



Mettawee River (0415040102)

C-134
 C-134- 4
 C-134- 4- 4-P419
 C-134- 4-14-P424/
 P424a C-134- 4-17
 C-134
 C-134-22
 C-134..P459 thru P464

Mettawee River, Lower, and minor tribs (1005-0034)
 Wood Cr/Champlain Canal and minor tribs (1005-0036)
 Sawmill Pond (1005-0037)
 Dolph/Beaver Pond (1005-0038)
 Winchell Creek and tribs (1005-0061)
 Mettawee River, Upper, and minor tribs (1005-0003)
 Indian River and tribs (1005-0002)
 Minor Lakes in Upper Mettawee Watershed(1005-0057)

NoKnownImpct
Impaired Seg
 UnAssessed
NoKnownImpct
Need Verific
MinorImpacts
MinorImpacts
 UnAssessed

Mettawee River, Lower, and minor tribs (1005-0034)

NoKnownImpct

Waterbody Location Information

Revised: 06/10/2009

Water Index No: C-134
Hydro Unit Code: 02010001/120 **Str Class:** C
Waterbody Type: River
Waterbody Size: 33.8 Miles
Seg Description: stream and selected tribs from mouth to trib -15

Drain Basin: Lake Champlain
Champlain-Lk.George
Reg/County: 5/Washington Co. (58)
Quad Map: WHITEHALL (G-27-4)

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

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Mettawee River in Whitehall, Washington County, (at Grays Road) was conducted in 2003 and 2004. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. Due to poor macroinvertebrate habitat, biological sampling was conducted in North Granville, upstream of this RIBS site. Biological sampling results reveal slightly to non-impacted conditions, indicating generally good water quality. Water column sampling found iron to be a parameter of concern, exceeding its assessment criteria in 2 of 10 samples. However, the median iron concentration for the samples was well below the criterion. Macroinvertebrates (collected at the North Granville site) chemically analyzed for selected metals and PAHs found no contaminants to be present at concentrations above the established guidance values. Sediment screening for acute toxicity indicated no toxicity to be present. Analysis of sediments found elevated levels of nickel above the threshold effects concentration, but not parameters were found to be above the probably effects concentration. Based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to result in toxicity to sediment-dwelling organisms. Toxicity testing of the water column also showed no significant mortality or reproductive impacts. Based on the consensus of these established assessment methods, overall water quality at this site shows that in spite of some concerns that should continue to be monitored, aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to recreational uses. (DEC/DOW, BWAM/RIBS, May 2009).

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of the Mettawee River in Whitehall (at Gray Lane) was also conducted in 1998-99. Results of this sampling were consistent with the more recent sampling. Biological sampling conducted in North Granville in 1998 indicated non-impacted water quality conditions, though close to the range of slightly impacted. The fauna was dominated by mayflies, caddisflies, and riffle beetles. This site was assessed as slightly impacted in 1993. (DEC/DOW, BWAR/RIBS, January 2001)

Previous Assessments

Concern regarding the impact of silt/sediment runoff from agricultural activities has been raised in the past. Extensive row cropping and the lack of riparian vegetation in some areas may also result in warming of the stream. Nutrient runoff is also a concern. (Washington County WQCC, April 2000)

Segment Description

This segment includes the portion of the river and selected/smaller tribs from the mouth to/including Martins Pond Outlet (-18) in North Granville. The waters of this portion of the river are Class C,C(T). Tribs to this reach, including Bartholomew Brook/Castle Creek (-5) and Martins Pond Outlet (-18), are Class C,C(T) and D. Mud Brook (-1) and Wood Creek/Champlain Canal (-4) are listed separately.

Wood Cr/Champlain Canal and minor tribs (1005-0036) Impaired Seg

Waterbody Location Information

Revised: 06/18/2009

Water Index No: C-134- 4
Hydro Unit Code: 02010001/140 **Str Class:** C
Waterbody Type: Canal
Waterbody Size: 128.7 Miles
Seg Description: entire stream and selected tribs

Drain Basin: Lake Champlain
Champlain-Lk.George
Reg/County: 5/Washington Co. (58)
Quad Map: WHITEHALL (G-27-4) ...

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: D.O./OXYGEN DEMAND, NUTRIENTS (phosphorus), PATHOGENS
Suspected: Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: MUNICIPAL (Whitehall (v) WWTP), OTHER SANITARY DISCH
Suspected: Agriculture, Streambank Erosion
Possible: Roadbank Erosion

Resolution/Management Information

Issue Resolvability: 2 (Strategy Exists, Needs Funding/Resources)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DOW/Reg5 **Resolution Potential:** High
TMDL/303d Status: 1* or 4b

Further Details

Overview

Recreational uses and aquatic life support in the Champlain Canal are impaired by nutrients, pathogens, and low dissolved oxygen from sewage overflows and by-passes from a municipal facility and collection system.

Source Assessment

Inadequate treatment of municipal wastewater is a source of low dissolved oxygen, nutrients, pathogens and other pollutants to the northern end of the canal. The Whitehall (v) WWTP has a history of operational problems that are the result of excessive infiltration/inflow to the collection system and an undersized WWTP. During wet weather flow the plant by-passes partially and/or untreated sewage into the canal. These events are frequent, occurring 50 to 100 times during a year. Sanitary sewer overflows in the collection system also discharge during wet weather events. The municipality is under enforcement by NYSDEC due to SPDES permit violations. A July 2009 consent order calls for major sewer system rehabilitation (elimination of SSO's, I/I reduction) and WWTP modifications (flow equalization, etc.). The project is scheduled for completion by January 2014. However the funding necessary to upgrade the plant and collection system is beyond what the community can afford and other funding sources are not currently available. Note this situation was inaccurately portrayed as a minor issue in previous assessments; in fact, it is a significant water quality problem and has a long history. There are four other wastewater facilities in this watershed, however none are known to experience operational problems. (DEC/DOW, Region 5, June, 2009)

Previous Assessment

Concerns were raised in previous assessments about silt and sediment deposition in the canal which results in the need for regular dredging to maintain navigable depths. However this dredging is best characterized as routine maintenance of the canal, and not unexpected given that the canal is fed by a number of tribs (Big Creek, Halfway Creek, Mettawee River and Poultney River) that drain highly-erodible clay soils. That being said, land use management efforts to reduce sediment loading to the tributaries could reduce the some dredging need. But the nature of the the watershed and canal hydrology make continued routine maintenance dredging unavoidable. (DEC/DOW, Region 5, June 2009)

Section 303d Listing

Wood Creek/Champlain Canal not is currently included on the NYS 2008 Section 303(d) List of Impaired Waters. However this updated assessment suggests it is appropriate to consider including this waterbody on the 2010 List. Because the municipal discharge is being addressed through a consent order, it would be most appropriate to either list this waterbody on Part 3c of the List as a waterbody for which TDML development is deferred pending the implementation and evaluation of other restoration measures, or to designate it a Category 4b water where a TMDL is not necessary because other required control measures are expected to restore the water. (DEC/DOW, BWAM/WQAS, June 2009)

Segment Description

This segment includes the entire stream and canal and selected/smaller tribs. The waters of the stream are Class C. Tribs to this reach/segment, including Sawmill Creek (-4), are Class C,C(T) and D. Winchell Creek (-17), Halfway Creek (-19) and Big Creek (-27) are listed separately.

Dolph/Beaver Pond (1005-0038)

NoKnownImpct

Waterbody Location Information

Revised: 05/29/2009

Water Index No: C-134- 4-14-P424/P424a
Hydro Unit Code: 02010001/140 **Str Class:** AA
Waterbody Type: Lake
Waterbody Size: 45.9 Acres
Seg Description: entire lake

Drain Basin: Lake Champlain
Champlain-Lk.George
Reg/County: 5/Washington Co. (58)
Quad Map: FORT ANN (H-27-1)

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
TMDL/303d Status: n/a

Resolution Potential: n/a

Further Details

Source (Drinking) Water Assessment

A source water assessment of Dolph Pond found no elevated susceptibility to contamination. This assessment was conducted through the NYSDOH Source Waters Assessment Program (SWAP) which compiles, organizes, and evaluates information regarding possible and actual threats to the quality of public water supply (PWS) sources. The information contained in SWAP assessment reports assists in the oversight and protection of public water systems. It is important to note that SWAP reports estimate the potential for untreated drinking water sources to be impacted by contamination and do not address the quality of treated finished potable tap water. This water supply source provides water to the Green Meadow Correctional Facility. (NYSDOH, Source Water Assessment Program, 2005)

Segment Description

This segment includes the total area of both Dolph Pond (P424) and Beaver Pond (P424a).

Winchell Creek and tribs (1005-0061)

Need Verific

Waterbody Location Information

Revised: 06/18/2009

Water Index No: C-134- 4-17
Hydro Unit Code: 02010101/140 **Str Class:** C
Waterbody Type: River (Low Flow)
Waterbody Size: 31.8 Miles
Seg Description: entire stream and tribs

Drain Basin: Lake Champlain
Reg/County: 5/Washington Co. (58)
Quad Map: FORT ANN (H-27-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: D.O./OXYGEN DEMAND, NUTRIENTS, PATHOGENS

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: AGRICULTURE

Resolution/Management Information

Issue Resolvability: 6 (Problem Thought to be Abated)
Verification Status: (Not Applicable for Selected RESOLVABILITY)
Lead Agency/Office: DOW/BWAM
TMDL/303d Status: 4b->n/a

Resolution Potential: High

Further Details

Overview

In previous assessments, aquatic life support, recreational use and aesthetics of Winchell Creek were reported as impaired by low dissolved oxygen, odors and discoloration. However the source of the problem - a manure lagoon discharge from an area CAFO - has been addressed. Regional staff indicate there are currently no water quality issues in the stream.

Previous Assessment

Low dissolved oxygen, odors and discoloration were previously reported in Winchell Creek during the summer months. The stream was discolored (varies from greenish-yellow to black) emanated foul odors and was septic (D.O. < 1.0 mg/l). DEC Regional Water staff collected D.O. and temperature data in 1999 and 2000 which documents the poor condition of a trib to the stream. The source of the impacts was identified by DEC Regional Water and BECI staff as a CAFO with an overflowing manure lagoon that was routinely flowing into the creek. A court ordered compliance schedule was implemented in 2001. Since then the owner has complied with the order to cease the illegal discharge. The operation at one time had obtained coverage under the SPDES General Permit for CAFOs. However when USEPA revised the definition of CAFO in 2004, this farm was no longer covered and dropped out of the program. DEC Regional Water staff have found no subsequent violations of water quality problems in the stream. (DEC/DOW, Region 5, June 2009)

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment

are also Class C.

Mettawee River, Upper, and minor tribs (1005-0003)

MinorImpacts

Waterbody Location Information

Revised: 06/10/2009

Water Index No: C-134
Hydro Unit Code: 02010001/120 **Str Class:** C(T)
Waterbody Type: River (Low Flow) **Reg/County:** 5/Washington Co. (58)
Waterbody Size: 65.2 Miles **Quad Map:** GRANVILLE (H-27-2) ...
Seg Description: stream and selected tribs from trib -15 to NY-VT border

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrology	Stressed	Suspected

Type of Pollutant(s)

Known: - - -
Suspected: SILT/SEDIMENT, THERMAL CHANGES
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: AGRICULTURE, HABITAT MODIFICATION, Streambank Erosion
Possible: - - -

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

Fishery habitat in this portion of the Mettawee River is thought to experience minor impacts from silt and sediment runoff from agricultural activities in the watershed and elevated stream temperatures that are the result of riparian vegetation loss.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Mettawee River in North Granville (at Whitehall Turnpike) was conducted as part of the RIBS sampling effort in 2003 and 2004. Sampling results indicated non-impacted conditions in 2004. The sample was dominated by clean-water species and was 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 sample revealed no, or only incidental, anomalies. The 2003 sampling results indicated slightly impacted conditions, with the community somewhat altered from natural conditions. Some sensitive species had been lost and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna were determined to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicates low levels of enrichment in the stream. Based on the consensus of this sampling, aquatic life support is considered to be fully supported in the stream. (DEC/DOW, BWAM/SBU, January 2009)

A biological (macroinvertebrate) assessment of the Mettawee River in North Granville was also conducted in 1998. Sampling results indicated non-impacted water quality conditions, though close to the range of slightly impacted. The

fauna was dominated by mayflies, caddisflies, and riffle beetles. This site was assessed as slightly impacted in 1993 sampling. Further sampling is needed to document whether or not the improvement represents a genuine trend. The site was not sampled in 1999 due to very high flows. (DEC/DOW, BWAR/SBU, January 2000)

Source Assessment

The stream waters are reported at or above critical temperature levels for support of trout. Extensive row cropping and the lack of riparian vegetation in many areas around Middle Granville contribute to the warming of the stream. Nutrient runoff and streambank erosion are also concerns. Several projects have been implemented to stabilize the river and establish riparian buffers. (Washington County WQCC, April 2000)

The Vermont-DEC has also reported aquatic life/habitat impacts in the Mettawee in Vermont due to elevated temperatures, silt/sediment loads and nutrient enrichment due to agriculture, riparian vegetation loss and streambank erosion. A segment of the Mettawee River just above the NY-VT border is listed on the State of Vermont's 2000 Section 303(d) List. (Poultney-Mettawee Watershed Assessment Report, Vermont DEC, December 1999)

Segment Description

This segment includes the portion of the river and selected/smaller tribs above Martins Pond Outlet (-19) in North Granville. The waters of this portion of the river are Class C(T). Tribs to this reach, including Holcomb Creek (-19), are Class C,C(T),C(TS) and D. Indian River (-22) is listed separately.

Indian River and tribs (1005-0002)

MinorImpacts

Waterbody Location Information

Revised: 04/21/2009

Water Index No: C-134-22
Hydro Unit Code: 02010001/140 **Str Class:** C(T)
Waterbody Type: River (Low Flow)
Waterbody Size: 31.6 Miles
Seg Description: entire stream and tribs (within NYS)

Drain Basin: Lake Champlain
Champlain-Lk.George
Reg/County: 5/Washington Co. (58)
Quad Map: GRANVILLE (H-27-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: SILT/SEDIMENT, Nutrients, Thermal Changes
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: AGRICULTURE, Streambank Erosion
Possible: - - -

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 and fishery habitat in Indian River are thought to experience minor impacts due to nutrients and silt/sediment from agricultural and other nonpoint sources in the watershed. Elevated stream temperatures may also impact the fishery.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Indian River in Granville (at Route 149) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated slightly impacted conditions. The community is altered from natural conditions. Some sensitive species have been lost and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna were determined to be minor. The nutrient biotic index and impact source determination indicates elevated enrichment in the stream and fauna that shows indications of nonpoint sources while also showing similarity to natural communities. Although aquatic life is supported in the stream, various indicators suggest the level of eutrophication and other conditions may be sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, January 2009)

Source Assessment

Aquatic life support and fishery habitat is thought to be stressed by silt/sediment runoff from agricultural activities in the

watershed and elevated stream temperatures. Much of the problem originates in the Pawlet Valley of Vermont. There is only one active dairy farm along the river in New York State. The lack of riparian vegetation result in warm stream temperature, which stress the trout fishery. DEC Regional Fisheries staff has identified this stream as a priority within the county. (Washington County WQCC, April 2000)

Segment Description

This segment includes the entire stream and all tribs within New York State. The waters of the stream are Class C(T). Tribs to this reach/segment are also Class C(T).