Deposition (Acid Rain). However, the mercury impairment was addressed in the Northeast Regional Mercury TMDL that was established in 2007. Therefore the listing for mercury for the reservoir is not included in the 2008 NYS Section 303(d) List of Impaired/TMDL Waters. (DEC/DOW, BWAM/WQAS, March 2008)

Segment Description

The Ashokan Reservoir is split into two basins by a dividing weir.

Esopus Creek, Upper, and minor tribs (1307-0007)

Impaired Seg

Waterbody Location Information

Revised: 07/16/2008

Water Index No: H-171 (portion 4) **Drain Basin:** Lower Hudson River
Hydro Unit Code: 02020006/190 **Str Class:** A(TS) Middle Hudson River
Waterbody Type: River **Reg/County:** 3/Ulster Co. (56)
Waterbody Size: 42.2 Miles **Quad Map:** PHOENICIA (M-23-3)
Seg Description: stream and select tribs, from Ashokan Res to Allaben

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
WATER SUPPLY	Impaired	Known
RECREATION	Impaired	Known

Type of Pollutant(s)

Known: SILT/SEDIMENT
Suspected: ---
Possible: ---

Source(s) of Pollutant(s)

Known: OTHER SOURCE (Shandaken Tunnel), STREAMBANK EROSION
Suspected: ---
Possible: ---

Resolution/Management Information

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

Further Details

Overview

Water supply and recreational uses in this portion of the Upper Esopus Creek are impaired by high levels of turbidity. This section of the Esopus is a significant component of the Catskill System of New York City water supply reservoirs in that it connects the Schoharie Reservoir (via the Shandaken Tunnel) with the Ashokan Reservoir. High turbidity in the Esopus, much of which comes from the Schoharie Reservoir, impairs water quality in both the river and the Ashokan Reservoir (1307-0004). Related Water quality issues in the Schoharie Reservoir and its watershed are discussed more fully in the Mohawk River Waterbody Inventory and Priority Waterbody List.

Water Quality Sampling

A biological (macroinvertebrate) survey of Upper Esopus Creek at multiple sites between Boiceville and Oliveria was conducted in 2000. Sampling results indicated non-impacted to slightly impacted water quality conditions. Two of the three sites within this reach were assessed as non-impacted. The site downstream of the Shandaken Tunnel outlet reveal slight impacts attributable to silt/sedimentation. In spite of these minor impacts, aquatic life in the stream appears to be fully supported. Diatom assessments also reveal conditions that are fully supportive of aquatic life. (Upper Esopus Creek Biological Assessment Report, Bode, et al., DEC/DOW, BWAM/SBU, May 2001)

Source Assessment

The turbidity is attributed to streambank erosion and runoff from tributary streams, in both the Esopus and Schoharie

Watersheds. Two tributaries to the Upper Esopus, Stony Clove Brook and Broadstreet Hollow Brook, have been cited as contributing excess turbidity to the river and reservoir. Highly erodible clay soils in both watersheds have been identified as the source of the problem and are the focus of considerable NYCDEP attention and effort. (NYCDEP, July 1999)

NYSDEC issued a SPDES discharge permit (effective September 2006) for the proposed discharge of untreated surface waters from the Shandaken Tunnel to the Esopus Creek by the New York City Department of Environmental Protection (DEP). The 18-mile Shandaken Tunnel is an integral part of the New York City drinking water supply system in the Catskills that transfers about 220 million gallons of water per day from the Schoharie Reservoir into Esopus Creek. The permit specifies seasonal action levels and limits for turbidity, temperature and phosphorus. It also includes a compliance schedule for projects that will help reduce turbidity of water entering the intake portal at the Schoharie Reservoir on a long-term basis. DEP is also required to complete other projects identified by the USEPA 2002 Filtration Avoidance Determination (FAD) for the Catskill and Delaware watersheds. These projects include enhanced stream restoration in the Schoharie Reservoir Basin and continuation of the Conservation Easement Program and other associated watershed protection programs within the Schoharie Basin. (DEC/DOW, NYC Watershed, June 2008)

New York City Watershed

NYCDEP is currently identifying other sources and implementing management techniques to reduce turbidity in the reservoir. A Watershed Agreement is in place between NYCDEP and the Catskill Watershed communities which sets forth programs and funding for watershed protection. Specifically, the NYCDEP has identified this stream as a high priority for streambank restoration work. NYCDEP has monitoring data showing the stream to be a major source of turbidity in the Esopus Creek Watershed, and ultimately affecting water supply uses in the Ashokan Reservoir. Restoration Projects are being developed with input from NYCDEP, Greene County SWCD and NYSDEC. (NYCDEP, July 1999)

Section 303(d) Listing

This portion of Upper Esopus Creek is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as a waterbody segment requiring the development of a TMDL or other strategy to attain water quality standards for silt/sedimentation. This segment first appeared on the 2002 Section 303(d) List.

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from Ashokan Reservoir (P848) to the outlet of the Shandaken Tunnel near Allaben. The waters of this portion of the stream are Class A(TS). Tribs to this reach/segment, including Broad Street Hollow (-47), are Class B,B(T),C,C(TS), with portions in the forest preserve. Little Beaverkill (-42), Beaverkill (-43), Stony Clove Creek (-45), Woodland Stream (-46) and other portions of Esopus Creek are listed separately.

Esopus Creek, Upper, and minor tribs (1307-0011) NoKnownImpct

Waterbody Location Information

Revised: 12/12/2007

Water Index No: H-171 (portion 5) **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** C(TS)
Waterbody Type: River **Reg/County:** 3/Ulster Co. (56)
Waterbody Size: 66.3 Miles **Quad Map:** SHANDAKEN (M-23-4)
Seg Description: stream and select tribs, above Allaben

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 of Upper Esopus Creek at multiple sites between Boiceville and Oliverea was conducted in 2000. Sampling results indicated non-impacted to slightly impacted water quality conditions. Two of the three sites within this reach were determined to be non-impacted. The site at Big Indian revealed slight impacts from organic and nutrient input. These are attributed to wastewater plant discharge to Birch Creek in Pine Hill. The most upstream site exhibited low species and EPT richness, but this can be attributed to headwater effects. In spite of these minor impacts, aquatic life in the stream appears to be fully supported. Diatom assessments also reveal conditions that are fully supportive of aquatic life. (Upper Esopus Creek Biological Assessment Report, Bode, et al., DEC/DOW, BWAM/SBU, May 2001)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs above the outlet of the Shandaken Tunnel near Allaben. The waters of this portion of the stream are Class C(TS). Tribs to this reach/segment, including Peck Hollow Brook (-48), Fox Hollow Brook (-49), Seneca Hollow Stream (-51), Lost Clove Brook (-53), Hatchery Hollow Brook (-54), McKinley Hollow Brook (-55), Elk Bush Kill (-56) Maben Hollow Brook (-57), Hanging Birds Nest Brook (-58) and Giant Ledge Stream (-60), are Class B(T),B(TS),C,C(TS), with portions in the forest preserve. Bushnellsville Creek (-50), Birch Creek (-52) and other portions of Esopus Creek are listed separately.

Beaverkill and tribs (1307-0033)

NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-171/P848-43
Hydro Unit Code: **Str Class:** C(TS)*
Waterbody Type: River
Waterbody Size: 21.4 Miles
Seg Description: stream and tribs, mouth to Lake Hill

Drain Basin: Lower Hudson River
Reg/County: 3/Ulster Co. (56)
Quad Map: PHOENICIA (M-23-3)

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
TMDL/303d Status: n/a

Resolution Potential: n/a

Further Details

Water Quality Sampling

A biological (macroinvertebrate) assessment of Beaver Kill in Mount Tremper (at Route 40) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. The fauna was diverse and all screening criteria for waters having no known impacts were met. (DEC/DOW, BWAM/SBU, June 2005)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to the City of Kingston water intake near Lake Hill, above which the stream is known as Mink Hollow. The waters of the stream are Class C(TS), with portions in the forest preserve. Tribs to this reach/segment, including Grog Kill (-2), Silver Hollow Brook (-4) and Willow Brook (-7), are B(T) and C,C(T),C(TS), with portions in the forest preserve.

Stony Clove Brook and tribs (1307-0008)

NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-171/P848-45
Hydro Unit Code: 02020006/190 **Str Class:** B(TS)
Waterbody Type: River
Waterbody Size: 48.8 Miles
Seg Description: entire stream and tribs

Drain Basin: Lower Hudson River
Middle Hudson River
Reg/County: 4/Greene Co. (20)
Quad Map: PHOENICIA (M-23-3)

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

A biological (macroinvertebrate) assessment of Beaver Kill in Mount Tremper (at Route 40) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. The fauna was diverse and all screening criteria for waters having no known impacts were met. (DEC/DOW, BWAM/SBU, June 2005)

Other Issues The New York City DEP has identified this stream as a high priority for streambank restoration work. NYCDEP has monitoring data showing the stream to be a major source of turbidity in the Esopus Creek Watershed, and ultimately affecting water supply uses in the Ashokan Reservoir. Restoration Projects are being developed with input from NYCDEP, Greene County SWCD and NYSDEC. Clay exposures in the streambed and bank produce significant turbidity. (DEC/DOW, Region 4, February 2000)

This segment includes the entire stream and all tribs. The waters of the stream are Class B(TS). Tribs to this reach/segment, including Ox Clove Brook (-1), Warner Creek (-2), Hollow Tree Brook (-4), Lanes Hollow Brook (-4a), Rhine Hollow Brook (-6), Fenwick Brook (-7), Lanes Hollow Brook (-11) and Christine Brook (-12), are Class B,B(T),C,C(T),C(TS), with portions in the forest preserve.

Birch Creek and tribs (1307-0037)

NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-171/P848-52 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** B(TS)
Waterbody Type: River **Reg/County:** 3/Ulster Co. (56)
Waterbody Size: 17.0 Miles **Quad Map:** SHANDAKEN (M-23-4)
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) survey of Birch Creek at multiple sites between in Big Indian and above Pine Hill was conducted in 2004. Sampling results indicated non-impacted water quality conditions at all sites. The fauna included many clean-water mayflies, stoneflies and caddisflies. The survey also included a toxicity testing component and no toxicity was evident in the samples. (Birch Creek Biological Stream assessment Report, Bode, et al., DEC/DOW, February 2005)

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class B(TS). Tribs to this reach/segment, including Ike Smith Hollow Brook (-1), Giggle Hollow Brook (-3) and Crystal Spring Brook (-4), are Class B(T) and C, with portions in the forest preserve.