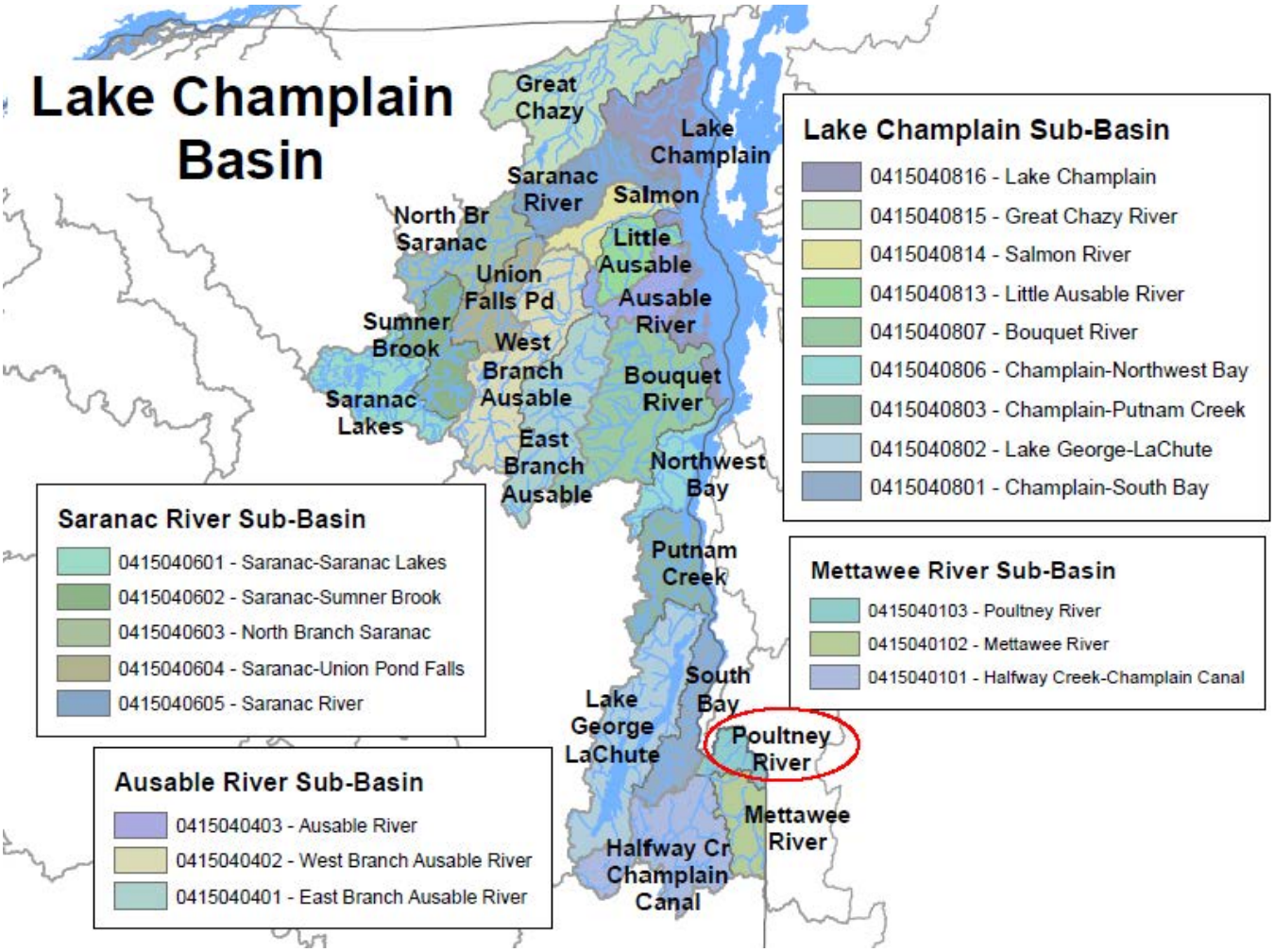

Poultney River
(0415040103)

C-134- 2	Mud Brook and tribs (1005-0035)	**MinorImpact**
C-138	Poultney River, Lower, and tribs(1005-0053)	**ImpairedSeg**
C-138	Poultney River, Upper, and tribs (1005-0054)	**MinorImpacts**

Mud Brook and tribs (1005-0035) MinorImpacts

Waterbody Location Information

Revised: 06/10/2009

Water Index No:	C-134- 2			**Drain Basin:**	Lake Champlain
Hydro Unit Code:	02010001/130	**Str Class:**	D		Champlain-Lk.George
Waterbody Type:	River			**Reg/County:**	5/Washington Co. (58)
Waterbody Size:	16.6 Miles			**Quad Map:**	THORN HILL (G-27-3)
Seg Description:	entire stream and tribs				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: AGRICULTURE, Urban/Storm Runoff
Possible: Streambank 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
Aquatic life support in Mud Creek is thought to experience minor impacts due to nutrient loadings and other contaminants from agricultural activities, urban runoff and other nonpoint sources.

Water Quality Sampling
NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Mud Brook in Whitehall, Washington County, (at Beckwith 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. Biological (macroinvertebrate) sampling results reveal slightly to non-impacted conditions, indicating good water quality. Water column sampling found iron to be a parameter of concern, exceeding its assessment criteria in 4 of 10 samples. However, the median iron concentration for the samples was well below the criterion. Macroinvertebrates collected at this site and chemically analyzed for selected metals and PAHs found chromium, lead and titanium to be present at concentrations above the established guidance values. Sediment screening for acute toxicity indicated possible 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).

A biological (macroinvertebrate) assessment of the stream at this site in 1998 also found slightly impacted water quality. Although the stream was very muddy, the fauna included many mayflies, stoneflies, caddisflies, riffle beetles, and hellgrammites. Impact Source Determination showed high affinities to nutrient enrichment, siltation, and natural conditions. (DEC/DOW, BWAR/SBU, June 1999)

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

Poultney River, Lower, and tribs (1005-0053) Impaired Seg

Waterbody Location Information

Revised: 07/20/2009

Water Index No:	C-138			**Drain Basin:**	Lake Champlain
Hydro Unit Code:	02010001/060	**Str Class:**	C		Champlain-Lk.George
Waterbody Type:	River			**Reg/County:**	5/Washington Co. (58)
Waterbody Size:	8.1 Miles			**Quad Map:**	WHITEHALL (G-27-4) ...
Seg Description:	stream and tribs from mouth at East Bay to Carver Falls				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
FISH CONSUMPTION	Impaired	Known
Recreation	Stressed	Suspected
Habitat/Hydrolgy	Stressed	Known

Type of Pollutant(s)

Known:	METALS (mercury), Nutrients, Silt/Sediment, Problem Species
Suspected:	Thermal Changes
Possible:	Pathogens

Source(s) of Pollutant(s)

Known:	Agriculture, Habitat Modification, Streambank Erosion
Suspected:	ATMOSPH. DEPOSITION
Possible:	- - -

Resolution/Management Information

Issue Resolvability:	3 (Strategy Being Implemented)		
Verification Status:	5 (Management Strategy has been Developed)		
Lead Agency/Office:	ext/Vt	**Resolution Potential:**	Medium
TMDL/303d Status:	4a (TMDL Complete, Being Implemented, Not Listed)		

Further Details

Overview

Fish consumption in the Lower Poultney River is known to be impaired by mercury contamination of walleye. The State of Vermont DEC has a fish consumption advisory in place that results in only partial support of fish consumption. The source of the contamination is thought to be atmospheric deposition. Habitat/hydrologic uses are also known to experience minor impacts due to nutrient enrichment and silt/sedimentation from agricultural runoff and streambank erosion in the watershed. Invasive species are also a concern.

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Poultney River in Hampton Flats, upstream of 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 slightly to non-impacted conditions, indicating 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 this site and chemically analyzed for selected metals and PAHs found chromium to be present at a concentration above the established guidance value. 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. Though this sampling point is above the described segment, it is considered representative of water quality in the lower reach. This segment is listed as being evaluated rather than monitored. (DEC/DOW, BWAM/RIBS, May 2009).

Watershed Management

The Vermont DEC has conducted considerable monitoring and water quality management efforts within the Poultney-Mettawee Watershed. Impacts to habitat along the watershed streams have been noted. Sediment and nutrient enrichment are the major causes of these impacts. Land runoff (from agriculture, roadways, residential and industrial uses), the loss of riparian vegetation, streambank erosion, and municipal wastewater facilities. Thermal modification from the loss of riparian vegetation and pathogens are also of concern. Since 1988, the Poultney-Mettawee Watershed Partnership - a collaboration of state and local agencies, watershed organizations, environmental groups, private interests - has guided the development of a watershed plan and led efforts to implement watershed restoration projects. (Vermont DEC, Poultney-Mettowee Basin Plan, March 2005)

Invasive species are also a concern in this reach of the Poultney River. In addition to Eurasian milfoil and water chesnut, sea lamprey also impact the river. This reach of the Poultney is a significant sea lamprey spawning tributary. A sea lamprey control program was restarted in the river in 2007. The lower reach of the river was designated an Outstanding Resource Water in 1992. (Vermont DEC, June 2009)

Previous Assessment

Concerns were raised during a previous (2000) assessment effort regarding the hydrologic impacts of a Central Vermont Public Service hydropower operation at Carver Falls on habitat and recreational uses in the river. The facility has since been relicensed and is now a run-of-river operation. As a results the previous impacts have been largely addressed. (Vermont DEC, June 2009)

Section 303(d) Listing

Due to the fish consumption advisory the Lower Poultney River was included in the 2006 Section 303(d) List of Impaired Waters, but it is not included on the 2008 List. The waterbody was delisted in 2008 due to the completion of the Northeast Regional Mercury TMDL which was approved in 2007 and provides coverage for this specific waterbody. (DEC/DOW, BWAM, January 2009)

Segment Description

This segment includes the portion of the stream and all tribs (within New York State) from the mouth to Carver Falls. The waters of this portion of the stream are Class C. Tribs to this reach/segment are Class D. Upper Poultney River is listed separately.

Poultney River, Upper, and tribs (1005-0054) MinorImpacts

Waterbody Location Information

Revised: 07/17/2009

Water Index No:	C-138			**Drain Basin:**	Lake Champlain
Hydro Unit Code:	02010001/040	**Str Class:**	C(T)		Champlain-Lk.George
Waterbody Type:	River			**Reg/County:**	5/Washington Co. (58)
Waterbody Size:	32.2 Miles			**Quad Map:**	THORN HILL (G-27-3) ...
Seg Description:	stream and tribs above Carver Falls (within NYS)				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Recreation	Stressed	Suspected
Habitat/Hydrolgy	Stressed	Known

Type of Pollutant(s)

Known: NUTRIENTS, SILT/SEDIMENT
Suspected: Thermal Changes
Possible: Pathogens

Source(s) of Pollutant(s)

Known: AGRICULTURE, STREAMBANK EROSION
Suspected: Roadbank Erosion
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: ext/Vt **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview
Habitat/hydrologic uses in the Poultney River are known to experience minor impacts due to nutrient enrichment and silt/sedimentation from agricultural runoff and streambank erosion in the watershed.

Water Quality Sampling
NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Poultney River in Hampton Flats, Washington County, (at Route 22A) 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 slightly to non-impacted conditions, indicating 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 this site and chemically analyzed for selected metals and PAHs found chromium to be present at a concentration above the established guidance value. 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 Poultney River in Hampton (at Route 22A) was conducted in 1998 and 1999 and found similar results. A biological (macroinvertebrate) assessment of the Poultney in Hampton Flats (at Route 22A) was conducted in 1998. Although the stream bottom was considered poor habitat, the fauna was diverse and well-balanced, with mayflies dominant, resulting in an assessment of non-impacted water quality. This site was assessed as slightly impacted in 1993. (DEC/DOW, BWAR/RIBS, January 2000)

Watershed Management

The Vermont DEC has conducted considerable monitoring and water quality management efforts within the Poultney-Mettawee Watershed. Impacts to habitat along the watershed streams have been noted. Sediment and nutrient enrichment are the major causes of these impacts. Land runoff (from agriculture, roadways, residential and industrial uses), the loss of riparian vegetation, streambank erosion, and municipal wastewater facilities. Thermal modification from the loss of riparian vegetation and pathogens are also of concern. Since 1988, the Poultney-Mettawee Watershed Partnership - a collaboration of state and local agencies, watershed organizations, environmental groups, private interests - has guided the development of a watershed plan and led efforts to implement watershed restoration projects. (Vermont DEC, Poultney-Mettowee Basin Plan, March 2005)

Segment Description

This segment includes the portion of the stream and all tribs (within New York State) above Carver Falls. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are also Class C(T). Lower Poultney River is listed separately.