Waterbody Inventory
for
Hudson-Wappingers River Watershed

Water Index Number	Waterbody Segment	Category
Lower Hudson, Main Stem, Bear Mountain Bridge to Rondout River		
H (portion 3)	Hudson River (Class B) (1301-0003)	**Impaired Seg**
H (portion 4a)	Hudson River (Class A) (1301-0001)	**Impaired Seg**
Tribs to Lower Hudson, Bear Mountain Bridge to Moodna Creek		
H- 61	Popolopen Creek and tribs (1301-0160)	**Need Verific**
H- 61- 2-P184b thru j	Queensboro Lk, Turkey Hill Pd, others (1301-0056)	**Need Verific**
H- 61- 5-P185	Cranberry Pond (1301-0161)	UnAssessed
H- 61- 6-P186	Long Pond (1301-0162)	UnAssessed
H- 61- 6-P187	Round Pond (1301-0163)	UnAssessed
H- 61-P188- 2-P191	Popolopen Lake (1301-0164)	UnAssessed
H- 61-P188- 2-P191..P192 thru P193	Bull Pond, Barnes Lake, Summit Lake (1301-0165)	UnAssessed
H- 61..P187a,P188	Stillwell Lake, Mine Lake (1301-0166)	**NoKnownImpct**
H- 61..P188..P188a/b,P189,P190	Lk Massawippa, Lk Teata, Low/Up Twin Lks (1301-0167)	UnAssessed
H- 62 thru 92, EOH (selected)	Minor Tribs to East of Hudson (1301-0168)	**MinorImpacts**
H- 63 thru 88, WOH (selected)	Minor Tribs to West of Hudson (1301-0169)	UnAssessed
H- 63-P193a	Brooks Lake (1301-0170)	UnAssessed
H- 67-P197,P197b	Cragson Lake, Crystal Lake (1301-0171)	UnAssessed
H- 71	Highland Brook and tribs (1301-0172)	**MinorImpacts**
H- 71..P200,P199b	Bog Meadow Pond, Jims Pond (1301-0173)	UnAssessed
H- 74-P204	Lusk Reservoir (1301-0174)	UnAssessed
H- 77	Indian Brook and tribs (1301-0175)	UnAssessed
H- 77-P206, P207a,P207b,P207c	Laths Pd, Loch Lyall, Catfish, Duck Pds (1301-0176)	UnAssessed
H- 83	Foundry Brook and tribs (1301-0177)	**NoKnownImpct**
H- 83- 3-P216	Jaycox Pond (1301-0178)	UnAssessed
H- 83-P217,P218	Cold Spring Reservoirs (1301-0179)	UnAssessed
H- 86-P220	Lake Surprise (1301-0180)	UnAssessed
H- 88- 4-P222d thru g	Arthurs, Sphagnum, Tamarack Ponds and... (1301-0181)	UnAssessed
H- 88-P223	Upper Reservoir (1301-0182)	UnAssessed
Moodna Creek Watershed		
H- 89	Moodna Creek, Lower, and minor tribs (1303-0010)	**NoKnownImpct**
H- 89	Moodna Creek, Upper, and minor tribs (1303-0011)	**MinorImpacts**
H- 89- 2-P225	Lake Washington (1303-0012)	**NoKnownImpct**
H- 89- 2-P226a	Browns Pond Reservoir (1303-0013)	**NoKnownImpct**
H- 89- 7	Woodbury Creek and tribs (1303-0014)	**MinorImpacts**
H- 89- 7- 4-P228	Sutherland Pond (1303-0015)	UnAssessed
H- 89- 7- 6-P229a	Earl Reservoir (1303-0016)	UnAssessed
H- 89- 7- 7- 2-P231	Cromwell Lake (1303-0017)	UnAssessed
H- 89- 7- 7-P231a,P231b	Shadow Lake, Hillside Lake (1303-0018)	UnAssessed

...Hudson-Wappingers River Watershed

Water Index Number	Waterbody Segment	Category
Moodna Creek Watershed (con't)		
H- 89- 7-10-P231f	Lake Frederick (1303-0019)	UnAssessed
H- 89- 7-P232	Peckermans Pond (1303-0020)	UnAssessed
H- 89-12-P234	Beaver Dam Lake (1303-0021)	UnAssessed
H- 89-12-P234..P234g	Crest View Lake (1303-0022)	UnAssessed
H- 89-17-P239d	Orange Rockland Lake (1303-0023)	UnAssessed
H- 89-19-10-P257	Walton Lake (1303-0004)	**Need Verific**
H- 89-19-P240d	Tomahawk Lake (1303-0024)	UnAssessed
H- 89-20	Otter Kill/Black Meadow Creek and tribs (1303-0025)	**Threatened**
H- 89-20-17-P304b	Goshen Reservoir (1303-0026)	UnAssessed
H- 89-20-P260	Browns Pond (1303-0027)	UnAssessed
Tribs to Lower Hudson, Moodna Creek to Fishkill Creek		
H- 92-P331	Melzing Reservoir (1301-0183)	UnAssessed
H- 94	Quassaic Creek, Lower, and minor tribs (1301-0079)	**MinorImpacts**
H- 94	Quassaic Creek, Middle, and tribs (1301-0184)	UnAssessed
H- 94	Quassaic Creek, Upper, and tribs (1301-0185)	UnAssessed
H- 94- 3-P337	Crystal Lake (1301-0186)	UnAssessed
H- 94- 4	Gidneytown Creek and tribs (1301-0187)	UnAssessed
H- 94- 6-P340	Orange Lake (1301-0008)	**Impaired Seg**
H- 94- P333	Muchattoes Lake (1301-0188)	UnAssessed
H- 94-P338b	Glenwood Lake (1301-0189)	UnAssessed
H- 94-P341a	Chadwick Lake (1301-0190)	**NoKnownImpct**
Fishkill Creek Watershed		
H- 95	Fishkill Creek, Lower, and tribs (1304-0003)	**MinorImpacts**
H- 95	Fishkill Creek, Middle, and minor tribs (1304-0010)	UnAssessed
H- 95	Fishkill Creek, Upper, and minor tribs (1304-0011)	UnAssessed
H- 95- 2	Dry Brook, Upper, and tribs (1304-0012)	UnAssessed
H- 95- 2-P345	Beacon Reservoir (1304-0013)	UnAssessed
H- 95- 5	Clove Creek and tribs (1304-0014)	**NoKnownImpct**
H- 95- 5- 2	Hell Hollow Creek, Upper, and tribs (1304-0015)	UnAssessed
H- 95- 5- 2-P345k	Lake Valhalla (1304-0016)	UnAssessed
H- 95- 5- 3-P345a	Beacon/Cargill Reservoir (1304-0017)	UnAssessed
H- 95- 5- 3a-P345i	Barrett Pond (1304-0018)	UnAssessed
H- 95- 5- 6-P345cc	Jordan Pond (1304-0019)	UnAssessed
H- 95- 5c..P345kkk,P345lll	Brickerhoff Pond, Sharp Reservoir (1304-0020)	UnAssessed
H- 95-10	Sprout Creek, Lower, and tribs (1304-0021)	**NoKnownImpct**
H- 95-10	Sprout Creek, Upper, and tribs (1304-0022)	**NoKnownImpct**
H- 95-10- 1b-P345g	Hillside Lake (1304-0001)	**Impaired Seg**
H- 95-10- 2	Jackson Creek and tribs (1304-0023)	**NoKnownImpct**
H- 95-10-10-P348o	Tyrell Lake (1304-0024)	UnAssessed
H- 95-11a-P345y	Lake Walton (1304-0025)	UnAssessed
H- 95-12a-P349	Penneywater Pond (1304-0026)	UnAssessed
H- 95-13	Wickopee Creek/Shenendoah Brook and trib (1304-0027)	UnAssessed
H- 95-14	Sylvan Lake Outlet and tribs (1304-0028)	UnAssessed

...Hudson-Wappingers River Watershed

Water Index Number	Waterbody Segment	Category
Fishkill Creek Watershed (con't)		
H- 95-14-P354	Sylvan Lake (1304-0029)	MinorImpacts
H- 95-19	Whaley Lake Brook and tribs (1304-0030)	NoKnownImpct
H- 95-19- 3	Gardner Hollow Brook, Upper, and tribs (1304-0031)	UnAssessed
H- 95-19- 4- 4a-P351n	Nuclear Lake (1304-0032)	UnAssessed
H- 95-19-P353,P354	Whaley Lake, Little Whaley Lake (1304-0033)	NoKnownImpct
H- 95-P356,P357,P358a,P359	Furnace, McKinney, Christie, Pray Ponds (1304-0034)	UnAssessed
Tribs to Lower Hudson, Fishkill Creek to Wappingers Creek		
H- 96 thru 100, WOH (selected)	Minor Tribs to West of Hudson (1301-0191)	UnAssessed
H- 98 thru 99, EOH (selected)	Minor Tribs to East of Hudson (1301-0192)	UnAssessed
Wappingers Creek Watershed		
H-101 (portion 1)	Wappingers Cr, Lower, and minor tribs (1305-0012)	UnAssessed
H-101 (portion 2)/P365	Wappingers Lake (1305-0001)	Impaired Seg
H-101 (portion 3)	Wappingers Cr, Middle, and minor tribs (1305-0013)	Need Verific
H-101 (portion 4)	Wappingers Cr, Middle, and minor tribs (1305-0014)	NoKnownImpct
H-101 (portion 5)	Wappingers Cr, Upper, and tribs (1305-0011)	NoKnownImpct
H-101- 1- 1a	Unnamed Trib to Hughsonville Cr (1305-0015)	UnAssessed
H-101- 4	Unnamed Trib to Wappingers Cr and tribs (1305-0016)	UnAssessed
H-101- 4- 2- 1-P366b	Lake Oniad (1305-0017)	UnAssessed
H-101-11	Unnamed Trib to Wappingers Cr and tribs (1305-0018)	UnAssessed
H-101-12	Great Spring Brook and tribs (1305-0030)	NoKnownImpct
H-101-18	Little Wappingers Cr, Lower, and tribs (1305-0019)	NoKnownImpct
H-101-18	Little Wappingers Cr, Upper, and tribs (1305-0020)	UnAssessed
H-101-18-11-P375	Long Pond (1305-0003)	Need Verific
H-101-18-13-P378	Silver Lake (1305-0002)	Need Verific
H-101-18-13-P378- 1-P379	Mud Pond (1305-0021)	UnAssessed
H-101-20-P384	Upton Lake (1305-0005)	Need Verific
H-101-21	East Br Wappingers Cr, Lower, and tribs (1305-0022)	UnAssessed
H-101-21	East Br Wappingers Cr, Upper, and tribs (1305-0023)	UnAssessed
H-101-21- 7-P395	Round Pond (1305-0024)	UnAssessed
H-101-21-P390	Dieterich Pond (1305-0025)	UnAssessed
H-101-21-P396	Shaw Pond (1305-0026)	UnAssessed
H-101-30..P401,P403	Ryder Pond, Hunns Lake (1305-0004)	Need Verific
H-101-31- 4- 2-P405	Miller Pond (1305-0027)	UnAssessed
H-101-38-P407	Halcyon Pond (1305-0028)	UnAssessed
H-101-P408,P409,P410	Thompson, Stissing, Mud/Twin Isl Ponds (1305-0010)	Need Verific
Tribs to Lower Hudson, Wappingers Creek to Rondout River		
H-103	Lattintown Creek and tribs (1301-0193)	NoKnownImpct
H-104 thru 125, WOH (selected)	Minor Tribs to West of Hudson (1301-0194)	UnAssessed
H-105	Casper Creek and tribs (1301-0195)	MinorImpacts
H-105-P415c	Cobalt Lake (1301-0196)	UnAssessed
H-105a thru 140, EOH (selected)	Minor Tribs to East of Hudson (1301-0197)	UnAssessed

...Hudson-Wappingers River Watershed

Water Index Number	Waterbody Segment	Category
Tribs to Lower Hudson, Wappingers Creek to Rondout River (con't)		
H-114	Fall Kill and tribs (1301-0087)	**Impaired Seg**
H-114..P418	Morgan Lake (1301-0198)	UnAssessed
H-116	Twaalfskill Creek and tribs (1301-0199)	**MinorImpacts**
H-124	Crum Elbow Creek and tribs (1301-0200)	**NoKnownImpct**
H-124-P425,P426	Staatsburg Reservoir, Browns Pond (1301-0201)	UnAssessed
H-128	Black Creek, Lower, and tribs (1301-0202)	**NoKnownImpct**
H-128	Black Creek, Middle, and tribs (1301-0203)	UnAssessed
H-128	Black Creek, Upper, and tribs (1301-0204)	UnAssessed
H-128- 2-P433,P434	Mirror Lake, Esopus Lake (1301-0205)	UnAssessed
H-128- 4-P436	Lily Pond (1301-0206)	UnAssessed
H-128- 4-P436b	Marx Pond (1301-0207)	UnAssessed
H-128-P437	Chodikee Pond (1301-0208)	**Impaired Seg**
H-136	Landsman Kill and minor tribs (1301-0209)	**MinorImpacts**
H-136- 6	Rhinebeck Kill and tribs (1301-0210)	**MinorImpacts**
H-136-P446	Round Pond (1301-0211)	UnAssessed

Hudson River (Class B) (1301-0003) Impaired Seg

Waterbody Location Information

Revised: 06/30/2008

Water Index No:	H (portion 3)			**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020008/	**Str Class:**	B		Low Hudson-Wappinger
Waterbody Type:	Estuary			**Reg/County:**	3/Orange Co. (36)
Waterbody Size:	8910.0 Acres			**Quad Map:**	WEST POINT (P-25-1)
Seg Description:	from Bear Mountain Bridge to Roseton/Chelsea				

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: METALS (cadmium), PRIORITY ORGANICS (PCBs)
Suspected: Pathogens, Problem Species, Thermal Changes
Possible: - - -

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT, Comb. Sewer Overflow, Urban/Storm Runoff
Suspected: Habitat Modification, Power Generation
Possible: - - -

Resolution/Management Information

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

Further Details

Overview
Fish consumption use in this portion of the Lower Hudson is impaired by elevated levels of priority organics (PCBs, dioxin), heavy metals (cadmium) and other toxics primarily the result of past industrial discharges. A significant decline in the Hudson River fisheries, most notably American shad, in recent years has resulted in concerted efforts to assess the possible causes of the decline the determine strategies to restore the fish stocks. The suspected causes of the decline include over-fishing, habitat loss and increased populations of predatory species. At the same time, increased recreational use of the Hudson River has spurred efforts to further improve water quality to support public bathing in the river.

Fish Consumption Advisories
Fish consumption in the Lower Hudson is impaired due to a NYSDOH health advisory that recommends eating no gizzard shad, channel catfish or white catfish, and no more than one meal per month of American eel, Atlantic needlefish, bluefish, carp, goldfish, largemouth bass, smallmouth bass, rainbow smelt, striped bass, walleye, white catfish and white

perch because of elevated levels of PCBs. Advisories along this lower reach are also in place for blue crab that recommend eating no more than six crabs per week, and discarding hepatopancreas (mustard, liver, or tomalley), and cooking liquid. In addition to PCBs, the blue crab advisory also reflects concern about contamination by dioxin and cadmium. The contamination is considered to be the result past industrial discharges, particularly PCB discharges in the Upper Hudson River. (For more information, see the Upper Hudson River WI/PWL Report.) These restrictions have severely affected what had been at one time thriving commercial fishing industries. The advisory for this lake was first issued prior to 1998-99. (2007-08 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2007).

Toxics/CARP

Ongoing efforts to address the widespread contamination by PCBs, dioxin and other toxic chemicals in New York Harbor and the Hudson River include the Contamination Assessment and Reduction Project (CARP), a landmark monitoring effort bringing together federal, state and non-government partners in a determined effort to reduce contamination within the NY/NJ Harbor Estuary, particularly as it relates to dredged material management. CARP has identified and quantified major sources of contaminants of concern to the NY/NJ Harbor and Hudson Estuary. A series of numerical models have also been developed and calibrated to simulate movement of contaminants through the estuary and to predict the concentrations of these contaminants in water, sediment, and biota in future years under a variety of scenarios. The CARP data and modeling products are being used to identify which contaminants require load reductions (through Total Maximum Daily Loads) to meet appropriate water quality criteria and to develop sediment remediation strategies in connection with the U.S. Army Corps of Engineers' Hudson-Raritan Comprehensive Restoration Program and the Harbor Estuary Program's Regional Sediment Management strategy. (USEPA/HEP and Hudson River Foundation and DEC/DOW, BWAM/Priority Waters Research, May 2008)

Hudson River Fisheries

New York fisheries biologists have documented that American shad spawning stock have become smaller and younger and mortality has increased to excessive and unacceptable levels. Throughout the Atlantic Coast waters, shad stocks are at historic lows and, along with several other important marine species, are in need of dedicated restoration efforts. The suspected causes of this decline include over-fishing, habitat loss, entrainment/impingement at power generating plants on the river, increased populations of predatory species and increased competition for food sources. NYSDEC recently announced a new set of initiatives aimed a developing a better understanding of the Hudson estuary ecosystem and restoring the threatened fisheries. This effort will focus on continuation of American shad monitoring programs, reduction of shad mortality at water intakes, control of bycatch of shad during commercial fishing for other species, identification and restoration of critical spawning and nursery habitats, and continued ecosystem studies to understand the effects of predators and invasive species. (NYSDEC/DFWMR, Hudson River Fisheries, May 2008)

Water Quality Sampling

NYSDEC is participating with a number of other agencies and organizations in a new private/public partnership called the Hudson River Environmental Conditions Observing System (HRECOS). This collaborative monitoring network will use stations located throughout the Hudson to provide data and other information essential to the management of the estuary. Seven scientific monitoring stations have been established throughout the Hudson River at Schodack Island, Tivoli Bays North, Tivoli Bays South, Norrie Point, Piermont Pier, George Washington Bridge (NJ) and Castle Point (NJ). The network provides continuous information about the estuary's conditions including temperature, oxygen levels, salinity, weather, tides, and some types of pollution that have the potential to affect the health and well-being of the Hudson's ecosystem. (DEC/HREP, May 2008)

Swimmable Hudson

In response to the improvement in Hudson River water quality since the 1970s, there has been a rise in recreational use and a public call for increased swimming opportunities. Currently swimming occurs in popular anchoring spots along the shore, including areas not designated for swimming. However, in spite of growing use publicly available swimming areas in the Hudson remain limited. To reach the goal of a swimmable Hudson River, the NYSDEC Hudson River Estuary Program: and Division of Water are focusing on four primary areas of water quality impact
1) the need for seasonal disinfection of municipal and other wastewater discharges, 2) the reduction of CSO impacts through appropriate control strategies, 3) implementation and compliance with Phase II Stormwater permit program, and

4) continued support of a vessel No Discharge Zone in the Hudson. (DEC/HREP and DEC/DOW, BWAM, May 2008)

Hudson River Estuary Program

To further restore and protect the waters of the Hudson River, NYS DEC established in 1987 The Hudson River Estuary Program: to provide a holistic (watershed) approach to management of the ecosystem. The Hudson River Estuary Program: leads a unique regional partnership of agencies, organizations and the public to restore the Hudson in ways that support the quality of life so valued by Hudson Valley residents. The program focuses on conservation of natural resources, promotion of full public use and enjoyment of the river and reducing pollution that affects the ability to use and enjoy the river. The Estuary Program implements the Hudson River Estuary Action Agenda through numerous partners in government, the non-profit and business sectors, and concerned citizens. The program is built on sound science and principles of ecosystem-based management. It is guided by the Hudson River Estuary Advisory Committee, which includes representatives of the commercial fishing industry, recreational anglers, utility companies, local government, educators, researchers, conservationists and other river users. This facilitates working with many representatives of the public toward common goals. (DEC/HREP, May 2008)

Segment Description

This segment includes the waters of the Hudson from a line drawn from the northerly Rockland County line on west shore and northerly Westchester County line on east shore, to a point on the river at Roseton on west shore and Low Point on east shore in general area of Chelsea. The size of the estuary area is taken from NYSDEC GIS and includes river and tidal flats, and tidal tribs (equal to 1% of total area).

Hudson River (Class A) (1301-0001) Impaired Seg

Waterbody Location Information

Revised: 06/30/2008

Water Index No: H (portion 4a)
Hydro Unit Code: 02020008/ **Str Class:** A
Waterbody Type: Estuary
Waterbody Size: 10306.0 Acres
Seg Description: from Roseton/Chelsea to Kingston

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Orange Co. (36)
Quad Map: KINGSTON EAST (N-25-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: METALS (cadmium), PRIORITY ORGANICS (PCBs)
Suspected: Pathogens, Thermal Changes
Possible: - - -

Source(s) of Pollutant(s)

Known: TOX/CONTAM. SEDIMENT, Comb. Sewer Overflow, Urban/Storm Runoff
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Possible: - - -

Resolution/Management Information

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

Further Details

Overview

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recommend eating no more than six crabs per week, and discarding hepatopancreas (mustard, liver, or tomalley), and cooking liquid. In addition to PCBs, the blue crab advisory also reflects concern about contamination by dioxin and cadmium. The contamination is considered to be the result past industrial discharges, particularly PCB discharges in the Upper Hudson River. (For more information, see the Upper Hudson River WI/PWL Report.) These restrictions have severely affected what had been at one time thriving commercial fishing industries. The advisory for this lake was first issued prior to 1998-99. (2007-08 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2007).

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Water Quality Sampling

NYSDEC Rotating Intensive Basin Studies (RIBS) Routine Network monitoring (water chemistry) of the Hudson River in Poughkeepsie, Dutchess County, is conducted annually at the Poughkeepsie Water Treatment Plant intake. In addition, when RIBS Intensive Network monitoring is conducted in a targeted basin every five years, additional sampling methods are employed to gain an overall assessment of water quality. The most recent Intensive Network monitoring was conducted during 2003. Water column sampling revealed iron, copper and water temperature to be parameters of concern. However, the results for these parameters may be influenced but sample collection which draws the samples through a raw water tap at the water treatment plant. Toxicity testing of the water column showed no significant mortality or reproductive impacts. (DEC/DOW, BWAM/RIBS, January 2005)

NYSDEC is participating with a number of other agencies and organizations in a new private/public partnership called the Hudson River Environmental Conditions Observing System (HRECOS). This collaborative monitoring network will use stations located throughout the Hudson to provide data and other information essential to the management of the estuary. Seven scientific monitoring stations have been established throughout the Hudson River at Schodack Island, Tivoli Bays North, Tivoli Bays South, Norrie Point, Piermont Pier, George Washington Bridge (NJ) and Castle Point (NJ). The network provides continuous information about the estuary's conditions including temperature, oxygen levels, salinity, weather, tides, and some types of pollution that have the potential to affect the health and well-being of the Hudson's ecosystem. (DEC/HREP, May 2008)

Source (Drinking) Water Assessment

The Hudson River 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. The Hudson River watershed is exceptionally large and too big for a detailed evaluation in the SWAP. General drinking water concerns for public water supplies which use these sources include: storm generated turbidity, eutrophication (excessive nutrients and algae) wastewater, toxic sediments. In addition, salt water can enter the lower Hudson and impact drinking water quality during periods of low flow. This more general assessment suggests an elevated susceptibility to contamination for this source of drinking water. This assessment is typical of many water supplies and reflects the need to protect the resource. This water supply reservoir provides water to the City of Poughkeepsie, Portions of Dutchess County and the Village of Millbrook. (NYSDOH, Source Water Assessment Program, 2005)

Swimmable Hudson

In response to the improvement in Hudson River water quality since the 1970s, there has been a rise in recreational use and a public call for increased swimming opportunities. Currently swimming occurs in popular anchoring spots along the shore, including areas not designated for swimming. However, in spite of growing use publicly available swimming areas in the Hudson remain limited. To reach the goal of a swimmable Hudson River, the NYSDEC Hudson River Estuary Program: and Division of Water are focusing on four primary areas of water quality impact
1) the need for seasonal disinfection of municipal and other wastewater discharges, 2) the reduction of CSO impacts through appropriate control strategies, 3) implementation and compliance with Phase II Stormwater permit program, and 4) continued support of a vessel No Discharge Zone in the Hudson. (DEC/HREP and DEC/DOW, BWAM, May 2008)

Hudson River Estuary Program

To further restore and protect the waters of the Hudson River, NYS DEC established in 1987 The Hudson River Estuary Program: to provide a holistic (watershed) approach to management of the ecosystem. The Hudson River Estuary Program: leads a unique regional partnership of agencies, organizations and the public to restore the Hudson in ways that support the quality of life so valued by Hudson Valley residents. The program focuses on conservation of natural resources, promotion of full public use and enjoyment of the river and reducing pollution that affects the ability to use and enjoy the river. The Estuary Program implements the Hudson River Estuary Action Agenda through numerous partners in government, the non-profit and business sectors, and concerned citizens. The program is built on sound science and principles of ecosystem-based management. It is guided by the Hudson River Estuary Advisory Committee, which includes representatives of the commercial fishing industry, recreational anglers, utility companies, local government, educators, researchers, conservationists and other river users. This facilitates working with many representatives of the public toward common goals. (DEC/HREP, May 2008)

Segment Description

This segment includes the waters of the Hudson from a point on the river at Roseton on west shore and Low Point on east shore in general area of Chelsea, to the mouth of the Rondout River in Kingston. The size of the estuary area is taken from NYSDEC GIS and includes river and tidal flats, and tidal tribs.

Popolopen Creek and tribs (1301-0160) Need Verific

Waterbody Location Information

Revised: 06/03/2008

Water Index No: H- 61
Hydro Unit Code:
Str Class: A(T)
Waterbody Type: River
Waterbody Size: 44.9 Miles
Seg Description: entire stream and tribs
Drain Basin: Lower Hudson River
Reg/County: 3/Orange Co. (36)
Quad Map: POPOLOPEN LAKE (P-24-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Aquatic Life	Threatened	Suspected

Type of Pollutant(s)

Known: - - -
Suspected: ACID/BASE (PH)
Possible: Metals (copper), Priority Organics (PAHs)

Source(s) of Pollutant(s)

Known: - - -
Suspected: ATMOSPH. DEPOSITION
Possible: Tox/Contam. Sediment

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 in Popolopen Creek is thought to be experience some threats from low pH, assumed to be from atmospheric deposition (acid rain). Elevated levels of organics (PAHs) in stream sediments were also noted.

Water Quality Sampling
NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Queensboro Creek, a trib of Popolopen Creek, in Highland, Ulster County, (at Seven Lakes Road) was conducted in 2003. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions. Water column sampling revealed only pH to be a parameter of concern. However the non-impacted biological assessment suggests the low pH does not have a measurable impact on aquatic life. Bottom sediment sampling results revealed several PAHs to be exceeding the Probable Effects Level - a level at which adverse impacts are expected; Copper was found above the Threshold Effects level - levels at which adverse impacts occasionally occur. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Based on the consensus of these established assessment methods, overall water quality at this site is threatened, but is supportive of the aquatic life and recreational uses. (DEC/DOW, BWAM/RIBS, January 2005)

Segment Description
This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(T) from the mouth to outlet of unnamed pond (P184h) near the confluence of Queensboro Creek (-2) and Class A,A(T) for the remainder of the reach. Tribs to this reach/segment, including Queensboro Creek (-2) and Long Pond Brook (-6), are Class A,A(T).

Queensboro Lk, Turkey Hill Pd, others (1301-0056) Need Verific

Waterbody Location Information

Revised: 05/28/2008

Water Index No: H- 61- 2-P184b thru j
Hydro Unit Code: 02020008/110 **Str Class:** A
Waterbody Type: Lake
Waterbody Size: 190.0 Acres
Seg Description: total area of selected lakes

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Orange Co. (36)
Quad Map: POPOLOPEN LAKE (P-24-3)

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: ACID/BASE (PH)
Possible: - - -

Source(s) of Pollutant(s)

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

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 Queensboro Lake, Turkey Hill Pond and other waters may experience impacts from low pH due to atmospheric deposition (acid rain). However due to the lack of current information conditions in these lakes need to be verified.

Source (Drinking) Water Assessment
Queensboro Lake was assessed throughout 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. The assessment area for this drinking water source contains no discrete potential contaminant sources and land cover suggests contaminant risk is low. This water supply reservoir provides water to Bear Mountain Water Supply. (NYSDOH, Source Water Assessment Program, 2005)

Previous Assessment

The fishery in a number of Palisades Park lakes were thought to be affected by low pH, the result of atmospheric deposition and lower buffering capacity. Specific lakes/ponds thought to be affected include: Turkey Hill Pond (P184b), Upper Twin Lake (P190), and Summit Lake (P193). (1996)

Stillwell Lake, Mine Lake (1301-0166) NoKnownImpct

Waterbody Location Information

Revised: 07/25/2008

Water Index No: H- 61..P187a,P188
Hydro Unit Code:
Str Class: A
Waterbody Type: Lake
Waterbody Size: 151.6 Acres
Seg Description: total area of both lakes
Drain Basin: Lower Hudson River
Reg/County: 3/Orange Co. (36)
Quad Map: POPOLOPEN LAKE (P-24-3)

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

Source (Drinking) Water Assessment
Stillwell and Mine Lakes were 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. The assessment area for this drinking water source contains no discrete potential contaminant sources. The high percentage of residential land cover results in an elevated potential for contamination from nonpoint sources. This assessment is typical of many water supplies and reflects the need to protect the resource. This water supply reservoir provides water to the US Military Academy at West Point. (NYSDOH, Source Water Assessment Program, 2005)

Minor Tribs to East of Hudson (1301-0168) MinorImpacts

Waterbody Location Information

Revised: 03/26/2008

Water Index No: H- 62 thru 92, EOH (selected) **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** B
Waterbody Type: River **Reg/County:** 3/Putnam Co. (40)
Waterbody Size: 25.3 Miles **Quad Map:** WEST POINT (P-25-1)
Seg Description: total length of select tribs, Bear Mt.Br. to Beacon

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: - - -

Source(s) of Pollutant(s)
Known: - - -
Suspected: AGRICULTURE, Urban/Storm Runoff
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 2 (Problem Verified, Cause Unknown)
Lead Agency/Office: DOW/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life use support and recreational uses in these tribs are thought to experience minor impacts due to nutrient enrichment from nonpoint sources.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Philipse Brook near Garrison (at Route 9D) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. The fauna was dominated by algal-feeding riffle beetles and filter-feeding caddisflies, indicative of nonpoint sources of nutrient enrichment. Stoneflies and mayflies were present in the sample, but sparse in numbers. 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 total length of selected/smaller tribs to the East of Hudson between Bear Mountain Bridge and Fishkill Creek (-95) in Beacon. Tribs within this segment, including Copper Mine Brook (-64), Arden Brook (-72), Philipse Brook (-75), Breakneck Valley Brook (-86), Wades Brook (-91) and Gordons Brook (-92), are Class B with some tribs and portions designated as Class C, and a small reach in Gordons Brook Class A. Indian Brook (-77), Foundry

Brook (-83) and Fishkill Creek (-95) are listed separately. Lower tidal portions of these tribs are included with the Hudson Main Stem.

Highland Brook and tribs (1301-0172) MinorImpacts

Waterbody Location Information

Revised: 03/26/2008

Water Index No: H- 71
Hydro Unit Code:
Waterbody Type: River
Waterbody Size: 7.1 Miles
Seg Description: entire stream and tribs
Str Class: A(T)
Drain Basin: Lower Hudson River
Reg/County: 3/Orange Co. (36)
Quad Map: PEEKSKILL (P-25-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: NUTRIENTS, UNKNOWN TOXICITY
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: URBAN/STORM RUNOFF
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 2 (Problem Verified, Cause Unknown)
Lead Agency/Office: DOW/Reg3
Resolution Potential: Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life use support and recreational uses in Highland Creek are thought to experience minor impacts due to urban nonpoint sources. Considerable urban refuse was also noted along the stream.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Highland Creek in Highland Falls (at Main Street) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. The fauna was dominated by facultative midges and caddisflies, indicative of urban nonpoint sources. The stream was highly embedded and considerable refuse was present. 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 B from the mouth to unnamed tribs (-2) above Highland Falls, and Class A(T) for the remainder of the reach.

Foundry Brook and tribs (1301-0177) NoKnownImpct

Waterbody Location Information

Revised: 03/26/2008

Water Index No: H- 83
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: A(T)
Waterbody Type: River
Reg/County: 3/Putnam Co. (40)
Waterbody Size: 10.3 Miles
Quad Map: WEST POINT (P-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
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 Foundry Brook in Cold Spring (at Route 9D) was conducted in 2002. Sampling results indicated non-impacted to slightly impacted water quality conditions. Species richness was limited but the dominant organism was a clean-water stonefly. Nutrient biotic evaluation determined 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. The unique stream habitat of bedrock, boulders and plunge pools likely affected the fauna. Because of the uniqueness of the habitat, this site was judged to be poor candidate for biological sampling. (DEC/DOW, BWAM/SBU, June 2005)

Segment Description
This segment includes the portion of the stream and all tribs above unnamed pond (P215a) above Cold Springs. The waters of this portion of the stream are Class A(T). Tribs to this reach/segment are also Class A(T). Lower Foundry Brook is listed separately (with Tribs to Hudson).

Moodna Creek, Lower, and minor tribs (1303-0010) NoKnownImpct

Waterbody Location Information

Revised: 03/26/2008

Water Index No: H- 89 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** C
Waterbody Type: River **Reg/County:** 3/Orange Co. (36)
Waterbody Size: 25.3 Miles **Quad Map:** CORNWALL (P-24-2)
Seg Description: stream and select tribs, from mouth to Mountainville

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 Moodna Creek at multiple sites between the mouth at Cornwall and Washingtonville was conducted in 2004. Sampling results indicated non-impacted to slightly impacted water quality conditions. Two of the three sites located in this reach reflected non-impacts water quality. Nonpoint source nutrient enrichment was indicated as the primary source at all sites on the stream. Possible sewage inputs were suggested at the downstream sites. Nutrient biotic evaluation determined the 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 all tribs from the mouth to Woodbury Creek (-7) in Mountainville. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Silver Stream (-2), are Class C. Woodbury Creek and Upper Moodna Creek are listed separately.

Moodna Creek, Upper, and minor tribs (1303-0011) MinorImpacts

Waterbody Location Information

Revised: 03/26/2008

Water Index No: H- 89 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** C
Waterbody Type: River **Reg/County:** 3/Orange Co. (36)
Waterbody Size: 131.5 Miles **Quad Map:** MAYBROOK (P-24-1)
Seg Description: stream and select tribs, above Mountainville

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 (phosphorus)
Possible: - - -

Source(s) of Pollutant(s)
Known: - - -
Suspected: AGRICULTURE, URBAN/STORM RUNOFF
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life uses in This portion of Moodna Creek are thought to experience minor impacts/threats due to nutrient loadings from nonpoint sources.

Water Quality Sampling
A biological (macroinvertebrate) survey of Moodna Creek at multiple sites between the mouth at Cornwall and Washingtonville was conducted in 2004. Sampling results indicated non-impacted to slightly impacted water quality conditions. All three of the sites located in this reach reflected slightly impacts water quality. Nonpoint source nutrient enrichment was indicated as the primary source at all sites on the stream. 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 portion of the stream and selected/smaller tribs above Woodbury Creek (-7) in Mountainville. The waters of this portion of the stream are Class C. Tribs to this reach/segment, including Baby Brook (-9), Perry Brook (-15), Slatterly Creek (-17) and Cromline Creek (-19), are Class C,C(T). Woodbury Creek, Otter Kill Creek (-2) and

Lower Moodna Creek are listed separately.

Lake Washington (1303-0012) NoKnownImpct

Waterbody Location Information

Revised: 07/25/2008

Water Index No: H- 89- 2-P225
Hydro Unit Code:
Waterbody Type: Lake
Waterbody Size: 167.3 Acres
Seg Description: entire lake
Str Class: A
Drain Basin: Lower Hudson River
Reg/County: 3/Orange Co. (36)
Quad Map: CORNWALL (P-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

Source (Drinking) Water Assessment
Lake Washington 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 an elevated susceptibility to contamination for this source of drinking water. The amount of residential lands in the assessment area results in an elevated potential for contaminants. Other potential contaminant sources consistent with residential/commercial areas are also present. However, this assessment is typical of many water supplies and reflects the need to protect the resource. This water supply reservoir provides water to... (NYSDOH, Source Water Assessment Program, 2005)

Browns Pond Reservoir (1303-0013) NoKnownImpct

Waterbody Location Information

Revised: 07/25/2008

Water Index No: H- 89- 2-P226a
Hydro Unit Code:
Waterbody Type: Lake(R)
Waterbody Size: 193.1 Acres
Seg Description: entire reservoir
Str Class: A
Drain Basin: Lower Hudson River
Reg/County: 3/Orange Co. (36)
Quad Map: CORNWALL (P-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

Source (Drinking) Water Assessment
Browns Pond 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. The analysis of available information for this source water assessment did not find any significant sources of contamination in this watershed. No discrete sources were identified within the assessment area and agricultural practices in the watershed do not appear to pose significant threats. The overall susceptibility of this watershed to potential sources of contamination was found to be medium. This assessment is typical of many water supplies and reflects the need to protect the resource. This water supply reservoir provides water to the City of Newburgh. (NYSDOH, Source Water Assessment Program, 2005)

Woodbury Creek and tribs (1303-0014) MinorImpacts

Waterbody Location Information

Revised: 03/26/2008

Water Index No: H- 89- 7
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: C
Waterbody Type: River
Reg/County: 3/Orange Co. (36)
Waterbody Size: 38.4 Miles
Quad Map: CORNWALL (P-24-2)
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	Known

Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), SALTS
Suspected: Silt/Sediment
Possible: - - -

Source(s) of Pollutant(s)

Known: DEICING (STOR/APPL), URBAN/STORM RUNOFF
Suspected: MUNICIPAL
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg3
Resolution Potential: Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life support in Woodbury Creek is known to experience minor impacts and threats due to elevated chlorides, nutrient enrichment and siltation from nonpoint sources related to continuing development in the watershed.

Water Quality Sampling
A biological (macroinvertebrate) survey of Woodbury Creek at multiple sites between the mouth in Mountainville and Highland Mill was conducted in 2005. Sampling results indicated quality conditions ranged from non-impacted to slightly impacted at four sites on the stream and in two tribs. The identified causes of the impacts include increased specific conductednce from chloride inputs, nutrient enrichment and siltation. Much of the chloride increase is likely attributable to salt runoff from a salt storage facility serving Woodbury Commons Mall. Increases in nutrient loadings may be the result of smaller sewage treatment facilities that serve newer developments in Highland Mills, just upstream of the sampling site most impacted by enrichment. Siltation from ongoing development in the watershed was also noted as contributing to impacts. The report noted that a particular stonefly species that is key indicator of high water quality that was found in 2004 sampling did not found during the 2005 survey. Although aquatic life is supported in the stream, sampling results indicate impacts are sufficient to stress/threaten aquatic life support. (Woodbury Creek Biological assessment Report, DEC/DOW, BWAM/SBU, November 2005)

Segment Description
This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(TS). Tribs to this reach/segment, including Mineral Spring Brook (-4), are also Class C,C(TS).

Walton Lake (1303-0004) Need Verific

Waterbody Location Information

Revised: 07/11/2008

Water Index No: H- 89-19-10-P257
Hydro Unit Code: 02020008/090 **Str Class:** A
Waterbody Type: Lake
Waterbody Size: 117.7 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Orange Co. (36)
Quad Map: MONROE (P-24-4)

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 (aquatic vegetation)
Possible: Nutrients, Salts

Source(s) of Pollutant(s)

Known: - - -
Suspected: ON-SITE/SEPTIC SYST, Urban/Storm Runoff
Possible: Deicing (stor/appl)

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
Recreational uses in Walton Lake 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.

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 sources. This information - which is contained in SWAP assessment reports - assists in the oversight and protection of public water systems. It is important to note that SWAP assessments evaluate the potential for untreated drinking water sources to be impacted by contamination. These assessments do not address the safety or quality of treated finished potable tap water. Drinking water supplies taken from this waterbody include the Village of Chester. This assessment found no noteworthy risks to source water quality. (NYSDOH, Source Water Assessment Program, 2005)

Previous Assessment
Concerns that recreational uses and aesthetics in Walton Lake may be restricted by excessive aquatic vegetation were previously reported. Suspected sources of nutrients feeding the lake include inadequate and/or failing on-site septic

systems serving residences along the lake and lawn chemical/fertilizer usage. Urban runoff and road salt/sanding activity may also influence water quality in the lake. Grass carp were introduced to control aquatic vegetation growth in the lake. However the lake has been stocked with trout and it is noted as a satisfactory large mouth bass fishery. (Orange County WQCC and DEC/Reg 3, FWMR, 1996)

Otter Kill/Black Meadow Creek and tribs (1303-0025) Threatened

Waterbody Location Information

Revised: 04/16/2008

Water Index No: H- 89-20
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: C*
Waterbody Type: River
Reg/County: 3/Orange Co. (36)
Waterbody Size: 99.1 Miles
Quad Map: MAYBROOK (P-24-1)
Seg Description: entire stream and tribs

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrolgy	Threatened	Known

Type of Pollutant(s)

Known: - - -
Suspected: WATER LEVEL/FLOW, THERMAL CHANGES
Possible: Silt/Sediment

Source(s) of Pollutant(s)

Known: - - -
Suspected: CONSTRUCTION, HABITAT MODIFICATION
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: n/a

Further Details

Overview
Hydrologic/habitat uses in Otter Kill/Black Meadow Creek are known to experience threats due to impacts to habitat from increasing development.

Water Quality Sampling
Biological (macroinvertebrate) assessments of Black Meadow Creek were conducted at various sites by the Orange County Water Authority in 2004 and 2005. The results of this sampling indicated slightly to moderately impacted water quality conditions. However the more significant (moderate) impacts were likely influenced by low stream gradient and poor sampling habitat. Initial result suggested septic inputs were contributing to impacts, but these indication were likely to have been significantly influenced by impoundment conditions in the wetlands. (DEC/DOW, BWAM/SBU, March 2008)

Habitat Issues
The Metropolitan Conservation Alliance of the Wildlife Conservation Society issued a Biodiversity Plan for the Southern Wallkill area, including this watershed. The plan identified Otter Creek as a biodiversity hub that is host to significant biodiversity. The plan noted that portions of the habitat system are at risk from dense residential development. The

watershed also includes Purgatory Swamp, a diverse wetland system that provides important wildlife habitat for state-listed declining and rare amphibians, reptiles and birds. Protection measures in this watershed would yield significant conservation benefits. (MCA/WCS, 2005)

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C. Tribs to this reach/segment, including Black Meadow Creek (above trib. 20 of Otter Kill is named Black Meadow Creek), are primarily Class C; with small portions of tribs designated Class A.

Quassaic Creek, Lower, and minor tribs (1301-0079) MinorImpacts

Waterbody Location Information

Revised: 03/26/2008

Water Index No: H- 94
Hydro Unit Code: 02020008/080 **Str Class:** C
Waterbody Type: River
Waterbody Size: 39.7 Miles
Seg Description: stream and select tribs, from mouth to Cronomer Valley

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Orange Co. (36)
Quad Map: NEWBURGH (O-24-3)

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: - - -
Suspected: NUTRIENTS (phosphorus), UNKNOWN TOXICITY
Possible: Pathogens

Source(s) of Pollutant(s)

Known: COMB. SEWER OVERFLOW, URBAN/STORM RUNOFF
Suspected: - - -
Possible: Unknown Source

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DOW/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: 3a->delist

Further Details

Overview
Aquatic life support and recreational uses in this portion of Quassaic Creek are known to experience minor impacts due to various pollutants from combined sewer overflows and other urban runoff sources.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Quassaic Creek in Newburgh (at River Road) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. These results are consistent with sampling results in 1992, 1997, 1998 and 1999. Results for these sampling years were also found to be slightly impacted, except in 1998 when moderate impacts were noted. The greater impacts in 1998 were attributed to a high flow year which increased the impacts from urban runoff, the primary source of impacts. Although aquatic life is supported in the stream, nutrient biotic evaluation indicates/suggests the level of eutrophication is sufficient to stress/threaten aquatic life support. (DEC/DOW, BWAM/SBU, June 2005)

Previous Assessment

A 1987 biological (macroinvertebrate) study conducted to evaluate CSO impact in lower Quassic Creek in Newburgh revealed moderate to severely impacted communities attributed to toxic influences. Some of these impacts were noted above the CSO area. Because of unidentified toxic sources, the intermittent nature of the CSO discharges and the tidal influences along this reach of the creek, it was not possible to determine the relative contributions of various pollutant sources. The City of Newburgh is currently developing a Long-Term Control Plan to address CSO discharges and resulting impacts on Quassaic Creek and other receiving waters. (DEC/DOW, BWAM/SBU, Quassaic Creek Biological Assessment, June 1987 and DEC/DOW, BWP, March 2008)

Additionally, current volunteer monitoring of the creek by local groups (Newburgh School District) also indicate areas of significant impact remain. (Orange County SWCD, December 1999)

Section 303(d) Listing

Quassaic Creek is currently included on the NYS 2008 Section 303(d) List of Impaired Waters. The stream is included on Part 3a of the List as a Water Requiring Verification of Impairment, however this updated assessment suggests that the suspected impacts to water quality and uses are not sufficient to warrant continued listing. Depending on the progress regarding the CSO LTCP, this waterbody should be considered for delisting in the 2010 Section 303(d) List cycle. (DEC/DOW, BWAM, March 2008)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from the mouth to Chadwick Lake in Cronomer Valley. The waters of this portion of the stream are Class C. Tribs to this reach/segment are also Class C. Gidneytown Creek (-4) and Middle/Upper Quassaic Creek are listed separately.

Orange Lake (1301-0008) Impaired Seg

Waterbody Location Information

Revised: 08/19/2010

Water Index No:	H- 94- 6-P340			**Drain Basin:**	Lower Hudson River
Hydro Unit Code:	02020008/080	**Str Class:**	B		Low Hudson-Wappinger
Waterbody Type:	Lake			**Reg/County:**	3/Orange Co. (36)
Waterbody Size:	411.8 Acres			**Quad Map:**	NEWBURGH (O-24-3)
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
RECREATION	Impaired	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), Algal/Weed Growth (algal bloom, vegetation)
Suspected: - - -
Possible: D.O./Oxygen Demand

Source(s) of Pollutant(s)

Known: HABITAT MODIFICATION
Suspected: ON-SITE/SEPTIC SYST, 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/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: n/a->1,4c

Further Details

Overview
Recreational uses in Orange 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.

Water Quality Sampling
Orange Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) from 1994 through 1998; it was sampled most recently in 2005. An Interpretive Summary report of the findings of this sampling was published in 2006. 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. The lake water is moderately to highly colored, however color only is thought to influence transparency only when algae levels are low. (DEC/DOW, BWAM/CSLAP, January 2006)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This most recent assessment (2005) indicates recreational suitability of the lake to be somewhat unfavorable. The recreational suitability of the lake is described most frequently as "slightly" impacted for most recreational uses. The lake itself is most often described as 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.

Lake/Watershed Management

The Orange Lake Civic Association has worked with local officials to lead a number of initiatives to improve water quality in the lake. In 1995, sewer lines were put in place to handle approximately 85% of our homes in and around the lake. More recently MS4 catch basins with sumps and snouts were placed around the peripheral of the lake by the Town. The Association also continues monitoring of geese, and under the DEC's direction has used oiling of eggs to reduce the population to an insignificant number. They have also instituted a plan to introduce 3,600 triploid carp to help control Eurasian milfoil in the lake. These initiatives are in addition to continued educate and outreach to members on the protection of the water quality and support of recreational use in the lake. (Orange Lake Civic Association, July 2010)

Section 303(d) Listing

Orange Lake was added to the current (2010) NYS Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List, indicating a waterbody with an impairment requiring TMDL development due to phosphorus. It is worth noting that although this recent addition to the List might suggest conditions have worsened since the previous (2008) List was issued, that is not the case. A full evaluation of waterbodies in the Lower Hudson Basin, including Orange Lake, was only recently completed (in July 2008). The absence of Orange Lake on previous Lists is not because evaluation of the lake showed it was not impaired, but rather due to the fact that the evaluation was incomplete and a specific listing decision for the lake was deferred. In fact, current available data suggests that conditions in the lake are indeed improving; likely due to the watershed management actions taken to date. (DEC/DOW, BWAM/WQAS, May 2008)

Chadwick Lake (1301-0190) NoKnownImpct

Waterbody Location Information

Revised: 07/25/2008

Water Index No: H- 94-P341a
Hydro Unit Code:
Waterbody Type: Lake
Waterbody Size: 211.4 Acres
Seg Description: entire lake
Str Class: A
Drain Basin: Lower Hudson River
Reg/County: 3/Orange Co. (36)
Quad Map: NEWBURGH (O-24-3)

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

Source (Drinking) Water Assessment
Chadwick Lake 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 an elevated susceptibility to contamination for this source of drinking water. Land cover and its associated activities within the assessment area do not increase the potential for contamination. There are no noteworthy contamination threats associated with other discrete contaminant sources. This assessment is typical of many water supplies and reflects the need to protect the resource. This water supply reservoir provides water to the Newburgh Consolidated Water District. (NYSDOH, Source Water Assessment Program, 2005)

Fishkill Creek, Lower, and tribs (1304-0003) MinorImpacts

Waterbody Location Information

Revised: 02/20/2008

Water Index No: H- 95
Hydro Unit Code: 02020008/070 **Str Class:** C
Waterbody Type: River
Waterbody Size: 17.4 Miles
Seg Description: entire stream and tribs, from mouth to Brickerhoff

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: WAPPINGERS FALLS (O-25-4)

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: NUTRIENTS (phosphorus)
Suspected: UNKNOWN TOXICITY, Pathogens
Possible: Metals, Silt/Sediment

Source(s) of Pollutant(s)

Known: - - -
Suspected: MUNICIPAL, OTHER SANITARY DISCH, URBAN/STORM RUNOFF, Agriculture
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic Life support in this portion of Fishkill Creek is thought to experience minor impacts due to nutrient enrichment from primarily nonpoint sources. Toxic municipal/industrial inputs have also been identified a possible contributors to the impacts.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Fishkill Creek in Beacon (at Main Street) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. The fauna was dominated by tolerant filter-feeding caddisflies. Impact Source Determination indicated both nonpoint source nutrient enrichment and possible toxic inputs from municipal/industrial sources as the primary stressors on the stream. Similar results were noted in sampling conducted in 1997, 98 and 99. In spite of some/these minor impacts, aquatic life is considered to be fully supported in the stream. (DEC/DOW, BWAM/SBU, December 2004) (DEC/DOW, BWAM/SBU, December 2004)

Segment Description
This segment includes the portion of the stream and selected/smaller tribs from the mouth to a point 8.3 miles above the mouth, above Clove Creek (-5) near Brickerhoff. The waters of this portion of the stream are Class C,C(T). Tribs to this

reach/segment, including Lower Dry Brook (-2), are Class C. Upper Dry Brook (-2), Clove Creek (-5) and Middle/Upper Fishkill Creek are listed separately.

Clove Creek and tribs (1304-0014) NoKnownImpct

Waterbody Location Information

Revised: 02/20/2008

Water Index No: H- 95- 5
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: C(TS)*
Waterbody Type: River
Reg/County: 3/Dutchess Co. (14)
Waterbody Size: 35.6 Miles
Quad Map: WAPPINGERS FALLS (O-25-4)
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 Clove Creek near Fishkill (at Mill 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. The field assessment was verified by laboratory-sorting of the sample to family level. (DEC/DOW, BWAM/SBU, December 2004)

Segment Description
This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C,C(TS). Tribs to this reach/segment, including Lower Hell Hollow Creek (-2), Trout Creek (-3) and Stephens Brook (-4), are primarily Class C,C(T); a small portion of Upper Trout Creek is Class A(T). Upper Hell Hollow Brook is listed separately.

Sprout Creek, Lower, and tribs (1304-0021) NoKnownImpct

Waterbody Location Information

Revised: 06/03/2008

Water Index No: H- 95-10
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: C(T)
Waterbody Type: River
Reg/County: 3/Dutchess Co. (14)
Waterbody Size: 18.3 Miles
Quad Map: HOPEWELL JUNCTION (O-25-3)
Seg Description: stream and tribs, from mouth to Noxon

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
NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Sprout Creek in Swartoutville, Dutchess County, (at Route 82) was conducted in 2003. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions. diverse fauna of mayflies, stoneflies and caddisflies was present. Water column sampling revealed only iron to be a parameters of concern. However, this substance is considered to be naturally occurring and not a source of water quality impacts. Bottom sediment sampling results revealed some PAHs and pesticides degradation products to be exceeding the Threshold Effects level - levels at which adverse impacts occasionally occur. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Based on the consensus of these established assessment methods, overall water quality at this site is considered to be fully supportive of the aquatic life and recreational uses. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Sprout Creek (at Todd Hill Road) was also conducted in 2002 during the Biological Screening effort in the basin. Sampling results also indicated slightly impacted water quality conditions. Communities were dominated by filter-feeding caddisflies and nonpoint source nutrient enrichment was identified as the

primary source of inputs. However, 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, December 2004)

Segment Description
This segment includes the portion of the stream and all tribs from the mouth to Jackson Creek (-2) near Noxon. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C. Jackson Creek and Upper Sprout Creek are listed separately.

Sprout Creek, Upper, and tribs (1304-0022) NoKnownImpct

Waterbody Location Information

Revised: 02/20/2008

Water Index No: H- 95-10
Hydro Unit Code:
Waterbody Type: River
Waterbody Size: 68.2 Miles
Seg Description: stream and tribs, above Noxon
Str Class: C(T)
Drain Basin: Lower Hudson River
Reg/County: 3/Dutchess Co. (14)
Quad Map: PLEASANT VALLEY (O-25-2)

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
A biological (macroinvertebrate) assessment of Sprout Creek in Freedom Plains (at Todd Hill Road) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. Communities were dominated by filter-feeding caddisflies and nonpoint source nutrient enrichment was identified as the primary source of inputs. However, 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, December 2004)

Segment Description
This segment includes the portion of the stream and all tribs above Jackson Creek (-2) near Noxon. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Pond Gut (-10) and Willow Brook (-13), are Class C. Jackson Creek and Lower Sprout Creek are listed separately.

Hillside Lake (1304-0001) Impaired Seg

Waterbody Location Information

Revised: 05/01/2008

Water Index No: H- 95-10- 1b-P345g
Hydro Unit Code: 02020008/070 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 25.9 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: HOPEWELL JUNCTION (O-25-3)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Public Bathing	Stressed	Known
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, Pathogens

Source(s) of Pollutant(s)

Known: HABITAT MODIFICATION
Suspected: AGRICULTURE, ON-SITE/SEPTIC SYST, 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/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: 1 (Individual Waterbody Impairment Requiring a TMDL)

Further Details

Overview

Recreational uses in Hillside Lake are considered to be impaired due to algal growth, nutrients and low water transparency. Elevated nutrient (phosphorus) loads attributed to nonpoint sources are the primary contributor to recreational and aesthetic impacts. On-site (septic) systems are thought to be sources of these pollutants. Nonpoint impacts from urban/stormwater runoff and agricultural activities may also be contributing sources.

Water Quality Sampling

Hillside Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) but not since 1996. Data from that sampling indicate that the lake is 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 do not 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, 1996)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This most recent assessment (2005) indicates recreational suitability of the lake to be very unfavorable. The recreational suitability of the lake is described most frequently as "substantially" impacted for most recreational uses. The lake itself is most often described as not supporting recreational uses ("recreation impossible"). Assessments have noted that aquatic plants grow to the lake surface and are very dense. (DEC/DOW, BWAM/CSLAP, 1996)

Lake Uses

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

Section 303(d) Listing

Hillside Lake is currently included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as a Waterbody Segment with Impairment Requiring TMDL Development due to phosphorus. (DEC/DOW, BWAM/WQAS, May 2008)

Jackson Creek and tribs (1304-0023) NoKnownImpct

Waterbody Location Information

Revised: 02/20/2008

Water Index No: H- 95-10- 2
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: C(T)
Waterbody Type: River
Reg/County: 3/Dutchess Co. (14)
Waterbody Size: 30.1 Miles
Quad Map: PLEASANT VALLEY (O-25-2)
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 Jackson Creek near Lagrangeville (at Route 33) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. although the substrate was less than ideal (gravel) the fauna was dominated by clean-water mayflies. (DEC/DOW, BWAM/SBU, December 2004)

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

Sylvan Lake (1304-0029) Impaired Seg

Waterbody Location Information

Revised: 03/10/2010

Water Index No: H- 95-14-P354
Hydro Unit Code: 02020008/070 **Str Class:** B(T)
Waterbody Type: Lake (Mesoeutrophic)
Waterbody Size: 113.3 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: POUGHQUAG (O-26-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
Public Bathing	Stressed	Known
AQUATIC LIFE	Impaired	Known
Recreation	Stressed	Known
Habitat/Hydrolgy	Threatened	Known

Type of Pollutant(s)

Known: D.O./OXYGEN DEMAND, Nutrients (phosphorus)
Suspected: - - -
Possible: Pathogens

Source(s) of Pollutant(s)

Known: - - -
Suspected: ON-SITE/SEPTIC SYST, PRIVATE/COMM/INST (Springhill), Other Source (waterfowl)
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DEC/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: 3b (Waterbody Requiring Verification of Cause/Pollutant)

Further Details

Overview

Aquatic life support in Sylvan Lake is considered impaired due to impacts on cold water fishery from periods and expanding areas of low dissolved oxygen in the lake. Although decreasing D.O. with depth is typical in thermally stratified lakes, the steady and significant increase in the hypoxic zone of the lake in recent years suggest other factors may be influencing conditions. Recreational uses (swimming, fishing) in the lake are considered to be stressed. Nutrient loadings result in mesotrophic - trending toward eutrophic - conditions, which also contribute to the low dissolved oxygen. Excessive aquatic vegetation in the lake shallows has been raised as a concern by local users/land owners. Impacts from inadequate/failing on-site septic systems are the suspected source of nutrients. Resident Canadian Geese frequent the lake and are also a likely contributing source.

Water Quality Sampling

Sylvan Lake was sampled as part of the NYSDEC Lake Classification and Inventory (LCI) sampling effort, a component

of the Rotating Intensive Basin Studies (RIBS) Program, in 2008. Nutrient, chlorophyl and clarity measurements taken at that time revealed (the lake was best characterized as mesoeutrophic, of moderately to highly productive. Lake clarity and phosphorus levels in the lake indicate mesotrophic conditions, while chlorophyll levels are typical of eutrophic lakes. Dissolved oxygen levels in the lake during the summer fell to about 4-5 mg/l at a depths ranging from 3 to 6 meters, creating a relatively narrow band of sufficiently cold and oxygenated water to support trout. These results were generally consistent with conditions reported in a previous (2003) survey. The recreational suitability of the lake was judged to be favorable, with the lake itself described as "not quite crystal clear" and "excellent" for most uses. Aquatic plants grow to the lake surface in some areas and plant density is reported to be heavy at times. It is not clear whether local complaints regarding weed growth are associated with invasives (Eurasian milfoil) or native plants. (DEC/DOW, BWAM/RIBS, January 2010)

A survey was conducted in 2003 that found the lake to be strongly stratified with a relatively warm epilimnion extending from the surface to a depth of about 15 feet. However at depths of about 32 feet the D.O. dropped to below 5 ppm, leaving a relatively narrow zone capable of supporting trout. These findings coupled with those of previous surveys also reflect a steady and dramatic reduction of the trout zone from 102 feet (in 1936) to 45 feet (in 1961) to 38 feet (in 1981) to only 12 feet (in 2003). More recent sampling in 2006 found improved conditions, but this remains a formerly oligotrophic lake that is know clearly mesotrophic with conditions that some years approach eutrophic. Increases in aquatic vegetation filling the shallows of the lake were also noted. (DEC/DFWMR, Region 3, September 2003)

Source Assessment

The lake has not significant tributaries waters, a watershed of only 518 acres, and an estimated hydraulic retention time of 7.33 years. These conditions and the fact that about one-half of the watershed is developed with a mix of homes, cottages, camps and condominiums suggests that local sources, primarily on-site septic systems and lawn runoff, are the primary causes of the impacts. A residentional development on the lake is served by a treatment facility that has been the subject of a NYSDEC consent order to address discharges without a permit. Though this facility is a subsurface discharge, there is concern that sewage finds its way to the lake. The Dutchess County Health Department is also involved because of Health Code violations. Large numbers of resident Canadian geese are also found at the lake and are a likely contributing source of nutrients. (DEC/DOW, Region 3, August 2006)

Whaley Lake Brook and tribs (1304-0030) NoKnownImpct

Waterbody Location Information

Revised: 02/20/2008

Water Index No: H- 95-19
Hydro Unit Code:
Waterbody Type: River
Waterbody Size: 24.8 Miles
Seg Description: entire stream and tribs
Str Class: C(T)
Drain Basin: Lower Hudson River
Reg/County: 3/Dutchess Co. (14)
Quad Map: POUGHQUAG (O-26-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling
A biological (macroinvertebrate) assessment of Whaley Lake Stream in Poughquag (at Route 7) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. The fauna was diverse, well-balanced and included many clean-water mayflies, stoneflies and caddisflies. Some indication of silt and nutrient inputs were noted but these impacts are minor. Aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts.]. (DEC/DOW, BWAM/SBU, December 2004)

Segment Description
This segment includes the entire stream and all tribs. The waters of the stream are Class C(T),C(TS). Tribs to this reach/segment, including Lower Gardner Hollow Brook (-3), are primarily Class C,C(T). Upper Gardner Hollow Brook is listed separately.

Whaley Lake, Little Whaley Lake (1304-0033) NoKnownImpct

Waterbody Location Information

Revised: 04/28/2008

Water Index No: H- 95-19-P353,P354
Hydro Unit Code:
Str Class: B
Waterbody Type: Lake
Waterbody Size: 298.9 Acres
Seg Description: total area of both lakes
Drain Basin: Lower Hudson River
Reg/County: 3/Dutchess Co. (14)
Quad Map: POUGHQUAG (O-26-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)
Known: - - -
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)
Known: - - -
Suspected: - - -
Possible: - - -

Resolution/Management Information

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

Further Details

Water Quality Sampling
Whaley Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) in 1998 and 1999. An Interpretive Summary report of the findings of this sampling was published in 2000. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive. Phosphorus levels in the lake occasionally exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements typically meet what is recommended for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5; occasional high pH does not appear to cause any ecological impacts. The lake water is weakly to moderately colored, but not likely high enough to influence clarity of the lake. (DEC/DOW, BWAM/CSLAP, January 2000)

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 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 "excellent" to "slightly" impacted. The lake itself is most often described as "not quite crystal clear" or having "definite algal greenness." Assessments have noted a reduced aquatic plants growth and improved recreational use. (DEC/DOW, BWAM/CSLAP,

January 2000)

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

Wappingers Lake (1305-0001) Impaired Seg

Waterbody Location Information

Revised: 07/11/2008

Water Index No: H-101 (portion 2)/P365
Hydro Unit Code: 02020008/060 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 80.2 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: WAPPINGERS FALLS (O-25-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: NUTRIENTS (phosphorus), Algal/Weed Growth (aquatic vegetation)
Suspected: SILT/SEDIMENT
Possible: Pathogens

Source(s) of Pollutant(s)

Known: - - -
Suspected: URBAN/STORM RUNOFF, Agriculture, Construction (resident.develop.), Hydro Modification
Possible: Streambank Erosion, Other Sanitary Disch

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: 3a->1

Further Details

Overview
Public bathing and other recreational uses in Wappingers Lake are impaired by nutrient (phosphorus) and silt/sediment loadings attributed to urban runoff and other nonpoint sources.

Water Quality Sampling
Wappingers Lake was sampled as part of the NYSDEC Lake Classification and Inventory (LCI) Program in 2003. Results of this sampling indicate that the lake is best characterized as eutrophic, or highly productive. Average phosphorus levels (60 ug/l) in the lake easily exceed the state guidance values indicating impacted/stressed recreational uses (20 ug/l). Corresponding transparency measurements also fail to meet what is the recommended minimum for swimming beaches. Upstream tributaries transport considerable silt and sediment to the lake. Urban/stormwater runoff in this highly developed urban/suburban watershed are thought to be a significant source of nutrient and silt/sediment loadings. Some of the remaining agriculture operations in the watershed may also contribute to the water quality impacts on the lake. (DEC/DOW, BWAM/SWQM, October 2005)

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. 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

Wappingers Lake is included on the NYS 2008 Section 303(d) List of Impaired Waters due to phosphorus and silt/sediment. The lake is included on Part 3 of the List as an Impaired Water for which TMDL Development May be Deferred due to the need to verify the impairment, the pollutant, or pending implementation/evaluation of other restoration measures. However this updated assessment suggests that the suspected impairments are confirmed and the lake be moved to Part 1 of the List as Waterbody Requiring TMDL Development (or other strategy to attain water quality standards). This waterbody was first listed on the 1996 Section 303(d) List for phosphorus and in 2002 for silt/sediment.

Wappingers Cr, Middle, and minor tribs (1305-0013) Need Verific

Waterbody Location Information

Revised: 06/05/2008

Water Index No: H-101 (portion 3) **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** B(T)
Waterbody Type: River **Reg/County:** 3/Dutchess Co. (14)
Waterbody Size: 42.7 Miles **Quad Map:** PLEASANT VALLEY (O-25-2)
Seg Description: stream and select tribs, fr Wapp.Falls to Pleasnt.Vall.

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: PATHOGENS, Metals
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: Tox/Contam. Sediment
Possible: UNKNOWN SOURCE, 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/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview
Recreational uses in this portion of Wappingers Creek may experience impacts due to elevated pathogen levels from as yet unidentified sources. Slightly elevated levels of some metals in sediments have also been noted.

Water Quality Sampling
NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Wappingers Creek in Poughkeepsie, Dutchess County, (at Jackson Road) was conducted in 2003. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions. Water column sampling revealed iron and coliform to be parameters of concern. However, iron can be considered to be naturally occurring and not a source of water quality impacts. Bottom sediment sampling results revealed various metals (copper, nickel, zinc) to be exceeding the Threshold Effects level - levels at which adverse impacts occasionally occur. Toxicity testing of the water column showed significant mortality and reproductive impacts in one of three test. Based on the consensus of these established assessment methods, overall water quality at this site is thought to experience impacts to uses that need further investigation. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Wappingers Creek at this site was also conducted in 2002 during the Biological Screening effort in the basin. Sampling results also indicated non-impacted water quality conditions. The sampling was part of a biological (macroinvertebrate) survey of Wappingers Creek at multiple sites between Wappingers Falls and Stanfordville. Sampling results indicated non-impacted water quality conditions at most sites. Excellent water quality was noted at four of the five sites sampled, including the three sites within this reach. Water quality at the most upstream site in Stanfordville was assessed as slightly impacted, however 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. These condition represent an improvement from previous sampling which should most sites to be slightly impacted. (DEC/DOW, BWAM/SBU, June 2005)

Segment Description
This segment includes the portion of the stream and selected/smaller tribs from Wappingers Lake (P365) in Wappingers Falls to unnamed trib (-11) in Pleasant Valley. The waters of this portion of the stream are Class B,B(T). Tribs to this reach/segment are Class B,B(T),C,C(T). An unnamed trib (-4) near New Hackensack and other portions of Wappingers Creek are listed separately.

Wappingers Cr, Middle, and minor tribs (1305-0014) NoKnownImpct

Waterbody Location Information

Revised: 02/20/2008

Water Index No: H-101 (portion 4) **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** B(T)
Waterbody Type: River **Reg/County:** 3/Dutchess Co. (14)
Waterbody Size: 91.8 Miles **Quad Map:** MILLBROOK (N-26-4)
Seg Description: stream and select tribs, fr Pleasnt Val to Stanfrdville

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 Wappingers Creek at multiple sites between Wappingers Falls and Stanfordville was conducted in 2002. Sampling results indicated non-impacted water quality conditions at most sites. Excellent water quality was noted at four of the five sites sampled, including two of three sites within (or representative of) this reach. Water quality at the most upstream site in Stanfordville was assessed as slightly impacted, however 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. These condition represent an improvement from previous sampling which should most sites to be slightly impacted. (DEC/DOW, BWAM/SBU, June 2005)

Segment Description
This segment includes the portion of the stream and selected/smaller tribs from to/including unnamed trib (-11) in Pleasant Valley to unnamed trib (-29) in Stanfordville. The waters of this portion of the stream are Class B(T),B(TS). Tribs to this reach/segment, including Clinton Corners Brook (-20) and Willow Brook (-27), are Class B,B(T),C,C(T),C(TS). Great Spring Brook (-12), Little Wappingers Creek (-18), East Branch (-21) and other portions of Wappingers Creek are listed separately.

Wappingers Cr, Upper, and tribs (1305-0011) NoKnownImpct

Waterbody Location Information

Revised: 02/20/2008

Water Index No: H-101 (portion 5)
Hydro Unit Code: 02020008/060 **Str Class:** C(TS)*
Waterbody Type: River
Waterbody Size: 81.5 Miles
Seg Description: stream and tribs, above Stanfordville

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: MILLBROOK (N-26-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)
Known: - - -
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)
Known: - - -
Suspected: - - -
Possible: - - -

Resolution/Management Information

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

Further Details

Water Quality Sampling
A biological (macroinvertebrate) survey of Wappingers Creek at multiple sites between Wappingers Falls and Stanfordville was conducted in 2002. Sampling results indicated non-impacted water quality conditions at most sites. Excellent water quality was noted at four of the five sites sampled. The lone site within this reach (in Stanfordville) was assessed as slightly impacted by nonpoint sources of nutrient enrichment, however 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. These condition represent an improvement from previous sampling which should most sites to be slightly impacted. (DEC/DOW, BWAM/SBU, June 2005)

Previous Assessment
The recreational use (swimming), fishery and aesthetics in Hunns Lake Creek may be affected by agricultural runoff and streambank erosion. BMPs have been implemented on watershed croplands to address erosion and nutrient runoff. Continuing efforts by the county are focusing on the access of cattle to the stream itself. (Dutchess County WQCC, July 1999)

Segment Description
This segment includes the portion of the stream and selected/smaller tribs above unnamed trib (-29) in Stanfordville. The waters of this portion of the stream are Class C,C(TS). Tribs to this reach/segment, including Cold Spring Creek (-30), are Class B,B(T),B(TS),C,C(T),C(TS). Other portions of Wappingers Creek are listed separately.

Great Spring Brook and tribs (1305-0030) NoKnownImpct

Waterbody Location Information

Revised: 03/26/2008

Water Index No: H-101-12
Hydro Unit Code:
Str Class: B
Waterbody Type: River (Low Flow)
Waterbody Size: 31.3 Miles
Seg Description: entire stream and tribs

Drain Basin: Lower Hudson River
Reg/County: 3/Dutchess Co. (14)
Quad Map: SALT POINT (N-25-3)

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/assessment of Great Spring Brook near Pleasant Valley (at Route 73) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. Mayflies and stoneflies were noted in the sample, but the fauna was dominated by algal-feeding riffle beetles. Nonpoint source nutrient enrichment was identified as the primary cause of the impacts. However, 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 entire stream and all tribs. The waters of the stream and Class B. Tribs to the stream are also Class B.

Little Wappingers Cr, Lower, and tribs (1305-0019) NoKnownImpct

Waterbody Location Information

Revised: 02/20/2008

Water Index No: H-101-18
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: B(T)
Waterbody Type: River
Reg/County: 3/Dutchess Co. (14)
Waterbody Size: 28.2 Miles
Quad Map: SALT POINT (N-25-3)
Seg Description: stream and tribs, mouth to Schultzville

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 Little Wappingers Creek near Salt Point (at Halstead Road) was conducted in 2002. Sampling results indicated non-impacted water quality conditions. The stream appeared sluggish and silty - less than ideal habitat - but the fauna was dominated by clean-water mayflies. (DEC/DOW, BWAM/SBU, December 2004)

Segment Description
This segment includes the portion of the stream and all tribs from the mouth to/including unnamed trib (-10) near Schultzville. The waters of this portion of the stream are Class B,B(T). Tribs to this reach/segment are primarily Class B; with some waters Class C. Upper Little Wappingers Creek is listed separately.

Long Pond (1305-0003) Need Verific

Waterbody Location Information

Revised: 07/11/2008

Water Index No: H-101-18-11-P375
Hydro Unit Code: 02020008/060 **Str Class:** AA
Waterbody Type: Lake
Waterbody Size: 81.9 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: ROCK CITY (N-25-2)

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 (aquatic vegetation), Nutrients
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: ON-SITE/SEPTIC SYST, Urban/Storm Runoff
Possible: - - -

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
Recreational uses in Long 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
Recreational uses (swimming, boating) and aesthetics in the lake were reported as being affected by excessive aquatic weed growth. Inadequate and/or failing on-site septic systems serving residences along the shore were the suspected source of nutrient loads that promote the growth of aquatic vegetation. (Dutchess County WQCC, 1999)

Silver Lake (1305-0002) Need Verific

Waterbody Location Information

Revised: 07/11/2008

Water Index No: H-101-18-13-P378
Hydro Unit Code: 02020008/060 **Str Class:** AA(T)
Waterbody Type: Lake
Waterbody Size: 110.7 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: ROCK CITY (N-25-2)

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 (aquatic vegetation), Nutrients
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: ON-SITE/SEPTIC SYST
Possible: Urban/Storm Runoff

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
Recreational uses in Silver Lake 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
Recreational uses (swimming, boating) and aesthetics in the lake were reported as being affected by excessive aquatic weed growth. Inadequate and/or failing on-site septic systems serving residences along the shore were the suspected source of nutrient loads that promote the growth of aquatic vegetation. (Dutchess County WQCC, 1999)

Upton Lake (1305-0005) Need Verific

Waterbody Location Information

Revised: 07/11/2008

Water Index No: H-101-20-P384
Hydro Unit Code: 02020008/060 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 45.5 Acres
Seg Description: entire lake

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: SALT POINT (N-25-3)

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 (aquatic vegetation), Nutrients
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: ON-SITE/SEPTIC SYST
Possible: Urban/Storm Runoff

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
Recreational uses in Long 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
Recreational uses (swimming, boating) and aesthetics in the lake were reported as being affected by excessive aquatic weed growth. Inadequate and/or failing on-site septic systems serving residences along the shore were the suspected source of nutrient loads that promote the growth of aquatic vegetation. (Dutchess County WQCC, 1999)

Ryder Pond, Hunns Lake (1305-0004) Need Verific

Waterbody Location Information

Revised: 07/11/2008

Water Index No: H-101-30..P401,P403
Hydro Unit Code: 02020008/060 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 78.8 Acres
Seg Description: total area of both lakes

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: PINE PLAINS (N-26-1)

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 (aquatic vegetation), Nutrients
Possible: Silt/Sediment

Source(s) of Pollutant(s)

Known: - - -
Suspected: ON-SITE/SEPTIC SYST, Agriculture
Possible: - - -

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
Recreational uses in Ryder Pond and Hunns Lake 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
Recreational uses (swimming, boating) and aesthetics in the lake were reported as being affected by excessive aquatic weed growth. Inadequate and/or failing on-site septic systems serving residences along the shore and runoff from agricultural activity in the watershed were the suspected source of nutrient loads that promote the growth of aquatic vegetation. (Dutchess County WQCC, 1999)

Thompson, Stissing, Mud/Twin Isl Ponds (1305-0010) Need Verific

Waterbody Location Information

Revised: 07/11/2008

Water Index No: H-101-P408,P409,P410
Hydro Unit Code: 02020008/060 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 204.4 Acres
Seg Description: total area of all three lakes

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: PINE PLAINS (N-26-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: - - -
Suspected: ALGAL/WEED GROWTH, Nutrients
Possible: Pathogens

Source(s) of Pollutant(s)

Known: - - -
Suspected: OTHER SOURCE (waterfowl)
Possible: Agriculture, Urban/Storm Runoff

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
Recreational uses in Thompson, Stissing and Mud/Twin Island Ponds 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
Recreational uses (swimming, boating) and aesthetics in the lake were reported as being affected by excessive aquatic weed growth. Waterfowl (geese, ducks) are the suspected source of nutrient loads that promote the growth of aquatic vegetation. (Dutchess County WQCC, 1996)

Lattintown Creek and tribs (1301-0193) NoKnownImpct

Waterbody Location Information

Revised: 02/19/2008

Water Index No: H-103
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: C*
Waterbody Type: River
Reg/County: 3/Ulster Co. (56)
Waterbody Size: 27.2 Miles
Quad Map: WAPPINGERS FALLS (O-25-4)
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 Lattintown Creek in Marlboro (at Prospect Street) was conducted in 2002. Sampling results indicated slightly impacted water quality conditions. The fauna was dominated by filter-feeding caddisflies, with few mayflies found. Nonpoint source nutrient enrichment was indicated as the primary source of impacts. However, 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, December 2004)

Segment Description
This segment includes the entire stream and all tribs. The waters of the stream are Class C,C(T). Tribs to this reach/segment are primarily Class C; a portion of one small unnamed trib (-6) is Class A.

Casper Creek and tribs (1301-0195) MinorImpacts

Waterbody Location Information

Revised: 02/19/2008

Water Index No: H-105
Hydro Unit Code:
Waterbody Type: River
Waterbody Size: 16.2 Miles
Seg Description: entire stream and tribs
Str Class: C
Drain Basin: Lower Hudson River
Reg/County: 3/Dutchess Co. (14)
Quad Map: WAPPINGERS FALLS (O-25-4)

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 (phosphorus)
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: AGRICULTURE, URBAN/STORM RUNOFF

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/BWAM
Resolution Potential: Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life support in Casper Creek is thought to experience impacts due to nutrient enrichment from nonpoint sources.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Casper Creek in Knapps Corners (at Camelot Road) was conducted in 2002. Sampling results indicated moderately impacted water quality conditions. The fauna had very low diversity and was dominated by filter-feeding caddisflies. Impact Source Determination indicated nonpoint source nutrient enrichment as the primary source of impacts, however poor sampling habitat of gravel and silt may have been a factor in the assessment of this site. (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. Tribs to this reach/segment are also Class C.

Fall Kill and tribs (1301-0087) Impaired Seg

Waterbody Location Information

Revised: 02/19/2008

Water Index No: H-114
Hydro Unit Code: 02020008/010 **Str Class:** C
Waterbody Type: River
Waterbody Size: 41.3 Miles
Seg Description: entire stream and tribs

Drain Basin: Lower Hudson River
Low Hudson-Wappinger
Reg/County: 3/Dutchess Co. (14)
Quad Map: POUGHKEEPSIE (O-25-1)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: Aesthetics (debris/trash), Pathogens
Suspected: NUTRIENTS (phosphorus), D.O./Oxygen Demand, Silt/Sediment, Unknown Toxicity
Possible: - - -

Source(s) of Pollutant(s)

Known: URBAN/STORM RUNOFF
Suspected: MUNICIPAL, Industrial
Possible: Other Sanitary Disch

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: DOW/Reg3 **Resolution Potential:** Medium
TMDL/303d Status: 3a (Waterbody Requiring Verification of Impairment)

Further Details

Overview
Aquatic life support and recreational uses in Fall Kill are impaired by nutrient enrichment, pathogens and various other pollutants attributed to municipal inputs and urban nonpoint sources.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Fall Kill in Poughkeepsie (at Garden Street) was conducted in 2002. Sampling results indicated moderately impacted water quality conditions. These results were comparable to conditions found in 1997, 98 and 99. Previous biological sampling found that water quality degradation increases from slightly to moderately impacted as one moves downstream. In the upstream watershed, the sources of impact were determined to be primarily nonpoint. Farther downstream the community was consistent with residential/commercial development and golf course runoff. Near the mouth, municipal/industrial waste and urban runoff are the likely sources. Considerable trash and debris, typical of urban waterways, was also found in the stream during sampling. (DEC/DOW, BWAM/SBU, December 2004 and Fallkill Creek Biological Assessment Report, Bode et al, DEC/DOW BWAM, August 1998)

Previously Assessment
The Dutchess County Health Department has collected data indicating several areas of high fecal coliform levels. These findings suggest failing and/or inadequate on-site septic systems. (Dutchess County DOH, 1996)

Section 303(d) Listing
Fallkill 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 phosphorus in the lake be moved to Part 1 of the List, indicating a waterbody with an impairment requiring TMDL development. It may be appropriate to add a listing for pathogens impairment as well, but current pathogen levels in the creek should first be verified. (DEC/DOW, BWAM/WQAS, May 2008)

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

Twaalfskill Creek and tribs (1301-0199) MinorImpacts

Waterbody Location Information

Revised: 02/19/2008

Water Index No: H-116
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: C
Waterbody Type: River
Reg/County: 3/Ulster Co. (56)
Waterbody Size: 22.0 Miles
Quad Map: POUGHKEEPSIE (O-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: D.O./OXYGEN DEMAND, NUTRIENTS (phosphorus)
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: - - -
Possible: INDUSTRIAL, MUNICIPAL

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: DOW/BWAM
Resolution Potential: Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life support in Twaalfskill Creek is thought to experience impacts due to pollutant inputs for municipal/industrial sources.

Water Quality Sampling
A biological (macroinvertebrate) assessment of Twaalfskill in Highland (at Van Wagner Road) was conducted in 2002. Sampling results indicated moderately impacted water quality conditions. Impact Source Determination indicated municipal/industrial inputs as the primary source of impacts, however poor sampling habitat may have been a factor in the assessment of this site. (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. Tribs to this reach/segment are also Class C.

Crum Elbow Creek and tribs (1301-0200) NoKnownImpct

Waterbody Location Information

Revised: 02/19/2008

Water Index No: H-124
Drain Basin: Lower Hudson River
Hydro Unit Code:
Str Class: A
Waterbody Type: River
Reg/County: 3/Dutchess Co. (14)
Waterbody Size: 43.0 Miles
Quad Map: HYDE PARK (N-25-4)
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 Crum Elbow Creek in Hyde Park (at Coach House Service Road) was conducted in 1998. Sampling results indicated slightly impacted water quality conditions. However, impoundment effects were thought to influence these results. Nutrient biotic evaluation determined these effects on the fauna to be minor. Slightly to non-impacted conditions were found at multiple upstream sites during a 1995 survey. Based on these findings, 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, December 2004)

Segment Description
This segment includes the entire stream and all tribs. The waters of the stream are primarily Class A,A(T); with a small portion at the mouth Class C. Tribs to this reach/segment are Class A and C.

Black Creek, Lower, and tribs (1301-0202) NoKnownImpct

Waterbody Location Information

Revised: 02/19/2008

Water Index No: H-128 **Drain Basin:** Lower Hudson River
Hydro Unit Code: **Str Class:** B*
Waterbody Type: River **Reg/County:** 3/Ulster Co. (56)
Waterbody Size: 36.5 Miles **Quad Map:** HYDE PARK (N-25-4)
Seg Description: stream and tribs, from mouth to Chodikes Pond

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
NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of Black Creek in Esopus , Ulster County, (at Route 9W) was conducted in 2003. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions. Water column sampling revealed no parameters of concern. Bottom sediment sampling results revealed no contaminants in detectable levels. Toxicity testing of the water column showed no significant mortality or reproductive impacts. Based on the consensus of these established assessment methods, overall water quality at this site is considered to be fully supportive of the water's aquatic life support and recreational use. (DEC/DOW, BWAM/RIBS, January 2005)

A biological (macroinvertebrate) assessment of Black Creek at this site was also conducted in 2002 during the Biological Screening effort in the basin. Sampling results indicated slightly impacted water quality conditions. Clean-water mayflies, stoneflies and hellgrammites were found, but the fauna was dominated by filter-feeding caddisflies. Nonpoint source nutrient enrichment was indicated, although very low flow at the time of sampling may have had some impact on the sample results. 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, December 2004)

Segment Description
This segment includes the portion of the stream and all tribs from the mouth to Chodikes Pond. The waters of this portion of the stream are Class C from the mouth to unnamed trib (-2), Class A from there to unnamed trib (-3) and Class B for the remainder of the reach. Tribs to this reach/segment are primarily Class C; unnamed trib (-2) is Class B. Middle/Upper Black Creek are listed separately. Lower tidal portions of these tribs are included with the Hudson Main Stem.

Chodikee Pond (1301-0208) Impaired Seg

Waterbody Location Information

Revised: 05/28/2008

Water Index No: H-128-P437
Hydro Unit Code:
Waterbody Type: Lake
Waterbody Size: 61.9 Acres
Seg Description: entire lake
Str Class: A
Drain Basin: Lower Hudson River
Reg/County: 3/Ulster Co. (56)
Quad Map: HYDE PARK (N-25-4)

Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

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

Type of Pollutant(s)

Known: METALS (mercury)
Suspected: - - -
Possible: - - -

Source(s) of Pollutant(s)

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

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 4 (Source Identified, Strategy Needed)
Lead Agency/Office: ext/EPA
Resolution Potential: Medium
TMDL/303d Status: 4a (TMDL Complete, Being Implemented, Not Listed)

Further Details

Overview
Fish consumption use in Chodikee Pond is impaired by mercury contamination attributed to atmospheric deposition.

Fish Consumption Advisories
Fish consumption in Chodikee Pond is impaired due to a NYSDOH 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 2005-06. (2006-07 NYSDOH Health Advisories and DEC/DFWMR, Habitat, December 2006).

Section 303(d) Listing
Chodikee Pond is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 2b of the List as a Fish Consumption Water/Atmospheric Deposition (Acid Rain). However, the mercury impairment was addressed in the Northeast Regional Mercury TMDL that was established in 2007. Therefore the listing for mercury for the lake are not included in the 2008 NYS Section 303(d) List of Impaired/TMDL Waters. (DEC/DOW, BWAM/WQAS, March 2008)

Landsman Kill and minor tribs (1301-0209) MinorImpacts

Waterbody Location Information

Revised: 02/19/2008

Water Index No: H-136
Hydro Unit Code:
Waterbody Type: River
Waterbody Size: 12.6 Miles
Seg Description: entire stream and select tribs
Str Class: C
Drain Basin: Lower Hudson River
Reg/County: 3/Dutchess Co. (14)
Quad Map: KINGSTON EAST (N-25-1)

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: UNKNOWN TOXICITY
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: UNKNOWN SOURCE
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 2 (Problem Verified, Cause Unknown)
Lead Agency/Office: DOW/BWAM
Resolution Potential: Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life support in Landsman Kill may experience minor impacts/threats due to unknown toxicity. The most recent sampling on this stream was conducted in 1998 and sampling to verify conditions is recommended.

Water Quality Sampling
A biological (macroinvertebrate) survey of Landsman Kill at multiple sites between the mouth and Rhinebeck was conducted in 1998. Sampling results indicated slightly to non-impacted water quality conditions. Low dissolved oxygen levels were noted at one site, but these conditions were attributed to decomposition of vegetation in an impounded reach of the stream. (DEC/DOW, BWAM/SBU, June April 1993)

Segment Description
This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C,C(T). Tribs to this reach/segment are also Class C. Rhinebeck Kill (-6) is listed separately.

Rhinebeck Kill and tribs (1301-0210) MinorImpacts

Waterbody Location Information

Revised: 02/19/2008

Water Index No: H-136- 6
Hydro Unit Code:
Str Class: C
Waterbody Type: River
Waterbody Size: 25.6 Miles
Seg Description: entire stream and tribs

Drain Basin: Lower Hudson River
Reg/County: 3/Dutchess Co. (14)
Quad Map: KINGSTON EAST (N-25-1)

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: UNKNOWN TOXICITY
Possible: - - -

Source(s) of Pollutant(s)

Known: - - -
Suspected: UNKNOWN SOURCE
Possible: - - -

Resolution/Management Information

Issue Resolvability: 1 (Needs Verification/Study (see STATUS))
Verification Status: 2 (Problem Verified, Cause Unknown)
Lead Agency/Office: DOW/BWAM
Resolution Potential: Medium
TMDL/303d Status: n/a

Further Details

Overview
Aquatic life support in Rhinebeck Kill may experience minor impacts/threats due to unknown toxicity. The most recent sampling on this stream was conducted in 1998 and sampling to verify conditions is recommended.

Water Quality Sampling
A biological (macroinvertebrate) survey of Rhinbeck Kill at multiple sites between the mouth near Rhinebeck Weys Corners was conducted in 1998. Sampling results indicated moderately to slightly impacted water quality conditions. Discharges from commercial establishments (car wash, town garage) were noted as possible sources. (DEC/DOW, BWAM/SBU, June April 1993)

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