



Kinderhook Creek (0202000606)

Water Index Number

H-204
 H-204- 2
 H-204- 2
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 H-204- 2- 7
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 H-204- 2- 7-P24
 H-204- 2- 7-P34
 H-204- 2- 7-P34- 1-P35,P35a
 H-204- 2- 7-P35b
 H-204- 2- 7-P40
 H-204- 2- 9

Waterbody Name

Stockport Creek and minor tribs (1310-0020)
 Kinderhook Creek, Lower, and minor tribs(1310-0021)
 Kinderhook Creek, Middle, and mnr tribs (1310-0017)
 Kinderhook Creek, Upper, and minor tribs (1310-0022)
 Valatie Kill, Lower, and tribs (1310-0023)
 Valatie Kill, Middle, and tribs (1310-0003)
 Valatie Kill, Upper, and tribs (1310-0024)
 Kinderhook Lake (1310-0002)
 Nassau Lake (1310-0001)
 Lyons Pond, Smith Pond (1310-0025)
 Cleveland Pond (1310-0026)
 Pikes/Mud Pond (1310-0027)
 Kline Kill and tribs (1310-0028)

Category

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

H-204- 2- 9- 1-P42	Smith Pond (1310-0009)	Need Verific
H-204- 2- 9- 3-P45	Barrett Pond (1310-0029)	UnAssessed
H-204- 2- 9- 4- 4- 1-P47	Beaver Pond (1310-0030)	UnAssessed
H-204- 2-10	Stony Kill and tribs (1310-0031)	UnAssessed
H-204- 2-10- 2-P52	Southerland Pond (1310-0032)	UnAssessed
H-204- 2-10-P57	Queechy Lake (1310-0033)	NoKnownImpct
H-204- 2-14-P59	Bachus Pond (1310-0034)	UnAssessed
H-204- 2-18	Tackawasic Creek, Lower, and tribs(1310-0035)	NoKnownImpct
H-204- 2-18	Tackawasic Creek, Upper, and tribs(1310-0036)	UnAssessed
H-204- 2-18-P65	Tackawasick Lake (1310-0037)	UnAssessed
H-204- 2-18-P68	Little Bowman Pond (1310-0038)	UnAssessed
H-204- 2-25	Wyomanock Creek and tribs (1310-0039)	NoKnownImpct
H-204- 2-30-P79	Taplin Pond (1310-0040)	UnAssessed
H-204- 2-35-P79a	Stone Bridge Pond (1310-0041)	UnAssessed
H-204- 2-35-P79d	Stump Pond (1310-0042)	UnAssessed
H-204- 2-36	Black River and tribs (1310-0043)	NoKnownImpct
H-204- 2-36- 4- 1-P80	Round Pond (1310-0044)	NoKnownImpct
H-204- 2-36- 4-P81	Spring Lake (1310-0045)	NoKnownImpct
H-204- 2-36-P80b	Black River Pond (1310-0046)	UnAssessed

of the water's aquatic life support and recreational use. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Kinderhook Creek was also conducted in 2002 during the Biological Screening effort in the basin. Sampling results at that time indicated non-impacted water quality conditions. (DEC/DOW, BWAM/RIBS, January 2005)

These results are consistent with findings of a survey of Kinderhook Creek conducted at multiple sites between Rossman and Garfield in 2000. Sampling results presented in the Kinderhook Creek Biological Stream assessment Report (Bode, et al., May 2001) indicated non-impacted water quality conditions at all but the most upstream and downstream sites; however two of the three sites within this downstream reach (at Rossman and Stuyvesant Falls) were found to be slightly impacted. In spite of these minor impacts nutrient biotic indices indicate aquatic life support is fully supported in the stream. (DEC/DOW, BWAM/SBU, June 2005)

Other Issues/Threats

Aquatic life support in this portion of the Kinderhook Creek may be affected by occasional high temperatures. While somewhat higher water temperatures during the summer months are to be expected, the removal of riparian buffer and canopy vegetation along the creek may be exacerbating the problem. Kinderhook Creek is a popular trout water and has been designated a "priority" watershed by the Columbia County WQCC. The county has raised concerns about potential threats from agricultural activity runoff, streambank erosion, subdivision construction/development and road salting/sanding that may also affect aquatic life including the fishery. The county has received funding to conduct Agricultural Environmental Management (AEM) assessments in the watershed and is pursuing funding to form a watershed advisory committee. (Columbia County WQCC, June 1998)

Fishery Assessment Below Valatie the stream is designated as and considered a warmwater fishery and is not generally supportive of trout populations. (DEC/DFWMR, Region 4, November 1999)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from the mouth to Klein Kill (-9) near Valatie. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Brophy Creek (-8), are Class C,C(T). Valatie Kill (-7), Klein Kill (-9) and Middle/Upper Kinderhook Creek are listed separately.

Kinderhook Creek, Middle, and mnr tribs (1310-0017) NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-204- 2
Hydro Unit Code: 02020006/100 **Str Class:** C(T)
Waterbody Type: River **Reg/County:** 4/Columbia Co. (11)
Waterbody Size: 72.0 Miles **Quad Map:** EAST CHATHAM (L-26-2)
Seg Description: stream and select tribs, from nr Valatie to East Nassau

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) survey of Kinderhook Creek at multiple sites between Rossman and Garfield was conducted in 2000. Sampling results presented in the Kinderhook Creek Biological Stream assessment Report (Bode, et al., May 2001) indicated non-impacted water quality conditions at all but the most downstream sites, including the two sites within this reach at Chatham Center and Brainard. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

Other Issues/Threats

Aquatic life support in this portion of the Kinderhook Creek may be affected by occasional high temperatures. While somewhat higher water temperatures during the summer months are to be expected, the removal of riparian buffer and canopy vegetation along the creek may be exacerbating the problem. Kinderhook Creek is a popular trout water and has been designated a "priority" watershed by the Columbia County WQCC. The county has raised concerns about potential threats from agricultural activity runoff, streambank erosion, subdivision construction/development and road salting/sanding that may also affect aquatic life including the fishery. The county has received funding to conduct Agricultural Environmental Management (AEM) assessments in the watershed and is pursuing funding to form a watershed advisory committee. (Columbia County WQCC, June 1998)

Fishery Assessment NYS DEC Fisheries considers the segment to support trout populations and stocks portions of

Kinderhook Creek. Below Valatie the stream is designated as and considered a warmwater fishery and is not generally supportive of trout populations. (DEC/DFWMR, Region 4, November 1999)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from Klein Kill (-9) to Tackawasic Creek (-18) in East Nassau. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Angel Brook (-12) and Green Brook (-15), are Class C,C(T),C(TS). Klein Kill (-9), Stony Kill (-10), Tackawasic Creek (-18) and Lower, Middle Kinderhook Cree are listed separately.

Kinderhook Creek, Upper, and minor tribs (1310-0022) NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-204- 2
Hydro Unit Code: **Str Class:** C(TS)
Waterbody Type: River
Waterbody Size: 150.3 Miles
Seg Description: stream and select tribs, above East Nassau
Drain Basin: Lower Hudson River
Reg/County: 4/Rensselaer Co. (42)
Quad Map: CANAAN (L-27-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

A biological (macroinvertebrate) survey of Kinderhook Creek at multiple sites between Rossman and Garfield was conducted in 2000. Sampling results presented in the Kinderhook Creek Biological Stream assessment Report (Bode, et al., May 2001) indicated non-impacted water quality conditions at all but the most downstream sites, including the two sites within this reach at West Lebanon and Garfield. These upstream sites revealed some indication of nutrient enrichment, but nutrient biotic evaluation determined these effects on the fauna to be minor. Aquatic life support is considered to be fully supported in the stream, and there are no other apparent water quality impacts to designated uses. (DEC/DOW, BWAM/SBU, June 2005)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs above Tackawasic Creek (-18) in East Nassau. The waters of this portion of the stream are Class C(T),C(TS). Tribs to this reach/segment, including Black Brook (-20), Roaring Brook (-35), East Creek (-39), West Brook (Kinderhook Creek is called West Brook above East Creek) and East Brook (-40), are also/primarily Class C,C(T),C(TS). Wyomanock Creek (-25), Black River (-36) and Lower/Middle Kinderhook Creek are listed separately.

Valatie Kill, Middle, and tribs (1310-0003)

Impaired Seg

Waterbody Location Information

Revised: 05/29/2008

Water Index No: H-204- 2- 7
Hydro Unit Code: 02020006/120 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 38.8 Miles
Seg Description: stream and tribs, from Kinderhook Lake to Rosecrans Pk

Drain Basin: Lower Hudson River
Middle Hudson River
Reg/County: 4/Rensselaer Co. (42)
Quad Map: KINDERHOOK (L-26-1)

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: PRIORITY ORGANICS (PCBs)
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)

Known: LANDFILL/LAND DISP. (Dewey Loeffel)
Suspected: Tox/Contam. Sediment
Possible: - - -

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DEC/DER **Resolution Potential:** Medium
TMDL/303d Status: 2b (Multiple Segment/Categorical Water, Fish Consumption)

Further Details

Overview

Fish consumption and recreational uses in this portion of Valatie Kill are considered to be impaired due to PCB contamination from past hazardous waste land disposal.

Fish Consumption Advisories

Fish consumption in this portion of Valatie Kill is impaired due to a NYSDOH health advisory that recommends eating no more than one meal per month of American eel, bluegill and redbreasted sunfish because of elevated PCB levels. The source of contamination has been identified as the Dewey Loeffel hazardous waste disposal site. This advisory applies to the entire segment from Kinderhook Lake to Nassau Lake. The advisory was first issued prior to 1998-99. (2007-08 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2007)

Hazardous Waste Site Impacts

The Dewey Loeffel inactive hazardous waste disposal site (Site No. 4-42-006) has been identified as a source of both surface and groundwater contamination in the Nassau Lake watershed. This industrial waste site was used to dispose of industrial solvents, PCB contaminated oils, paints and other chemicals until it was closed in 1970. Construction of source containment measures were completed in 1984; however PCB contamination in off-site drainage and elevated PCBs in fish from Nassau Lake were subsequently identified. Elevated levels of trichloroethene, methyl chloride and

benzene were also reported in the groundwater near the site in 1993. Numerous investigations have been completed to date. These include an engineering evaluation followed by design and construction of a slurry wall and containment cell cap to address contaminant source controls within the landfill; RI/FS documents and Record of Decision (ROD) dated January 2001 addressing groundwater contamination and enhanced source controls; and RI/FS documents and ROD dated January 2002 addressing surface water PCB-contamination that has impacted water, sediment and biota in the Nassau Lake drainage basin. Construction of a replacement Nassau Lake dam and pumping from the off-site groundwater plume began in early 2008. Currently, the design to address the groundwater contamination (OU2) is underway and is expected to be completed in 2008. Locations with elevated PCB-contamination in the drainage basin has been mitigated. Long term site management continues and includes continued pump out and off-site disposal of leachate collected from the containment cell, groundwater monitoring to assess containment cell integrity and tracking of the off-site groundwater plume and surface water drainage basin monitoring. Fish sampling continue to show elevated levels of PCBs, resulting in the NYSDOH advisory. However, levels of PCB in sediment are low and recreational use of the lake is not restricted. (DEC/DER, Environmental Site Remediation Database, 2008)

Section 303(d) Listing

This portion of Valatie Kill 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. This waterbody was first listed prior to the 2002 Section 303(d) List. (DEC/DOW, BWAM, May 2008)

Segment Description

This segment includes the portion of the stream and all tribs from Kinderhook Lake (P24) to Nassau Lake (P34) in Rosecrans Park. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C. Lower/Upper Valatie Kill are listed separately.

to date. These include an engineering evaluation followed by design and construction of a slurry wall and containment cell cap to address contaminant source controls within the landfill; RI/FS documents and Record of Decision (ROD) dated January 2001 addressing groundwater contamination and enhanced source controls; and RI/FS documents and ROD dated January 2002 addressing surface water PCB-contamination that has impacted water, sediment and biota in the Nassau Lake drainage basin. Construction of a replacement Nassau Lake dam and pumping from the off-site groundwater plume began in early 2008. Currently, the design to address the groundwater contamination (OU2) is underway and is expected to be completed in 2008. Locations with elevated PCB-contamination in the drainage basin has been mitigated. Long term site management continues and includes continued pump out and off-site disposal of leachate collected from the containment cell, groundwater monitoring to assess containment cell integrity and tracking of the off-site groundwater plume and surface water drainage basin monitoring. Fish sampling continue to show elevated levels of PCBs, resulting in the NYSDOH advisory. However, levels of PCB in sediment are low and recreational use of the lake is not restricted. (DEC/DER, Environmental Site Remediation Database, 2008)

Water Quality Sampling

A biological (macroinvertebrate) assessment of this portion of Valatie Kill in Nassau (at Mead Road) was conducted in 1997. Sampling results indicated non-impacted water quality conditions. The fauna was dominated by caddisflies and mayflies were sparse, but most indices were favorable. (DEC/DOW, BWAM/SBU, June 2005)

Section 303(d) Listing

This portion of Valatie Kill is not 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 next (2010) List. It is recommended that a listing for PCBs be added to Part 2b (Fish Consumption Waters) of the List. (DEC/DOW, BWAM, May 2008)

Segment Description

This segment includes the portion of the stream and all tribs above Nassau Lake, including unnamed tribs (-1) to Nassau Lake. The waters of this portion of the stream are Class C(T),C. Tribs to this reach/segment are Class C. Lower/Middle Valatie Kill are listed separately.

Kinderhook Lake (1310-0002)

Impaired Seg

Waterbody Location Information

Revised: 05/01/2008

Water Index No: H-204- 2- 7-P24
Hydro Unit Code: 02020006/120 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 344.6 Acres
Seg Description: entire lake
Drain Basin: Lower Hudson River
Reg/County: 4/Columbia Co. (11)
Quad Map: KINDERHOOK (L-26-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: ON-SITE/SEPTIC SYST, TOX/CONTAM. SEDIMENT, Agriculture, Landfill/Land Disp. (Dewey Loeffel), 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: DEC/DER
TMDL/303d Status: 1,2b (Individual Waterbody Impairment Requiring a TMDL, more)
Resolution Potential: Medium

Further Details

Overview

Fish consumption and recreational uses in Kinderhook Lake are considered to be impaired due to PCB contamination and aquatic weed and algal growth and low water transparency. A fish consumption advisory has been issued for the lake due to impacts from past land disposal. Elevated nutrient (phosphorus) loads attributed to nonpoint sources are considered the primary contributors to the recreational and aesthetic impacts. Previous assessments noted that failing and/or inadequate on-site septic systems serving lake shore homes as well as agricultural nonpoint sources may be contributing to the water quality problems.

Fish Consumption Advisories

Fish consumption in Kinderhook Lake is impaired due to a NYSDOH health advisory that recommends eating no more than one meal per month of American eel because of elevated PCB levels. This advisory was first issued prior to 1998-99. (2006-07 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2006)

Hazardous Waste Site Impacts The Dewey Loeffel Inactive Hazardous Waste Disposal site (Site No. 4-42-006) located

along Nassau Lake just upstream has been identified as the source of PCB contamination in Kinderhook Lake. This industrial waste site was used to dispose of industrial solvents, PCB contaminated oils, paints and other chemicals until it was closed in 1970. Construction of source containment measures were completed in 1984; however PCB contamination in off-site drainage and elevated PCBs in fish from Nassau Lake were subsequently identified. Fish sampling continue to show elevated levels of PCBs, resulting in the NYSDOH advisory. However, levels of PCB in sediment are low and recreational use of the lake is not restricted. See also the listing for Nassau Lake. (DEC/DER, Environmental Site Remediation Database, 2008)

Water Quality Sampling

Kinderhook Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) from 1996 through 2001. An Interpretive Summary report of the findings of this sampling was published in 2002. 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 regularly 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. (DEC/DOW, BWAM/CSLAP, November 2002)

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 fairly favorable. The recreational suitability of the lake is described most frequently as "excellent" or "slightly" impacted for most recreational uses, and assessment the is inconsistent with measured water quality conditions and suggesting the reduced water quality is perceived as normal. The lake itself is most often described as having "definite algae greenness." Assessments have noted that aquatic plants occasionally grow to the lake surface and are not thought to significantly impact recreation. (DEC/DOW, BWAM/CSLAP, November 2002)

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 public bathing use is generally the responsibility of state and/or local health departments.

Section 303(d) Listing

Kinderhook Lake is currently included on the NYS 2008 Section 303(d) List of Impaired Waters; it is included on Part 1 of the List as a waterbody with Impairment Requiring TMDL Development due to phosphorus and on Part 2b of the List as a Fish Consumption Water. (DEC/DOW, BWAM/WQAS, May 2008)

Nassau Lake (1310-0001)

Impaired Seg

Waterbody Location Information

Revised: 04/30/2008

Water Index No: H-204- 2- 7-P34
Hydro Unit Code: 02020006/120 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 171.7 Acres
Seg Description: entire lake
Drain Basin: Lower Hudson River
Reg/County: 4/Rensselaer Co. (42)
Quad Map: NASSAU (K-26-3)

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

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

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH (algal blooms, vegetation), NUTRIENTS (phosphorus), PRIORITY ORGANICS (PCBs)
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)

Known: HABITAT MODIFICATION, LANDFILL/LAND DISP. (Dewey Loeffel), TOX/CONTAM. SEDIMENT
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/DER
TMDL/303d Status: 1*,2b,4c* **Resolution Potential:** Medium

Further Details

Overview

Fish consumption and recreational uses in Nassau Lake are considered to be impaired due to PCB contamination and aquatic weed and algal growth and low water transparency. A fish consumption advisory has been issued for the lake due to impacts from past land disposal. Elevated nutrient (phosphorus) loads attributed to nonpoint sources are considered the primary contributors to the recreational and aesthetic impacts. Previous assessments noted that failing and/or inadequate on-site septic systems serving lake shore homes as well as agricultural nonpoint sources may be contributing to the water quality problems.

Fish Consumption Advisories

Fish consumption in Nassau Lake is impaired due to a NYSDOH health advisory that recommends eating no fish (all species) because of elevated PCB levels. This advisory was first issued prior to 1998-99. (2006-07 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2006)

Hazardous Waste Site Impacts The Dewey Loeffel Inactive Hazardous Waste Disposal site (Site No. 4-42-006) has been identified as a source of both surface and groundwater contamination in the Nassau Lake watershed. This industrial waste site was used to dispose of industrial solvents, PCB contaminated oils, paints and other chemicals until it was closed in 1970. Construction of source containment measures were completed in 1984; however PCB contamination in off-site drainage and elevated PCBs in fish from Nassau Lake were subsequently identified. Elevated levels of trichloroethene, methyl chloride and benzene were also reported in the groundwater near the site in 1993. Numerous investigations have been completed to date. These include an engineering evaluation followed by design and construction of a slurry wall and containment cell cap to address contaminant source controls within the landfill; RI/FS documents and Record of Decision (ROD) dated January 2001 addressing groundwater contamination and enhanced source controls; and RI/FS documents and ROD dated January 2002 addressing surface water PCB-contamination that has impacted water, sediment and biota in the Nassau Lake drainage basin. Construction of a replacement Nassau Lake dam and pumping from the off-site groundwater plume began in early 2008. Currently, the design to address the groundwater contamination (OU2) is underway and is expected to be completed in 2008. Locations with elevated PCB-contamination in the drainage basin has been mitigated. Long term site management continues and includes continued pump out and off-site disposal of leachate collected from the containment cell, groundwater monitoring to assess containment cell integrity and tracking of the off-site groundwater plume and surface water drainage basin monitoring. Fish sampling continue to show elevated levels of PCBs, resulting in the NYSDOH advisory. However, levels of PCB in sediment are low and recreational use of the lake is not restricted. (DEC/DER, Environmental Site Remediation Database, 2008)

Water Quality Sampling

Nassau Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) from 1982 through 1990, and from 1996 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 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 typically 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. (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 most recent assessment indicates recreational suitability of the lake to be fairly favorable. The recreational suitability of the lake is described most frequently as "excellent" for most recreational uses. The lake itself is most often described as "not quite crystal clear" to having "definite algae greenness." These assessments are higher than expected based on measured water quality characteristics. Assessments have noted that aquatic plants do not typically grow to the lake surface and are not thought to significantly impact recreation. (DEC/DOW, BWAM/CSLAP, June 2001)

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.

Section 303(d) Listing

Nassau Lake is currently included on the NYS 2008 Section 303(d) List of Impaired Waters; it is included on Part 2b of the List as a Fish Consumption Water. This updated assessment suggests it is appropriate to also include this waterbody on the 2010 List due to impairments to recreation from nutrients in the lake. 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)

Kline Kill and tribs (1310-0028)

NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-204- 2- 9
Hydro Unit Code: **Str Class:** C(TS)
Waterbody Type: River
Waterbody Size: 67.9 Miles
Seg Description: entire stream and tribs
Drain Basin: Lower Hudson River
Reg/County: 4/Columbia Co. (11)
Quad Map: KINDERHOOK (L-26-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

A biological (macroinvertebrate) assessment of Kline Kill in Chatham (at Merwin Road) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. The fauna was diverse and all screening criteria for waters having no known impacts were met. (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(TS). Tribs to this reach/segment, including Indian Creek (-3) and Punsit Creek (-4), are Class C,C(T),C(TS).

Smith Pond (1310-0009)

Need Verific

Waterbody Location Information

Revised: 07/11/2008

Water Index No: H-204- 2- 9- 1-P42
Hydro Unit Code: 02020006/120 **Str Class:** C
Waterbody Type: Lake
Waterbody Size: 26.9 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Middle Hudson River
Reg/County: 4/Columbia Co. (11)
Quad Map: CHATHAM (L-26-3)

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

Use(s) Impacted	Severity	Problem Documentation
Recreation	Stressed	Possible

Type of Pollutant(s)

Known: ---
Suspected: ALGAL/WEED GROWTH
Possible: Nutrients, Salts, Silt/Sediment

Source(s) of Pollutant(s)

Known: ---
Suspected: URBAN/STORM RUNOFF
Possible: On-Site/Septic Syst

Resolution/Management Information

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

Resolution Potential: Medium

Further Details

Overview

Recreational uses in Smith Pond may experience minor impacts/threats due to excessive aquatic vegetation and/or algal growth. This assessment is based on previously reported concerns and conditions in the lake need to be verified.

Previous Assessment

Aesthetics in the lake were reported as being affected by excessive aquatic weed growth and odors. Storm sewers in the Village of Chatham that contributing floatables, silt/sediment, nutrients and various other pollutants to the pond were cited as the suspected source. (Columbia County SWCD, 1996)

Queechy Lake (1310-0033)

NoKnownImpct

Waterbody Location Information

Revised: 04/16/2008

Water Index No: H-204- 2-10-P57 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** B(T)
Waterbody Type: Lake **Reg/County:** 4/Columbia Co. (11)
Waterbody Size: 137.2 Acres **Quad Map:** CANAAN (L-27-1)
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

Queechy Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1988 and most recently in 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 mesoligotrophic, or moderately unproductive. The most recent data (2006) suggest conditions typical of an oligotrophic or unproductive lake. Phosphorus levels in the lake are significantly below the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements that greatly exceed the recommended minimum for swimming beaches. Measurements of pH are typically high relative to the state water quality range of 6.5 to 8.5, but this does not result in ecological impacts. The lake water is moderately to weakly colored, but color does not limit water transparency. (DEC/DOW, BWAM/CSLAP, April 2007)

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 described most frequently as "could not be nicer" to "excellent." The lake itself is most often described as "crystal clear" to "not quite crystal clear," an assessment that is consistent with the perceived water quality conditions in the lake and its measured water quality characteristics. Assessments have noted that aquatic plants rarely grows to the lake surface. (DEC/DOW, BWAM/CSLAP, April 2007)

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 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.

Tackawasic Creek, Lower, and tribs (1310-0035)

NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-204- 2-18 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** B(T)
Waterbody Type: River **Reg/County:** 4/Rensselaer Co. (42)
Waterbody Size: 1.5 Miles **Quad Map:** NASSAU (K-26-3)
Seg Description: stream and tribs, from mouth to Tackawasic 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

A biological (macroinvertebrate) assessment of Tackawasick Creek in Hoags Corners (at Route 21) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. The fauna was diverse and all screening criteria for waters having no known impacts were met. (DEC/DOW, BWAM/SBU, June 2005)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Tackawasic Lake (P65). The waters of this portion of the stream are Class B(T). Tribs to this reach/segment are Class C. Upper Tackawasic Creek is listed separately.

Wyomanock Creek and tribs (1310-0039)

NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-204- 2-25 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** C(TS)
Waterbody Type: River **Reg/County:** 4/Columbia Co. (11)
Waterbody Size: 47.6 Miles **Quad Map:** CANAAN (L-27-1)
Seg Description: entire stream and tribs, within NYS

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 Wyomanock Creek in West Lebanon (at Adamas Crossing Road) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. The fauna was diverse and all screening criteria for waters having no known impacts were met. (DEC/DOW, BWAM/SBU, June 2005)

Segment Description

This segment includes the entire stream and all tribs, within NYS. The waters of the stream are Class C(TS). Tribs to this reach/segment, including South Branch/Shaker Brook (-3), are Class C,C(T),C(TS).

Black River and tribs (1310-0043)

NoKnownImpct

Waterbody Location Information

Revised: 11/06/2007

Water Index No: H-204- 2-36 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** C(TS)
Waterbody Type: River **Reg/County:** 4/Rensselaer Co. (42)
Waterbody Size: 22.6 Miles **Quad Map:** STEPHENTOWN CENTER (K-27-4)
Seg Description: entire stream and tribs

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 Black River near Garfield (at Route 28) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. The fauna was diverse and all screening criteria for waters having no known impacts were met. (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(TS),C(T). Tribs to this reach/segment are Class C,C(T).

occasionally grow to the lake surface, but do not impact recreational uses. (DEC/DOW, BWAM/CSLAP, March 2008)

Lake Uses

This lake waterbody is designated class A, 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.

Lake Uses

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