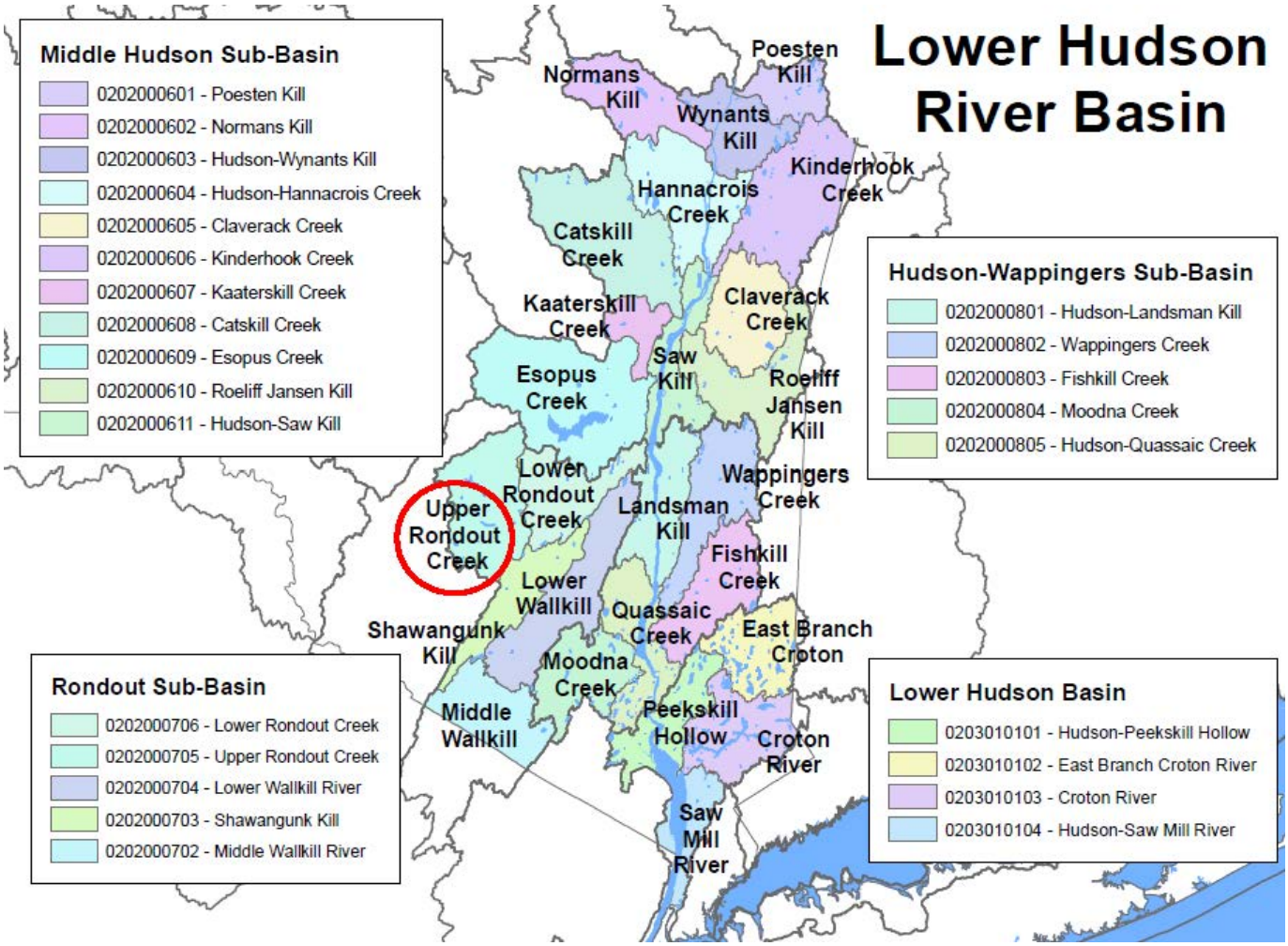

Upper Roundout Creek
(0202000705)

Water Index Number	Waterbody Name	Category
H-139-14 (portion 5)/P815a	Rondout Reservoir (1306-0003)	**Impaired Seg**
H-139-14 (portion 6)	Rondout Creek, Upper, and minor tribs(1306-0026)	**NoKnownImpct**
H-139-14 (portion 7)	Rondout Creek, Upper, and minor tribs(1306-0092)	**MinorImpacts**
H-139-14-P815a-	Minor Tribs to Rondout Reservoir (1306-0014)	**MinorImpacts**
H-139-14-P815a-48	Chestnut Creek and tribs (1306-0009)	**NoKnownImpct**
H-139-14-P815a-48- 2-P818	Beaverdam Pond (1306-0126)	UnAssessed
H-139-14-P815a-53	East/Sundown Brook and tribs (1306-0127)	UnAssessed

Rondout Reservoir (1306-0003) Impaired Seg

Waterbody Location Information

Revised: 05/29/2008

Water Index No:	H-139-14 (portion 5)/P815a	**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020007/110 **Str Class:** AA(TS)		Rondout River
Waterbody Type:	Lake(R)	**Reg/County:**	3/Ulster Co. (56)
Waterbody Size:	2023.8 Acres	**Quad Map:**	RONDOUT RESERVOIR (N-23-4)
Seg Description:	entire reservoir		

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Possible
FISH CONSUMPTION	Impaired	Known

Type of Pollutant(s)

Known: METALS (mercury)
Suspected: - - -
Possible: Nutrients, Silt/Sediment

Source(s) of Pollutant(s)

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

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: 2b->4a

Further Details

Overview
Fish consumption in Rondout Reservoir is considered to be impaired due to mercury contamination thought to be the result of atmospheric deposition. Water supply uses are also noted as being potentially threatened.

Fish Consumption Advisories
Fish consumption in Rondout Reservoir is impaired due to a NYSDOH health advisory that recommends eating no more than one meal per month of larger (over 16 inches) smallmouth bass because of elevated mercury levels. 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 1999-2000. (2007-08 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2007).

Water Supply Use
The water supply use of the Rondout Reservoir is fully supported. 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 this reservoir as having a current phosphorus load that well below the allowable load. Average phosphorus

concentrations in the reservoir at the time the TMDL was less than 10 ug/l, well below the applicable 15 ug/l criterion established for source water reservoirs. (DEC/DOW, BWAM/WQAS, July 2007)

New York City Watershed

The Rondout 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 Rondout Reservoir receives water from the 95 square mile watershed of the Upper Rondout River and serves as a collecting reservoir for the water from the three other reservoirs (Cannonsville, Pepacton and Neversink) in the Delaware system. Water quality in these upstream reservoirs influences water quality in the Rondout Reservoir. The safe yield of the entire Delaware water system is 610 MGD. Water from the Rondout Reservoir travels through the Delaware Aqueduct to the West Branch Reservoir in the Croton System. 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

Rondout Reservoir is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the 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 lake are not included in the 2008 NYS Section 303(d) List of Impaired/TMDL Waters. (DEC/DOW, BWAM/WQAS, March 2008)

Rondout Creek, Upper, and minor tribs (1306-0026) NoKnownImpct

Waterbody Location Information

Revised: 12/13/2007

Water Index No:	H-139-14 (portion 6)	**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020007/110 **Str Class:** A(TS)		Rondout River
Waterbody Type:	River	**Reg/County:**	3/Sullivan Co. (53)
Waterbody Size:	18.7 Miles	**Quad Map:**	CLARYVILLE (N-22-2)
Seg Description:	stream and select tribs, fr reservoir to E.Mountain Rd.		

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 Rondout Creek at multiple sites between Rosendale and Peekamoose was conducted in 2002. Sampling results indicated non-impacted to slightly impacted water quality conditions along the stream. The assessments of sites on this reach of the Upper Rondout fell within the range of non-impacted. Farther upstream slight impacts due to acid rain impacts were noted, but these impacts were not evident in this reach. Aquatic life is considered to be fully supported in the stream, and there are not other indications of impacts to uses. (Rondout Creek Biological Assessment Report, Bode, et al., DEC/DOW, BWAM/SBU, October 2003)

New York City Watershed
This creek feeds the Rondout Reservoir, which is a terminal reservoir of the Catskill/Delaware System of New York City water supply reservoirs (see Rondout Reservoir, Segment 1306-0003). A Watershed Agreement is in place between NYCDEP and the Croton Watershed communities which sets forth programs and funding for watershed protection. NYCDEP has reported average pH values (6.4) for the Upper Rondout Creek that fall outside the criteria for pH outlined in Addendum E of the agreement between NYC and NYSDEC for protection of the New York City water supply. (NYCDEP, July 1999)

Segment Description
This segment includes the portion of the stream and selected/smaller tribs from the Rondout Reservoir to/including

unnamed trib (-50) near East Mountain Road. The waters of this portion of the stream are Class A(TS). Tribs to this reach/segment, including Sugarloaf Brook (-49), are Class A(TS),B(T),B(TS),C,C(TS). Chestnut Creek (-48) is listed separately.

Rondout Creek, Upper, and minor tribs (1306-0092) MinorImpacts

Waterbody Location Information

Revised: 12/13/2007

Water Index No: H-139-14 (portion 7) **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** C(T)
Waterbody Type: River **Reg/County:** 3/Ulster Co. (56)
Waterbody Size: 38.9 Miles **Quad Map:** PEEKAMOOSE MOUNTAIN (N-23-1)
Seg Description: stream and select tribs, above East Mountain Road

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)
Known: ACID/BASE (PH)
Suspected: - - -
Possible: - - -

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

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: ext/EPA **Resolution Potential:** Low
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life support in this portion of Upper Rondout Creek is thought to experience minor impacts due to low pH, the result of atmospheric deposition (acid rain).

Water Quality Sampling
A biological (macroinvertebrate) survey of Rondout Creek at multiple sites between Rosendale and Peekamoose was conducted in 2002. Sampling results indicated non-impacted to slightly impacted water quality conditions along the stream. The assessments of sites on the Upper Rondout fell mostly within the range of non-impacted, with the uppermost site reflecting slight impacts due to acid rain impacts. In spite of these minor impacts, aquatic life is considered to be fully supported in the stream. (Rondout Creek Biological Assessment Report, Bode, et al., DEC/DOW, BWAM/SBU, October 2003)

New York City Watershed
This creek feeds the Rondout Reservoir, which is a terminal reservoir of the Catskill/Delaware System of New York City water supply reservoirs (see Rondout Reservoir, Segment 1306-0003). A Watershed Agreement is in place between NYCDEP and the Croton Watershed communities which sets forth programs and funding for watershed protection. NYCDEP has reported average pH values (6.4) that fall outside the criteria for pH outlined in Addendum E of the

agreement between NYC and NYSDEC for protection of the New York City water supply. (NYCDEP, July 1999)

Segment Description

This segment includes the portion of the stream and all tribs above unnamed trib (-50) near East Mountain Road. The waters of this portion of the stream are Class C(T),C(TS) from unnamed tribs (-50) to unnamed trib (-57a), and Class B(TS) for the remainder of the reach. Tribs to this reach/segment, including High Falls Brook (-55), Stone Cabin/Bull Run Brook (-56), Bear Hole Brook (-57), Buttermilk Falls Brook (-58), Pickett Brook (-60), are Class C,C(T),C(TS),B(T) and with some portion in the forest preserve. East/Sundown Brook (-53) is listed separately.

Minor Tribs to Rondout Reservoir (1306-0014) MinorImpacts

Waterbody Location Information

Revised: 05/29/2008

Water Index No:	H-139-14-P815a-			**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020007/110	**Str Class:**	A		Rondout River
Waterbody Type:	River			**Reg/County:**	3/Ulster Co. (56)
Waterbody Size:	15.6 Miles			**Quad Map:**	RONDOUT RESERVOIR (N-23-4)
Seg Description:	total length of select tribs, to Rondout Reservoir				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: ACID/BASE (PH)
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: ATMOSPH. DEPOSITION
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: n/a

Further Details

Overview
Water supply use and aquatic life in Trout Creek (also Sawkill Brook) are thought to experience minor impacts due to low pH attributable to atmospheric deposition (acid rain).

Water Quality Sampling
NYCDEP has reported low average pH values that fall is outside the criteria for pH outlined in Addendum E of the agreement between NYC and NYS DEC for protection of the New York City water supply. The fishery may also be affected by the low pH, but no biologic assessment has been conducted. (NYCDEP, July 1999)

New York City Watershed
This creek feeds the Rondout Reservoir, the terminal reservoir of the Delaware System of New York City water supply reservoirs (see Rondout Reservoir, Segment 1306-0003). A Watershed Agreement is in place between NYCDEP and the Delaware Watershed communities which sets forth programs and funding for watershed protection. (NYCDEP, July 1999)

Segment Description
This segment includes the total length of selected/smaller tribs to Rondout Reservoir. Tribs within this segment,

including Trout Creek (-44), Deeper Kill (-46), are Class A,A(T),A(TS). Chestnut Creek (-48) and Upper Rondout Creek are listed separately.

Chestnut Creek and tribs (1306-0009) NoKnownImpct

Waterbody Location Information

Revised: 12/12/2007

Water Index No:	H-139-14-P815a-48			**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020007/110	**Str Class:**	A(T)		Rondout River
Waterbody Type:	River			**Reg/County:**	3/Sullivan Co. (53)
Waterbody Size:	48.9 Miles			**Quad Map:**	GRAHAMSVILLE (N-22-3)
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 Chestnut Creek in Grahamsville (at Route 42) was conducted in 1998 and 2002. Sampling results indicated non-impacted water quality conditions. Slightly lower metrics in 1998 were attributed to headwater effects. The 2002 sampling found the fauna to be diverse and all screening criteria for waters having no known impacts were met. (DEC/DOW, BWAM/SBU, June 2005)

NYC Water Supply
Chestnut Creek is tributary to the Catskill/Delaware System of New York City water supply reservoirs (see also Rondout Reservoir, Segment 1306-0003). A Watershed Agreement is in place between NYCDEP and the Delaware Watershed communities which sets forth programs and funding for watershed protection. NYCDEP has conducted routine chemical monitoring of the stream and although these results indicate acceptable water quality, impacts from failing and/or inadequate on-site septic systems - some of which have been documented - are of some concern. (NYCDEP, July 1999)

Segment Description
This segment includes the entire stream and all tribs. The waters of the stream are Class A(T). Tribs to this reach/segment, including Weston Brook (-1), Red Brook (-2), Bullet Brook (-3), Pepacton Brook (-5), Birch Brook (-6), Scott Brook (-7), are Class A(T),B(T),B(TS),C,C(TS).