



Bouquet River (0415040807)

C-48	Boquet River, Lower, and tribs (1004-0037)	MinorImpact
C-48	Boquet River, Middle, and minor tribs (1004-0039)	MinorImpact
C-48	Boquet River, Middle, and minor tribs (1004-0046)	MinorImpacts
C-48	Boquet River, Upper, and tribs (1004-0081)	NoKnownImpct
C-48-6	North Branch Boquet, Lower, and tribs (1004-0078)	MinorImpacts
C-48-6	North Branch Boquet, Upper, and tribs (1004-0036)	NoKnownImpct
C-48-6-9-5-P286	Frances Lake (1004-0086)	NoKnownImpct
C-48-6-10	Spruce Mill Brook, Lower, and tribs (1004-0079)	NoKnownImpct
C-48-6-10	Spruce Mill Brook, Upper, and tribs (1004-0080)	NoKnownImpct
C-48-6-10-11-P288	Big Pond (1004-0087)	NoKnownImpct
C-48-6..P289 thru P310	Minor Lake Tribs to Upper North Branch(1004-0088)	NoKnownImpct
C-48-26	Black River and tribs (1004-0082)	UnAssessed
C-48-26-32-P314	Nichols Pond (1004-0089)	NoKnownImpct
C-48-26-P315	Lincoln Pond (1004-0090)	Impaired Seg
C-48-26..P318,P316,P319	Mill/Russet/Tanaher Ponds (1004-0091)	NoKnownImpct
C-48-34	The Branch (Boquet) and tribs (1004-0040)	UnAssessed
C-48-36,37	Locklaird, Killkeny Brooks and tribs (1004-0096)	UnAssessed
C-48-45-P326	Little Pond (1004-0092)	NoKnownImpct
C-48-67-3-P329	Round Pond (1004-0093)	NoKnownImpct

Boquet River, Lower, and tribs (1004-0037)

MinorImpacts

Waterbody Location Information

Revised: 08/14/2009

Water Index No: C- 48
Hydro Unit Code: 02010004/030 **Str Class:** C(T)
Waterbody Type: River (Med. Flow) **Reg/County:** 5/Essex Co. (16)
Waterbody Size: 6.1 Miles **Quad Map:** WILLSBORO (D-27-0)
Seg Description: stream and tribs from mouth to Willsboro

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: SILT/SEDIMENT (coal ash and debris), Algal/Weed Growth
Suspected: Metals
Possible: - - -

Source(s) of Pollutant(s)

Known: LANDFILL/LAND DISP. (Willsboro Black Ash Pond)
Suspected: - - -
Possible: - - -

Resolution/Management Information

Issue Resolvability: 2 (Strategy Exists, Needs Funding/Resources)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DEC/DER
TMDL/303d Status: n/a

Resolution Potential: High

Further Details

Overview

Aquatic life support, recreational uses and aesthetics in this portion of the Boquet River are known to experience impacts from sediment runoff from an old waste site.

Willsboro Black Ash Pond Site

A pulp mill operated along the Boquet River from the 1880s through to 1964. During this operation the residue of the combustion of black liquor - a combination of soda ash, chemical lime, wood fiver and soft coal used in the paper pulp making - was stored in a pond on site. This black ash accumulated to fill the 900 ft by 400 ft pond to a depth of 16 feet. Over time the dyke constructed to hold the waste has erode, exposing the black ash to the river; it is now eroding directly into the river. A remedial site investigation was completed in 2006. The investigation found that erosion of the fine-grained black ash into the river impacts reproduction and survival or aquatic life. Although impacts to human health are minimal, the poor aesthetics of the site also impact recreational uses. (DEC/DER, Willsboro Black Ash Pond Site, E-5-16-009, March 2007)

Water Quality Management/Remediation

A remedial alternatives report, issued in 2007, recommended capping the site with clean soil, grading the site to control stormwater and infiltration, and stabilization of the riverbank to eliminate erosion of material into the river. Up to 90% of the funding for the \$4 million remedial project was to come from the State Environmental Restoration Program, however that funding has been depleted. Efforts to find alternative funding have not been successful. (DEC/DER, August 2009)

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Boquet River in Willsboro, Essex County, (at Route 22) 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. Biological (macroinvertebrate) sampling results reveal non-impacted conditions, indicating very good water quality. Water column sampling found lead to be a parameter of concern, exceeding its assessment criteria in 2 of 10 samples. However, the exceedences were at the criterion and the median lead concentration for the samples was well below the standard. Macroinvertebrates collected at this site and chemically analyzed for selected metals and PAHs found arsenic and chromium to be present at concentrations above the established guidance values. Sediment screening for acute toxicity indicated possible toxicity, but analysis of sediments found no contaminants above the threshold 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. Note that this sampling site is upstream of the Willboro Black Ash Pond Site. (DEC/DOW, BWAM/RIBS, May 2009).

A biological (macroinvertebrate) survey of Boquet River at multiple sites from Wadhams to Underwood was conducted in 2004. Sampling results indicated non-impacted conditions at all sites. The samples were dominated by clean-water species and conditions reflected a natural community with minimal, if any, human impacts. The sample collected in Elizabethtown revealed a slight increase in nutrient and nonpoint impacts, but the site was still most similar to natural communities. These results are consistent with previous sampling at these sites conducted in 2003, 1998 and 1992. Aquatic life community is clearly fully supported. Although these sites are located above this reach, the results support an assessment of good water quality in this downstream reach. (DEC/DOW, BWAM/SBU, January 2009)

The Boquet River Association

The Boquet River Association is a small, 200-member, grass-roots non-profit organization dedicated to enhancing the quality of water and life in the Boquet watershed. Formed in 1984, it focuses on issues related to land uses, point and non-point source pollution, in-stream and riparian species and habitats, recreation, and the economy. Its membership is primarily local landowners, and its Board is composed of appointees from the five watershed towns and elected representatives. BRASS is known for its dedication to river quality and for mitigating conflicting river interests. It also has a reputation for accomplishing projects through education and by coordinating skills and services of volunteers, businesses, county and town governments, and state agencies. BRASS conducts periodic water quality monitoring, streambank stabilization projects, and public education programs including a newsletter. (Boquet River Association, 2009)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to the railroad bridge above Willsboro. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Randy Brook (-1), are Class D. Middle/Upper Bouquet River are listed separately.

Boquet River, Middle, and minor tribs (1004-0039)

MinorImpacts

Waterbody Location Information

Revised: 08/10/2009

Water Index No: C- 48
Hydro Unit Code: 02010004/030 **Str Class:** A
Waterbody Type: River (Med. Flow) **Reg/County:** 5/Essex Co. (16)
Waterbody Size: 77.4 Miles **Quad Map:** WILLSBORO (D-27-0) ...
Seg Description: stream and selected tribs from Willsboro to Wadhams

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
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION
Possible: Deicing (stor/appl) (road sanding), Roadbank Erosion

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

Fishery habitat in this portion of the Boquet River is thought to experience some impacts due to sand and sediment deposition from streambank erosion. Roadway runoff is also a contributing source.

Habitat Assessment

High gradient streams erode streambanks and wash sand and silt into and along streams. The sand and sediment fills in gravel spawning beds, decreasing salmonid spawning success, limiting macroinvertebrate production and increasing winter mortality of fish and invertebrates due to loss of escape cover from the effects of anchor ice. Limited natural reproduction of trout and other cold water species has been documented in this reach and high levels of stream embeddedness are suspected as contributing to the impacts. The heavy bedload results in the rapid buildup of gravel bars which also cause ice jamming problems. (DEC/DFWMR, Region 5, June 2009)

Water Quality Sampling

A biological (macroinvertebrate) survey of Boquet River at multiple sites from Wadhams to Underwood was conducted in 2004. Sampling results indicated non-impacted conditions at all sites, including a site in Wadhams (at Mariam Forge Road). The sample was dominated by clean-water species and conditions reflected a natural community with minimal, if any, human impacts. These results are consistent with previous sampling at this site conducted in 1998. Aquatic life community is clearly fully supported. (DEC/DOW, BWAM/SBU, January 2009)

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Boquet River in Willsboro, just below this segment 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. Biological (macroinvertebrate) sampling results reveal non-impacted conditions, indicating very good water quality. Water column sampling found lead to be a parameter of concern, exceeding its assessment criteria in 2 of 10 samples. However, the exceedences were at the criterion and the median lead concentration for the samples was well below the standard. Macroinvertebrates collected at this site and chemically analyzed for selected metals and PAHs found arsenic and chromium to be present at concentrations above the established guidance values. Sediment screening for acute toxicity indicated possible toxicity, but analysis of sediments found no contaminants above the threshold 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).

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Other concerns were raised regarding potential impacts from agricultural activities and inadequate and/or failing on-site septic systems in the watershed. Lake Champlain NonPoint Assessment Reports and the Boquet River Assoc report phosphorus loads above amounts predicted by land use models. Accelerated streambank erosion of sandy, noncohesive soils is also a concern. A Town of Essex Sanitary Survey found one-third of septic systems in Wallonsburg operate unsatisfactorily, with 40% of lots too small to conform to standards. Current conditions related to these potential impacts need to be re-evaluated. (Boquet River Assoc and LCBP, April 2000)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from the railroad bridge above Willsboro to the water supply dam in Wadhams. The waters of this portion of the stream are Class A. Tribs to this reach/segment, including Beaver Brook (-15) and Crooked Brook (-21), are primarily Class D, with one trib Class C(T). North Branch (-6) and Lower/Upper Bouquet River are listed separately.

Boquet River, Middle, and minor tribs (1004-0046)

MinorImpacts

Waterbody Location Information

Revised: 08/10/2009

Water Index No: C- 48
Hydro Unit Code: 02010004/030 **Str Class:** C(T)
Waterbody Type: River (Med. Flow) **Reg/County:** 5/Essex Co. (16)
Waterbody Size: 42.4 Miles **Quad Map:** ELIZABETHTOWN (E-26-A) ...
Seg Description: stream and selected tribs from Wadhams to Elizabethtown

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
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION
Possible: Deicing (stor/appl) (road sanding), Roadbank Erosion

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

Fishery habitat in this portion of the Boquet River is thought to experience some impacts due to sand and sediment deposition from streambank erosion. Roadway runoff is also a contributing source.

Habitat Assessment

High gradient streams erode streambanks and wash sand and silt into and along streams. The sand and sediment fills in gravel spawning beds, decreasing salmonid spawning success, limiting macroinvertebrate production and increasing winter mortality of fish and invertebrates due to loss of escape cover from the effects of anchor ice. Limited natural reproduction of trout and other cold water species has been documented in this reach and high levels of stream embeddedness are suspected as contributing to the impacts. The heavy bedload results in the rapid buildup of gravel bars which also cause ice jamming problems. (DEC/DFWMR, Region 5, June 2009)

Water Quality Sampling

A biological (macroinvertebrate) survey of Boquet River at multiple sites from Wadhams to Underwood was conducted in 2004. Sampling results indicated non-impacted conditions at all sites, including a site in Wadhams (at Mariam Forge Road) and in Elizabethtown (at Route 8A). The samples were dominated by clean-water species and conditions reflected a natural community with minimal, if any, human impacts. The sample collected in Elizabethtown revealed a slight increase in nutrient and nonpoint impacts, but the site was still most similar to natural communities. These results are consistent with

previous sampling at these sites conducted in 2003, 1998 and 1992. Aquatic life community is clearly fully supported. (DEC/DOW, BWAM/SBU, January 2009)

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Segment Description

This segment includes the portion of the stream and selected/smaller tribs from the water supply dam in Wadhams to The Branch (-34) in Elizabethtown. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Phelps Brook (-31), are primarily Class C(T) and D. Black River (-26) and The Branch (-34) as well as Lower/Upper Bouquet River are listed separately.

Boquet River, Upper, and tribs (1004-0081)

NoKnownImpct

Waterbody Location Information

Revised: 12/18/2000

Water Index No: C- 48
Hydro Unit Code: 02010004/020 **Str Class:** C(T)*
Waterbody Type: River
Waterbody Size: 100.7 Miles
Seg Description: stream and tribs above Elizabethtown

Drain Basin: Lake Champlain
Reg/County: 5/Essex Co. (16)
Quad Map: ELIZABETHTOWN (E-26-A) ...

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

Overview

Aquatic life support and other uses are considered to be fully supported with no notable impacts to uses in this portion of the Boquet River. There is some data indicating low pH in some smaller ponds within the segment as a result of atmospheric deposition (acid rain). However available data indicating such impacts is limited to these small ponds and is more than 20 years old. The more recent data on the larger waterbody segment is considered to be more reflective of water quality conditions in the segment as a whole.

Water Quality Sampling

A biological (macroinvertebrate) survey of Boquet River at multiple sites from Wadhams to Underwood was conducted in 2004. Sampling results indicated non-impacted conditions at all sites, including a site in Elizabethtown (at Route 8A) and in Underwood (at off Route 9). The samples were dominated by clean-water species and conditions reflected a natural community with minimal, if any, human impacts. The sample collected in Elizabethtown revealed a slight increase in nutrient and nonpoint impacts, but the site was still most similar to natural communities. These results are consistent with previous sampling at these sites conducted in 2003, 1998 and 1992. Aquatic life community is clearly fully supported. (DEC/DOW, BWAM/SBU, January 2009)

Monitoring of small ponds in this segment by the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of

parameters, including total phosphorus, pH and water color. Monitoring by ALSC revealed very low pH in Bullet Pond (P327) and Cranberry Pond (P332). (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Water Quality Management

Efforts are underway on a national level to address problems caused by acid rain by reducing pollutant emissions, as required by the Clean Air Act. New York State (and other northeastern states) have taken legal action against USEPA to accelerate implementation of controls. Monitoring of these waters will continue, in order to assess changes in water quality resulting from implementation of the Clean Air Act. However, these changes are expected to occur only slowly over time.

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Section 303(d) Listing

Bullet Pond (P327) and Cranberry Pond (P332) within this segment are included on the NYS 2008 Section 303(d) List of Impaired Waters in Appendix A as a Smaller Lake Impaired by Acid Rain. (DEC/DOW, BWAM, 2008)

Segment Description

This segment includes the portion of the stream and all tribs above The Branch (-34) in Elizabethtown. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Little Pond Outlet (-45), Roaring Brook (-46), Stevens Brook (-56), Slide Brook (-62), North Fork (-67) and South Fork (-68), are primarily Class C(T) and D; one unnamed trib (-48) is Class AA(T). This segment also includes the smaller ponds smaller ponds Bullet Pond (P327), Lilypad Pond (P330) and Cranberry Pond (P332). The Branch (-34) as well as Lower/Middle Bouquet River are listed separately.

North Branch Boquet, Lower, and tribs (1004-0078)

MinorImpacts

Waterbody Location Information

Revised: 08/10/2009

Water Index No: C- 48- 6
Hydro Unit Code: 02010004/020 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 70.5 Miles
Seg Description: stream and tribs from mouth to Reber/Spruce Mill Brook

Drain Basin: Lake Champlain
Reg/County: 5/Essex Co. (16)
Quad Map: WILLSBORO (D-27-0)

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
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: STREAMBANK EROSION, Deicing (stor/appl) (road sanding)
Possible: Roadbank Erosion

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 North Branch Boquet River is thought to experience some impacts due to sand and sediment deposition from streambank erosion. Roadway runoff is also a contributing source.

Habitat Assessment

High gradient streams erode streambanks and wash sand and silt into and along streams. The sand and sediment fills in gravel spawning beds, decreasing salmonid spawning success, limiting macroinvertebrate production and increasing winter mortality of fish and invertebrates due to loss of escape cover from the effects of anchor ice. Limited natural reproduction of trout and other cold water species has been documented in this reach and high levels of stream embeddedness are suspected as contributing to the impacts. The heavy bedload results in the rapid buildup of gravel bars which also cause ice jamming problems. (DEC/DFWMR, Region 5, June 2009)

Water Quality Sampling

A biological (macroinvertebrate) assessment of North Branch Boquet River in Reber (at Route 68/West Road) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. The sample was dominated by clean-water species and conditions reflected a natural community with minimal, if any, human impacts. Similar results were found at this site in 1998. Aquatic life community is clearly fully supported. (DEC/DOW, BWAM/SBU, January 2009)

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Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Spruce Mill Brook (-10) near Reber. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Cold/Reber Brook (-9), are Class C,C(T) and D. Spruce Mill Brook (-10) and Upper North Branch are listed separately.

North Branch Boquet, Upper, and tribs (1004-0036)

NoKnownImpct

Waterbody Location Information

Revised: 07/21/2009

Water Index No: C- 48- 6
Hydro Unit Code: 02010004/020 **Str Class:** C(T)
Waterbody Type: River (Med. Flow) **Reg/County:** 5/Essex Co. (16)
Waterbody Size: 84.2 Miles **Quad Map:** LEWIS (D-26-B)
Seg Description: stream and tribs above Reber/Spruce Mill Brook

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrology	Threatened	Possible

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: STREAMBANK EROSION

Resolution/Management Information

Issue Resolvability: 8 (No Known Use Impairment)
Verification Status: (Not Applicable for Selected RESOLVABILITY)
Lead Agency/Office: ext/WQCC **Resolution Potential:** n/a
TMDL/303d Status: n/a

Further Details

Water Quality Sampling

A biological (macroinvertebrate) assessment of North Branch Boquet River in Reber (at Route 68/West Road) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. The sample was dominated by clean-water species and conditions reflected a natural community with minimal, if any, human impacts. Similar results were found at this site in 1998. Aquatic life community is clearly fully supported. (DEC/DOW, BWAM/SBU, January 2009)

Habitat Assessment:

Fishery habitat in this reach may experience some impact due to sand and sediment deposition from streambank erosion. Roadway runoff may also be a contributing source. High gradient streams erode streambanks and wash sand and silt into and along streams. The sand and sediment fills in gravel spawning beds, decreasing salmonid spawning success, limiting macroinvertebrate production and increasing winter mortality of fish and invertebrates due to loss of escape cover from the effects of anchor ice. Impacts on natural reproduction of trout and other cold water species have been documented in other reaches in the basin. No such impacts have been documented in this reach, but these impacts are considered a possible threat to fishery habitat. (DEC/DFWMR, Region 5, June 2009)

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Segment Description

This segment includes the portion of the stream and all tribs above Spruce Mill Brook (-10) near Reber. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Church Brook (-13), Hale Brook (-21) and Doyle Brook (-21-1), are Class D. Spruce Mill Brook (-10) and Lower North Branch are listed separately.

Frances Lake (1004-0086)

NoKnownImpct

Waterbody Location Information

Revised: 06/01/2009

Water Index No: C-48-6-9-5-P286
Hydro Unit Code: 02010004/020 **Str Class:** C(T)
Waterbody Type: Lake (Eutrophic) **Drain Basin:** Lake Champlain
Waterbody Size: 30.2 Acres **Reg/County:** 5/Essex Co. (16)
Seg Description: entire lake **Quad Map:** LEWIS (D-26-B)

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

Monitoring of Francis Lake was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational use at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Segment Description

This segment includes the entire area of the lake.

Spruce Mill Brook, Lower, and tribs (1004-0079)

NoKnownImpct

Waterbody Location Information

Revised: 12/20/2000

Water Index No: C- 48- 6-10
Hydro Unit Code: 02010004/020 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 46.6 Miles
Seg Description: stream and tribs from mouth to Lewis water supply

Drain Basin: Lake Champlain
Reg/County: 5/Essex Co. (16)
Quad Map: LEWIS (D-26-B)
AuSable/Boquet

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 Spruce Mill Brook near Reber (at County Route 12) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. The sample was dominated by clean-water species and conditions reflected a natural community with minimal, if any, human impacts. Similar results were found at this site in 1998. Aquatic life community is clearly fully supported. (DEC/DOW, BWAM/SBU, January 2009)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to the Lewis water supply intake above Route 9 in Lewis. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Burpee Brook (-9), and Derby Brook (-11), are also Class C(T). Upper Spruce Mill Brook listed separately.

Spruce Mill Brook, Upper, and tribs (1004-0080)

NoKnownImpct

Waterbody Location Information

Revised: 04/21/2009

Water Index No: C- 48- 6-10
Hydro Unit Code: 02010004/020 **Str Class:** AA(T)
Waterbody Type: River **Reg/County:** 5/Essex Co. (16)
Waterbody Size: 12.9 Miles **Quad Map:** LEWIS (D-26-B)
Seg Description: stream and tribs above Lewis water supply intake

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 Spruce Mill Brook below this segment near Reber (at County Route 12) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. The sample was dominated by clean-water species and conditions reflected a natural community with minimal, if any, human impacts. Similar results were found at this site in 1998. Though this sampling point is below the described segment, it is considered representative of water quality in the upper reach and the aquatic life community is considered to be fully supported. This segment is listed as being evaluated rather than monitored. (DEC/DOW, BWAM/SBU, January 2009)

Segment Description

This segment includes the portion of the stream and all tribs above the Lewis water supply intake above Route 9 in Lewis. The waters of this portion of the stream are Class AA(T). Tribs to this reach/segment are also Class AA(T).

Big Pond (1004-0087)

NoKnownImpct

Waterbody Location Information

Revised: 03/02/2009

Water Index No: C-48-6-10-11-P288
Hydro Unit Code: 02010004/020 **Str Class:** C(T)
Waterbody Type: Lake (Unknown Trophic) **Reg/County:** 5/Essex Co. (16)
Waterbody Size: 52.6 Acres **Quad Map:** LEWIS (D-26-B)
Seg Description: entire lake

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

Monitoring of Big Pond was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational use at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Segment Description

This segment includes the entire area of the lake.

Minor Lake Tribs to Upper North Branch (1004-0088) NoKnownImpct

Waterbody Location Information

Revised: 03/02/2009

Water Index No: C- 48- 6..P289 thru P310
Hydro Unit Code: 02010004/020 **Str Class:** C(T)
Waterbody Type: Lake
Waterbody Size: 94.4 Acres
Seg Description: total area of selected lakes

Drain Basin: Lake Champlain
Reg/County: 5/Essex Co. (16)
Quad Map: LEWIS (D-26-B) ...

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

Monitoring of a number of ponds in this segment was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. Data for Clear Pond (P301) and Trout Pond (P306), as well as some other smaller ponds revealed no indication of impacts to aquatic life support or recreational use at the time.. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Segment Description

This segment includes the total area of all selected/smaller lakes/ponds within the Upper North Branch watershed. Lakes within this segment, including Mud Pond (P289), Lockart Pond (P297), Clear Pond (P301), Lawson Pond (P302), Trout Pond (P306), are primarily Class C(T).

Nichols Pond (1004-0089)

NoKnownImpct

Waterbody Location Information

Revised: 03/02/2009

Water Index No: C- 48-26-32-P314
Hydro Unit Code: 02010004/030 **Str Class:** C(T)
Waterbody Type: Lake (Mesotrophic)
Waterbody Size: 78.4 Acres
Seg Description: entire lake

Drain Basin: Lake Champlain
Reg/County: 5/Essex Co. (16)
Quad Map: ELIZABETHTOWN (E-26-A) ...

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

Monitoring of Nichols Pond was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational use at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Segment Description

This segment includes the total area of Nichols Pond, and smaller Little Nichols Pond (P313).

Lincoln Pond (1004-0090)

Impaired Seg

Waterbody Location Information

Revised: 03/09/2009

Water Index No:	C- 48-26-P315	Drain Basin:	Lake Champlain
Hydro Unit Code:	02010004/030	Str Class:	B(T)
Waterbody Type:	Lake (Mesotrophic)	Reg/County:	AuSable/Boquet
Waterbody Size:	656.1 Acres	Reg/County:	5/Essex Co. (16)
Seg Description:	entire lake	Quad Map:	ELIZABETHTOWN (E-26-A)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: METALS (mercury), PROBLEM SPECIES (Eurasian milfoil)
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)

Known: HABITAT MODIFICATION
Suspected: ATMOSPH. DEPOSITION
Possible: - - -

Resolution/Management Information

Issue Resolvability:	1 (Needs Verification/Study (see STATUS))	Resolution Potential:	Medium
Verification Status:	4 (Source Identified, Strategy Needed)		
Lead Agency/Office:	ext/WQCC		
TMDL/303d Status:	2b,4c (Multiple Segment/Categorical Water, Fish Consumption, more)		

Further Details

Overview

Fish consumption and recreational uses in Lincoln Pond are known to be impaired. The fish consumption impairment is the result of elevated mercury levels attributed to atmospheric deposition. Recreational impairments are attributed to excessive aquatic invasive weed growth.

Fish Consumption

Fish consumption in Lincoln Pond is impaired due to a NYS DOH health advisory that recommends eating no more than one meal per month of larger (over 15 inches) largemouth bass because of elevated mercury levels. The source of mercury is considered to be atmospheric deposition, as there are not other apparent sources in the lake watershed. The advisory for this lake was first issued in 2006-07. (2008-09 NYS DOH Health Advisories and DEC/DFWMR, Habitat, January 2009).

Water Quality Sampling

Lincoln Pond has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1997 and continuing through 2004. An Interpretive Summary report of the findings of this sampling was published in 2005. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive. Phosphorus levels in the lake only rarely exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements greatly exceed the recommended minimum for swimming beaches.

Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is weakly to moderately colored, reflecting the natural conditions in the watershed. But color does not appear to limit water transparency. (DEC/DOW, BWAM/CSLAP, October 2005)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be unfavorable, largely reflecting aquatic weed growth. The recreational suitability of the lake is described most frequently as "slightly" or "substantially" impacted, assessment that are inconsistent with measured water quality characteristics. The lake itself is most often described as having a "definite algal greenness," also inconsistent with measured conditions. Assessments have noted that aquatic plants typically grow to the lake surface and have been cited as causing impacts to recreational uses. There appears to be a mix of non-native (Eurasian watermilfoil, curly-leafed pondweed) and native plants in Lincoln Pond, although it is likely that the plant communities are dominated by the Eurasian watermilfoil. This species was the focus of a herbivorous insect project conducted by Cornell Cooperative Extension and the lake association. Cornell University has also conducted extensive aquatic plant surveys of the lake. (DEC/DOW, BWAM/CSLAP, October 2005)

The Lincoln Pond Association, in cooperation with Cornell University and funding from the Lake Champlain Basin Program, conducted a Eurasian watermilfoil control program that used aquatic moth caterpillars {*Acentria ephemerella*} in the pond. The Lincoln Pond project was conducted between 1999 and 2002. The introduction of the moths did not appear to have significantly increased moth populations in Lincoln Pond or to have produced a significant impact on pond milfoil. Fish predation is thought to hinder the expansion of moths in Lincoln Pond. (Lincoln Pond Association and Cornell Cooperative Extension, January 2003)

Lake Uses

This lake waterbody is designated class B(T), suitable for use as a public bathing beach, general recreation and aquatic life support, but not as a public water supply. Water quality monitoring by NYSDEC focuses primarily on support of general recreation and aquatic life. Samples to evaluate the bacteriological condition and bathing use of the lake or to evaluate contamination from organic compounds, metals or other inorganic pollutants have not been collected as part of the CSLAP monitoring program. Monitoring to assess potable water supply and public bathing use is generally the responsibility of state and/or local health departments.

Section 303(d) Listing

Lincoln Pond is included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a Fish Consumption Water due to the health advisory related to mercury levels. However the Northeast Regional Mercury TMDL which was approved in 2007 provides coverage for waters that are subsequently identified as being impaired by mercury from atmospheric deposition. As a result, NYSDEC anticipates delisting this waterbody when the 2010 Section 303(d) List is issued because of coverage under this TMDL. (DEC/DOW, BWAM, December 2008)

Mill/Russet/Tanaher Ponds (1004-0091)

NoKnownImpct

Waterbody Location Information

Revised: 03/02/2009

Water Index No: C- 48-26..P318,P316,P319
Hydro Unit Code: 02010004/030 **Str Class:** C(T)
Waterbody Type: Lake
Waterbody Size: 88.6 Acres
Seg Description: total area of all three lakes

Drain Basin: Lake Champlain
Reg/County: 5/Essex Co. (16)
Quad Map: ELIZABETHTOWN (E-26-A)

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

Monitoring of these ponds was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. Data for Russet Pond (P316), Murray Pond (P317), Mill Pond (P318) and Tanaher Pond (P319) revealed no indication of impacts to aquatic life support or recreational use at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Segment Description

This segment includes the total area of Russet Pond (P316), Mill Pond (P318) and Tanaher Pond (P319), as well as smaller Murray Pond (P317) and Fifth Pond (P320).

Little Pond (1004-0092)

NoKnownImpct

Waterbody Location Information

Revised: 03/02/2009

Water Index No: C- 48-45-P326
Hydro Unit Code: 02010004/030 **Str Class:** C(T)
Waterbody Type: Lake (Mesotrophic)
Waterbody Size: 28.2 Acres
Seg Description: entire lake

Drain Basin: Lake Champlain
Reg/County: 5/Essex Co. (16)
Quad Map: ELIZABETHTOWN (E-26-A)

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

Monitoring of Little Pond was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational use at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Segment Description

This segment includes the total area of the lake.

Round Pond (1004-0093)

NoKnownImpct

Waterbody Location Information

Revised: 03/02/2009

Water Index No: C- 48-67-3-P329
Hydro Unit Code: 02010004/030 **Str Class:** C(T)
Waterbody Type: Lake (Unknown Trophic) **Reg/County:** 5/Essex Co. (16)
Waterbody Size: 17.7 Acres **Quad Map:** ELIZABETHTOWN (E-26-A)
Seg Description: entire lake

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

Monitoring of Round Pond was included in the Adirondack Lake Survey Corporation (ALSC) lake monitoring and assessment effort conducted in the mid-1980s (1984-86). Generally these were one-time samples analyzed for variety of parameters, including total phosphorus, pH and water color. These data revealed no indication of impacts to aquatic life support or recreational use at the time. Because the data is limited to single samples and collected more than 20 years ago, this assessment is considered to be evaluated, rather than monitored. (DEC, DOW, BWAM/WQAS, January 2009 and ALSC, 1984-86)

Segment Description

This segment includes the total area of Round Pond (P329).