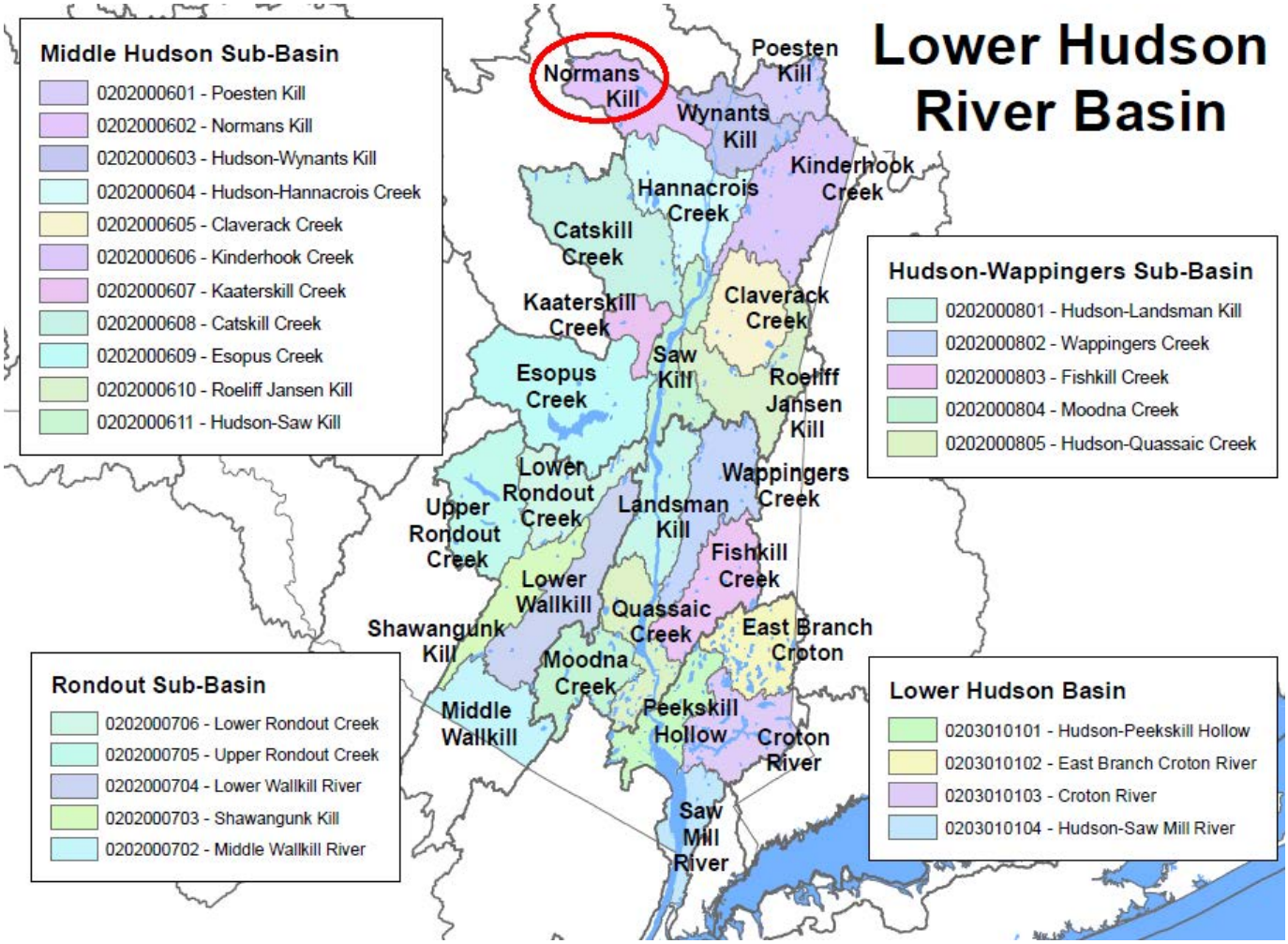

Normanskill (0202000602)

Water Index Number	Waterbody Name	Category
H-221	Island Creek and minor tribs (1311-0020)	UnAssessed
H-221- 4 (portion 1)	Normans Kill, Lower, and minor tribs(1311-0010)	**MinorImpacts**
H-221- 4 (portion 2)	Normans Kill, Middle, and tribs (1311-0002)	**MinorImpacts**
H-221- 4 (portion 3)/P270	Watervliet Reservoir (1311-0001)	**Need Verific**
H-221- 4 (portion 4)	Normans Kill, Upper, and tribs (1311-0018)	UnAssessed
H-221- 4 (portion 5)	Normans Kill, Upper, and tribs (1311-0005)	UnAssessed
H-221- 4- 3	Krum Kill, Upper, and tribs (1311-0004)	**Impaired Seg**
H-221- 4- 7	Vly Creek and tribs (1311-0021)	**MinorImpacts**
H-221- 4- 8-P266	Glass Pond (1311-0003)	**Need Verific**
H-221- 4-270- 1	Bozen Kill and minor tribs (1311-0017)	**MinorImpacts**
H-221- 4-31-P290	Duanesburg Reservoir (1311-0022)	UnAssessed
H-221- 4-35-P292	Delanson Reservoir (1311-0023)	UnAssessed
H-221- 4-P270- 1- 1	Black Creek and tribs (1311-0024)	UnAssessed
H-221- 4-P270- 1- 1- 2-P274	Thompsons Lake (1311-0007)	**NoKnownImpct**
H-221- 4-P270- 1- 8-P276b	Altamont Reservoir (1311-0025)	UnAssessed
H-221- 4-P270- 1- 9-P276a	Duane Lake (1311-0006)	**Impaired Seg**
H-221- 4-P289	Mill Pond (1311-0026)	UnAssessed

Normans Kill, Lower, and minor tribs (1311-0010) MinorImpacts

Waterbody Location Information

Revised: 11/05/2007

Water Index No: H-221- 4 (portion 1)
Drain Basin: Lower Hudson River
Hydro Unit Code: 02020006/030 **Str Class:** C
Middle Hudson River
Waterbody Type: River
Reg/County: 4/Albany Co. (1)
Waterbody Size: 44.7 Miles
Quad Map: ALBANY (K-25-2)
Seg Description: stream and select tribs, from mouth to nr Voorheesville

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: STREAMBANK EROSION, URBAN/STORM RUNOFF
Suspected: Construction (resid/comm development)
Possible: Comb. Sewer Overflow

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 this portion of the Normans Kill is thought to experience minor impacts from silt/sediment and nutrient enrichment. A variety of nonpoint sources contribute to the impacts. Considerable residential and commercial development has occurred in the watershed. Urban runoff and streambank erosion are known, and lawn and golf course runoff are potential sources. The creek runs quite turbid at times.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Normans Kill in Delmar (at Delaware Avenue) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment and siltation are the primary sources of the impacts. Similar results were found in 1997 and 1998 sampling. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Previous Assessment

Results Biological (macroinvertebrate) sampling was conducted along the main stem of the Normans Kill and its larger tributaries in August 1993. Multiple locations exhibited some slight impacts, but the character of the stream (slow moving water, upstream reservoir influences) make rapid biological assessment less reliable. Nonetheless, no

significant water quality problems were noted. Several small municipal WWTPs discharge to the creek and its tribs, and various nonpoint sources may affect the creek. CSO discharges have also been reported by regional staff. The unknown toxic pollutants cited refer to inputs detected in some of the tributaries. (Normans Kill Biological Stream Assessment Report, Bode et al, January 1994)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from the mouth to Vly Creek (-7) near Voorheesville. The waters of this portion of the stream are Class C from the mouth to Route 43 and Class B for the remainder of the reach. Tribs to this reach/segment, including Lower Krum Kill (-3), are Class C,C(T). Upper Krum Kill (-3), Vly Creek (-7) and Middle/Upper Normans Kill are listed separately.

Normans Kill, Middle, and tribs (1311-0002) MinorImpacts

Waterbody Location Information

Revised: 11/05/2007

Water Index No: H-221- 4 (portion 2)
Hydro Unit Code: 02020006/030 **Str Class:** B
Waterbody Type: River
Waterbody Size: 29.5 Miles
Seg Description: stream and tribs, fr nr Voorheesville to reservoir

Drain Basin: Lower Hudson River
Middle Hudson River
Reg/County: 4/Albany Co. (1)
Quad Map: VOORHEESVILLE (K-25-1)

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: SILT/SEDIMENT
Suspected: WATER LEVEL/FLOW, NUTRIENTS
Possible: - - -

Source(s) of Pollutant(s)

Known: HYDRO MODIFICATION, STREAMBANK EROSION, URBAN/STORM RUNOFF
Suspected: Construction
Possible: - - -

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: 4c->n/a

Further Details

Overview

Aquatic life support in this portion of the Normans Kill is thought to experience minor impacts from silt/sediment and nutrient enrichment. A variety of nonpoint sources contribute to the impacts. Considerable residential and commercial development has occurred in the watershed. Urban runoff and streambank erosion are known, and lawn and golf course runoff are potential sources. The creek runs quite turbid at times. Hydrologic impacts related to reservoir releases and the impact on the fishery is also a concern below the Watervliet Reservoir.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Normans Kill in Delmar (at Delaware Avenue) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. Nonpoint source nutrient enrichment and siltation are the primary sources of the impacts. Similar results were found in 1997 and 1998 sampling. Although aquatic life is supported in the stream, nutrient biotic evaluation suggests the level of eutrophication is sufficient to threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Previous Assessment

Results Biological (macroinvertebrate) sampling was conducted along the main stem of the Normans Kill and its larger tributaries in August 1993. Multiple locations exhibited some slight impacts, but the character of the stream (slow moving water, upstream reservoir influences) make rapid biological assessment less reliable. Nonetheless, no

significant water quality problems were noted. Several small municipal WWTPs discharge to the creek and its tribs, and various nonpoint sources may affect the creek. CSO discharges have also been reported by regional staff. The unknown toxic pollutants cited refer to inputs detected in some of the tributaries. (Normans Kill Biological Stream Assessment Report, Bode et al, January 1994)

Hydrologic Impacts Previously DEC Regional staff reported impacts to aquatic life support including fish populations in this portion of the Normans Kill below the Watervliet Reservoir as a result of hydrologic modification. Specifically, no water is released from the reservoir to the creek during dry weather, a regular summertime occurrence, causing the creek to go dry. In light of the increasing growth in the surrounding areas, water demands on the reservoir are expected to increase. (DEC/DOW, Region 4, 1996)

Segment Description
This segment includes the portion of the stream and all tribs from Vly Creek (-7) near Voorheesville to Watervliet Reservoir (P270). The waters of this portion of the stream are Class C from Vly Creek (-7) to Route 43 and Class B for the remainder of the reach. Tribs to this reach/segment, including Hunger Kill (-8), are Class C,C(T). Vly Creek (-7) and Lower/Upper Normans Kill are listed separately.

Watervliet Reservoir (1311-0001) Need Verific

Waterbody Location Information

Revised: 05/28/2008

Water Index No: H-221- 4 (portion 3)/P270
Hydro Unit Code: 02020006/030 **Str Class:** A
Waterbody Type: Lake(R)
Waterbody Size: 383.7 Acres
Seg Description: entire reservoir

Drain Basin: Lower Hudson River
Middle Hudson River
Reg/County: 4/Albany Co. (1)
Quad Map: VOORHEESVILLE (K-25-1)

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: ALGAL/WEED GROWTH (algal blooms, vegetation)
Suspected: - - -
Possible: D.O./Oxygen Demand, Nutrients

Source(s) of Pollutant(s)

Known: - - -
Suspected: HABITAT MODIFICATION
Possible: Agriculture, Construction (resid/comm development)

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 1 (Waterbody Nominated, Problem Not Verified)
Lead Agency/Office: DOW/BWAM **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview

Water supply, aquatic life and recreational uses in Watervliet Reservoir may experience minor impacts due to algal blooms and aquatic weed growth. Due to the lack of any current information, conditions in the lake need to be verified.

Previous Assessment

Various uses of the Watervliet Reservoir, including water supply, recreation, fishery and aesthetics were previously reported to be limited by occasional algal blooms and excessive aquatic weed growth. Water chestnuts proliferated to the point that they needed to be harvested on a regular basis. Low dissolved oxygen and high turbidity that may restrict the fishery were also noted. Suspected sources of nutrient and other pollutant loads included upstream sewage treatment plant discharges from the Village of Altamont and Thatcher State Park plants. Urban runoff from various residential and commercial development projects in the watershed may also affect water quality in the reservoir. Storm sewers in an industrial park discharge into Black Creek (Trib -1-1), a trib to the Bozen Kill and the reservoir. Some agriculture activity still exists in the watershed but it is not extensive. (DEC/DEW, Region 4, 1996)

Source (Drinking) Water Assessment

The Watervliet Reservoir was assessed 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 assessment found substantial potential risks to drinking water quality. Land cover within the assessment area does not increase the susceptibility to contamination. However, the elevated density of sanitary wastewater discharges results in high risks for contamination. There are also noteworthy contamination risks associated with other discrete contaminant sources, such as landfills, transportation routes (roads and rail), industrial parks, and golf courses. This water supply reservoir provides water to the City of Watervliet. (NYSDOH, Source Water Assessment Program, 2005)

Krum Kill, Upper, and tribs (1311-0004) Impaired Seg

Waterbody Location Information

Revised: 11/05/2007

Water Index No:	H-221- 4- 3			**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020006/030	**Str Class:**	A		Middle Hudson River
Waterbody Type:	River			**Reg/County:**	4/Albany Co. (1)
Waterbody Size:	0.4 Miles			**Quad Map:**	ALBANY (K-25-2)
Seg Description:	stream and tribs, above McKnownville				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known:	- - -
Suspected:	UNKNOWN TOXICITY
Possible:	D.O./Oxygen Demand, Nutrients

Source(s) of Pollutant(s)

Known:	URBAN/STORM RUNOFF
Suspected:	COMB. SEWER OVERFLOW
Possible:	Industrial

Resolution/Management Information

Issue Resolvability:	1 (Needs Verification/Study (see STATUS))		
Verification Status:	2 (Problem Verified, Cause Unknown)		
Lead Agency/Office:	DOW/Reg4	**Resolution Potential:**	Medium
TMDL/303d Status:	3a (Waterbody Requiring Verification of Impairment)		

Further Details

Overview

Aquatic life support in Krum Kill is impaired by toxic inputs. The source of these impacts are thought to be municipal/industrial sources and urban runoff. The stream flows through a highly developed urban/commercial area of Albany County.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Krum Kill in Albany (at Russell Road) was conducted in 1997. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated municipal/industrial inputs and urban runoff as likely sources. These results are similar to 1993 sampling findings of the Normanskill Stream Assessment Report (Bode et al, January 1994) which revealed a community dominated by organisms often associated with toxic inputs, and specific conductednce in the stream that was substantially higher than other streams in the area. Although specific sources of the moderate impact could not be determined, regional staff previously reported that a pump station in the vicinity has been known to experience operational problems. Urban runoff from the surrounding area may also contribute to impairment of the creek. (DEC/DOW, BWAM/SBU, January 2005)

Section 303(d) Listing

Krum Kill Creek is currently included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included

on Part 3a of the List as a Water Requiring Verification of Impairment, however this updated assessment suggests that the suspected impairments to water quality and uses are verified and it is recommended that this listing for unknown toxics in the stream be moved to Part 1 of the List, indicating a waterbody with an impairment requiring TMDL development. (DEC/DOW, BWAM/WQAS, May 2008)

Segment Description

This segment includes the portion of the stream and all tribs above/including unnamed pond (P256) in McKnownville. The waters of this portion of the stream are Class A. Tribs to this reach/segment are also Class A. Lower Krum Kill is listed with the Lower Normans Kill segment.

Vly Creek and tribs (1311-0021) MinorImpacts

Waterbody Location Information

Revised: 11/05/2007

Water Index No: H-221- 4- 7
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: C(T)
Waterbody Type: River
Reg/County: 4/Albany Co. (1)
Waterbody Size: 20.4 Miles
Quad Map: VOORHEESVILLE (K-25-1)
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

Type of Pollutant(s)

Known: - - -
Suspected: NUTRIENTS
Possible: D.O./Oxygen Demand

Source(s) of Pollutant(s)

Known: - - -
Suspected: MUNICIPAL (Voorheesville WWTP), Urban/Storm Runoff
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg4
Resolution Potential: Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life support in Vly Creek is thought to experience minor impacts due to nutrient loadings from municipal point sources. Urban runoff and other nonpoint sources likely contribute to impacts as well.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Vly Creek in Voorheesville (near Normanskill Road) was conducted in 1993. Sampling results indicated slightly impacted water quality conditions. The fauna contained mayflies, stoneflies and caddisflies, but was dominated by facultative midges. The stream receives discharge from the Village of Voorheesville WWTP, which is thought to be contributing to these minor impacts. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates the level of eutrophication is sufficient to stress aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Segment Description
This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(T),C(TS). Tribs to this reach/segment are Class C,C(T).

Glass Pond (1311-0003) Need Verific

Waterbody Location Information

Revised: 05/28/2008

Water Index No:	H-221- 4- 8-P266			**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020006/030	**Str Class:**	C(T)		Middle Hudson River
Waterbody Type:	Lake			**Reg/County:**	4/Albany Co. (1)
Waterbody Size:	16.2 Acres			**Quad Map:**	VOORHEESVILLE (K-25-1)
Seg Description:	entire lake				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: SILT/SEDIMENT, Water Level/Flow, Thermal Changes
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: HYDRO MODIFICATION, Construction (resident.develop.)
Possible: Resource Extraction

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 1 (Waterbody Nominated, Problem Not Verified)
Lead Agency/Office: DOW/BWAM **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview

Aquatic life in Glass Pond may experience minor impacts due to siltation and sediment loadings that result in temperature and habitat modifications. Due to the lack of any current information, conditions in the lake need to be verified.

Previous Assessment

In previous assessments aquatic life support in Glass Pond was thought to be limited due to siltation and sediment loads and resulting hydrologic and temperature modification. Land clearing for residential development and roadway construction in the surrounding area were the suspected sources of sediment loads. The pond has become quite shallow and is more supportive of warmwater fish populations. An illegal surface mining operation may also contribute to problems. Further verification and coordination with Mineral Resources is needed. (DEC/DOW, Region 4, December 1997)

Bozen Kill and minor tribs (1311-0017) MinorImpacts

Waterbody Location Information

Revised: 11/05/2007

Water Index No: H-221- 4-270- 1
Hydro Unit Code: 02020006/030 **Str Class:** C
Waterbody Type: River
Waterbody Size: 75.2 Miles
Seg Description: entire stream and select tribs

Drain Basin: Lower Hudson River
Middle Hudson River
Reg/County: 4/Albany Co. (1)
Quad Map: VOORHEESVILLE (K-25-1)

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: - - -
Possible: D.O./Oxygen Demand, Ammonia

Source(s) of Pollutant(s)

Known: - - -
Suspected: MUNICIPAL (Altamont WWTP)
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg4 **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview

Aquatic life support in Bozen Kill are known to experience minor impacts due to nutrient and organic loads believed to be from municipal sources.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Bozen Kill in Altamont (at Route 158) was conducted in 1997. Sampling results indicated slightly impacted water quality conditions. This impacts are likely the result of municipal discharges from the Village of Altamont WWTP. Previous operational problems and ammonia violations led to plant upgrading in 1990. Subsequent biological (macroinvertebrate) sampling in 1993 revealed an enriched stream, but one that was assessed as only slightly impacted. This assessment represented a significant improvement in water quality since the plant upgrade. (DEC/DOW, BWAM/SBU, June 2005)

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 a small portion designated Class A. Black Creek (-1) is listed separately.

Thompsons Lake (1311-0007) NoKnownImpct

Waterbody Location Information

Revised: 04/14/2008

Water Index No: H-221- 4-P270- 1- 1- 2-P274
Hydro Unit Code: 02020006/030 **Str Class:** A(T)
Waterbody Type: Lake
Waterbody Size: 130.9 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Middle Hudson River
Reg/County: 4/Albany Co. (1)
Quad Map: ALTAMONT (K-24-2)

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
Thompson Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1994 and continuing through 2000. An Interpretive Summary report of the findings of this sampling was published in 2001. These data indicate that the lake continues to be best characterized as oligotrophic, or unproductive. These conditions have been relatively stable during the sampling period. Phosphorus levels in the lake do not exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements meet what is recommended for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. (DEC/DOW, BWAM/CSLAP, June 2001)

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 very favorable since the lake was first evaluated and continuing through the most recent assessment. The recreational suitability of the lake is best characterized as good to excellent. The lake itself is most often described as between "crystal clear" and "not quite crystal clear," an assessment that is consistent with the perceived water quality conditions in the lake and its measured water quality characteristics. More recent assessments have noted that aquatic plants grow to the lake surface more frequently than in previous years, although this growth does not appear to impact recreational use. (DEC/DOW, BWAM/CSLAP, June 2001)

Lake Uses

This lake waterbody is designated class A(T), suitable for use as a water supply, public bathing beach, general recreation and aquatic life support. 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. Water from the lake is used as a drinking water supply for Thatcher State Park.

Source (Drinking) Water Assessment

The NYSDOH Source Waters Assessment Program (SWAP) 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 assessment found a moderate susceptibility to contamination for this source of drinking water. The amount of agricultural lands in the assessment area results in elevated potential for protozoa and pesticides contamination. However, there is reason to believe that land cover data may over estimate the percentage of row crops in the assessment area. There is also a high density of sanitary wastewater discharges which results in elevated susceptibility for all contaminate categories. In addition, it is appears that the total amount of wastewater discharged to surface water in this assessment area is high enough to further raise the potential for contamination. This assessment is typical of many water supplies and reflects the need to protect the resource. This water supply reservoir provides water to John Boyd Thatcher State Park (NYSDOH, Source Water Assessment Program, 2005)

Duane Lake (1311-0006) Impaired Seg

Waterbody Location Information

Revised: 04/30/2008

Water Index No: H-221- 4-P270- 1- 9-P276a
Hydro Unit Code: 02020006/030 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 116.8 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Middle Hudson River
Reg/County: 4/Schenectady Co. (47)
Quad Map: ALTAMONT (K-24-2)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Aquatic Life	Stressed	Possible
RECREATION	Impaired	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH (aquatic vegetation), NUTRIENTS (phosphorus)
Suspected: - - -
Possible: D.O./Oxygen Demand

Source(s) of Pollutant(s)

Known: HABITAT MODIFICATION
Suspected: ON-SITE/SEPTIC SYST, URBAN/STORM RUNOFF
Possible: Agriculture

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DEC/Reg4 **Resolution Potential:** Medium
TMDL/303d Status: n/a->1*,4c*

Further Details

Overview

Recreational uses in Duane Lake are considered to be impaired due to aquatic weed and algal growth and low water transparency. Elevated nutrient (phosphorus) loads attributed to nonpoint sources are the primary contributor to these impairments. Previous assessments noted that failing and/or inadequate on-site septic systems serving lake shore homes may be contributing to the water quality problems.

Water Quality Sampling

Duane Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) from 1992 through 2006. An Interpretive Summary report of the findings of this sampling was published in 2007. These data indicate that the lake continues to be best characterized as eutrophic, or highly productive, based on low water transparency, and high nutrient (primarily phosphorus) and algae levels. Phosphorus levels in the lake consistently exceed (and often significantly exceed) the state phosphorus guidance value indicating impacted/ stressed recreational uses. Corresponding transparency measurements occasionally fail to meet what is recommended for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5; occasionally high pH does not appear to impact aquatic life. The lake water is weakly to moderately colored, however color is not thought to influence transparency due to high algae levels. (DEC/DOW, BWAM/CSLAP, October 2007)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This most recent assessment indicates recreational suitability of the lake to be unfavorable. The recreational suitability of the lake is described most frequently as "slightly" to "substantially" impacted for most recreational uses. The lake itself is most often described as "not quite crystal clear" to having "definite algae greenness," an assessment that is consistent with measured water quality characteristics. Assessments have noted that aquatic plants do not typically grow to the lake surface, although this assessment might not reflect impacts from curly-leaf pondweed which usually occurs during the spring. (DEC/DOW, BWAM/CSLAP, January 2006)

Lake Uses

This lake waterbody is designated class B, suitable for use as a public bathing beach, for general recreation and aquatic life support, but not as 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.

Previous Assessment

The recreational uses and aesthetics in Duane Lake are restricted by algal blooms and excessive aquatic vegetation. A suspected source of nutrients feeding the lake include inadequate and/or failing on-site septic systems serving residences along the lake and lawn chemical/fertilizer usage. (DOW/Reg3, June 1999)

Section 303(d) Listing

Duane Lake not is currently included on the NYS 2008 Section 303(d) List of Impaired Waters. However this updated assessment suggests it is appropriate to include this waterbody on the 2010 List. It is recommended that a listing for phosphorus be added to Part 1 of the List, indicating a waterbody with an impairment requiring TMDL development. (DEC/DOW, BWAM/WQAS, May 2008)