



Middle Walkkill River (0202000702)

Water Index Number

H-139-13-59
H-139-13-59-P668
H-139-13-61
H-139-13-61- 9
H-139-13-61- 9
H-139-13-61- 9-15
H-139-13-61- 9-20
H-139-13-61- 9-25
H-139-13-61- 9-P698
H-139-13-62
H-139-13-62- 2
H-139-13-62- 3
H-139-13-62- 3
H-139-13-62-10-P743

Waterbody Inventory

Quaker Creek and tribs (1306-0025)
Glenmere Lake (1306-0077)
Pochuck Creek and minor tribs (1306-0078)
Wawayanda Creek, Lower, and tribs (1306-0079)
Wawayanda Creek, Upper, and minor tribs (1306-0015)
Unnamed Trib to Wawayanda Cr, and tribs (1306-0080)
Warwick Reservoir Outlet, Upp, and tribs (1306-0081)
Long House Creek, Upper, and tribs (1306-0082)
Wickham Lake (1306-0083)
Rutgers Creek and minor tribs (1306-0006)
Catlin Creek and tribs (1306-0084)
Indigot Creek, Lower, and tribs (1306-0085)
Indigot Creek, Upper, and tribs (1306-0086)
Lochenhurst Pond (1306-0087)

Category

Impaired Seg
UnAssessed
NoKnownImpct
MinorImpacts
MinorImpacts
UnAssessed
UnAssessed
UnAssessed
UnAssessed
NoKnownImpct
UnAssessed
NoKnownImpct
UnAssessed
UnAssessed

Quaker Creek and tribs (1306-0025)

Impaired Seg

Waterbody Location Information

Revised: 12/17/2007

Water Index No: H-139-13-59
Hydro Unit Code: 02020007/060 **Str Class:** C
Waterbody Type: River
Waterbody Size: 41.5 Miles
Seg Description: entire stream and tribs
Drain Basin: Lower Hudson River
Rondout River
Reg/County: 3/Orange Co. (36)
Quad Map: MONROE (P-24-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: D.O./OXYGEN DEMAND, WATER LEVEL/FLOW, NUTRIENTS, Silt/Sediment
Possible: Pesticides

Source(s) of Pollutant(s)

Known: - - -
Suspected: AGRICULTURE (muckland farms), HYDRO MODIFICATION, Municipal (Florida WWTP)
Possible: Streambank Erosion

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 2 (Problem Verified, Cause Unknown)
Lead Agency/Office: DOW/BWAR **Resolution Potential:** Medium
TMDL/303d Status: 3b (Waterbody Requiring Verification of Cause/Pollutant)

Further Details

Overview

Aquatic life support and aesthetics of Quaker Creek are thought to be impacted by low dissolved oxygen in the stream. Significant biological impacts were noted. Some of the impacts are thought to be exacerbated by low flow/hydrmodification and sluggish stream currents.

Water Quality Sampling

A biological (macroinvertebrate) survey of Quaker Creek was conducted at multiple sites between Snufftown and Florida in 1994 and 1995. Both surveys indicated moderately to severely impacted water quality in some reaches of the creek. Sampling during drought conditions in 1995 found daytime D.O. to be as low as 3.1 mg/l. The biological impact was reflective of municipal discharges, in this case from the Florida (v) WWTP. However, the plant had been upgraded in 1993 and all indications are that it is operating properly. Other hydrologic conditions such as the slow-moving sluggish flow of the creek, the withdrawal of water for irrigation and the low flow/drought conditions are thought to exacerbate the effect of the sewage effluent, and hinders the recovery of the creek. (Quaker Creek Biological Assessment Report, Bode et al, DEC/DOW, BWAM, January 1996)

Source Assessment

The stream flows through a muckland area where onion farming is intensive. Soil erosion and other agricultural runoff

from the onion farming along creek affects water clarity and aesthetics and influence water quality. (DEC/DOW, Region 3, 1996)

Section 303(d) Listing

Quaker Creek is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 3b of the List as a Water Requiring Verification of Cause/Pollutant because the specific cause of the low dissolved oxygen have not been identified.

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment, including Stony Creek (-3), are also Class C.

Wawayanda Creek, Upper, and minor tribs (1306-0015) MinorImpacts

Waterbody Location Information

Revised: 12/17/2007

Water Index No: H-139-13-61- 9
Hydro Unit Code: 02020007/050 **Str Class:** B(T)*
Waterbody Type: River
Waterbody Size: 21.2 Miles
Seg Description: stream and select tribs, above Warwick

Drain Basin: Lower Hudson River
Rondout River
Reg/County: 3/Orange Co. (36)
Quad Map: WARWICK (P-23-3)

Water Quality Problem/Issue Information (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: AGRICULTURE, URBAN/STORM RUNOFF
Possible: Construction (resident.develop.), Municipal (Warwick WWTP), On-Site/Septic Syst

Resolution/Management Information

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

Resolution Potential: Medium

Further Details

Overview

Aquatic life support in this portion of Wawayanda Creek are known to experience minor impacts due to nutrients from nonpoint sources.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Wawayanda Creek in Warwick (at River Street) was conducted last conducted in 1995. Sampling results indicated slightly impacted water quality conditions. This assessment is consistent with sampling conducted at the site in 1994 and 1989. Impact Source Determination indicated that nonpoint sources of nutrients were the likely factors influencing the sample. Sampling of the stream below this reach have shown a steady improvement in water quality attributed to the 1994 upgrade of the Warwick WWTP. In spite of some/these minor impacts, aquatic life is considered to be fully supported in the stream. (DEC/DOW, BWAM/SBU, December 2004)

Previous Assessment

Previously agricultural (livestock) runoff, urban inputs, golf course runoff, and failing/inadequate on-site septic systems were identified as possible nonpoint sources. Runoff from residential construction and other land development projects in the Warwick Valley may also contribute to water quality impairment. One additional point source discharge, Town of Warwick SD#1, is also located upstream. Poor natural habitat is another factor limiting the biological community

in portions of the creek. The sand and gravel substrate and lower current velocity in the stream are not ideal for macroinvertebrates. (Wawayanda Creek Biological Assessment Report, Novak et al, DEC/DOW, BWAM, March 1996)

Local school-based volunteer monitors are currently studying the creek as well. (Orange County SWCD, December 1999)

Segment description

This segment includes the portion of the stream and selected/smaller tribs above unnamed trib (-21) above Warwick. The waters of this portion of the stream are Class B(T) to just below unnamed trib (-25), Class A(T) to Long House Creek (-25), and Class B(T) for the remainder of the reach. Tribs to this reach/segment, including Lower Long House Creek (-25), are primarily Class B,B(T),B(TS); with a short portion of Lower Long House Creek designated Class A(T). Upper Long House Creek and Lower Wawayanda Creek are listed separately.

Rutgers Creek and minor tribs (1306-0006)

NoKnownImpct

Waterbody Location Information

Revised: 12/13/2007

Water Index No: H-139-13-62
Hydro Unit Code: 02020007/060 **Str Class:** C*
Waterbody Type: River
Waterbody Size: 80.1 Miles
Seg Description: entire stream and select tribs

Drain Basin: Lower Hudson River
Rondout River
Reg/County: 3/Orange Co. (36)
Quad Map: UNIONVILLE (P-22-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted
NO USE IMPAIRMNT

Severity

Problem Documentation

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 Rutgers Creek in Johnson (at Ridgebury Road) 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. The sample was sorted in the lab to family level and results were found to support the field assessment. (DEC/DOW, BWAM/SBU, December 2004)

Segment Description

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C. Tribs to this reach/segment are primarily Class C; with one unnamed tribs (-20) designated Class B. Catlin Creek (-2) and Indigot Creek (-3) are listed separately.

Indigot Creek, Lower, and tribs (1306-0085)

NoKnownImpct

Waterbody Location Information

Revised: 12/13/2007

Water Index No: H-139-13-62- 3 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** C
Waterbody Type: River **Reg/County:** 3/Orange Co. (36)
Waterbody Size: 30.7 Miles **Quad Map:** UNIONVILLE (P-22-3)
Seg Description: stream and tribs, from mouth to near Mount Orange Road

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 Indigot Creek in Millsburg (at Millsburg Road) 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. The sample was sorted in the lab to family level and results were found to support the field assessment. (DEC/DOW, BWAM/SBU, December 2004)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to unnamed trib (-11) near Mount Orange Road. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C. Upper Indigot Creek is listed separately.