

Waterbody Inventory for Upper Susquehanna River Watershed

Water Index Number	Waterbody Segment	Category
Upper Susquehanna River, Main Stem, Binghamton to Portlandville		
SR (portion 5)	Susquehanna River, Main Stem (0601-0182)	Impaired Seg
SR (portion 6)	Susquehanna River, Main Stem (0601-0040)	Impaired Seg
SR (portion 7)	Susquehanna River, Main Stem (0601-0020)	Impaired Seg
SR (portion 8)/P360	Goodyear Lake (0601-0015)	Impaired Seg
Tribs to Upper Susquehanna River, Binghamton to NY-PA State Line		
SR- 45 thru 78 (selected)	Minor Tribs to Susquehanna River (0601-0028)	MinorImpacts
SR- 53	Park Creek and tribs (0601-0031)	Impaired Seg
SR- 64	Little Snake Creek and tribs (0601-0042)	NoKnownImpct
SR- 64-5-Pxx	Clines Pond (0601-0063)	UnAssessed
SR- 66	Snake Creek and tribs (0601-0043)	NoKnownImpct
SR- 78-P173	Hawkins Pond (0601-0064)	UnAssessed
Tribs to Upper Susquehanna River, NY-PA State Line to Sidney		
SR- 94 thru 121 (selected)	Minor Tribs to Susquehanna River (0601-0123)	UnAssessed
SR- 94-1-2-Pxx	Mud Pond (0601-0065)	UnAssessed
SR- 99- 1-P174	Beaver Lake (0601-0066)	MinorImpacts
SR-100-P174a(?)	White Birch Lake (0601-0068)	MinorImpacts
SR-103	Hotchkiss Creek, Upper, and tribs (0601-0185)	UnAssessed
SR-105	Occanum Creek and tribs (0601-0126)	UnAssessed
SR-105-3-2-Pxx	Agfa Lake (0601-0069)	UnAssessed
SR-105-3-2-Pxx	Rogers/Sweet Lake (0601-0090)	UnAssessed
SR-118-P175	Beaver/Marsh Pond (0601-0070)	UnAssessed
SR-122	Belden Brook and tribs (0601-0129)	UnAssessed
SR-123	Wylie Brook and tribs (0601-0044)	MinorImpacts
SR-124 thru 145 (selected)	Minor Tribs to Susquehanna River (0601-0186)	UnAssessed
SR-124-P177	Pickrel Pond (0601-0071)	UnAssessed
SR-132	Cornell Creek and tribs (0601-0130)	UnAssessed
SR-132- 3-P178	Perch Pond (0601-0072)	UnAssessed
SR-134	Kelsey Brook, Lower and minor tribs (0601-0045)	NoKnownImpct
SR-134	Kelsey Brook, Upper and tribs (0601-0131)	UnAssessed
SR-134- 1-P344	Smith Pond (0601-0073)	UnAssessed
SR-134- 8	Wilkins Brook and tribs (0601-0133)	UnAssessed
SR-134- 8-4-Pxx	Echo Lake (0601-0074)	UnAssessed
SR-134-P179	Brackett Lake (0601-0075)	UnAssessed
SR-135-P180	Afton Lake (0601-0010)	Need Verific
SR-139	Big Brook/Bennettsville Creek and tribs (0601-0048)	MinorImpacts
SR-139-10-3-1-P182a	Youngs Pond (0601-0076)	UnAssessed
SR-142	Yaleville Brook, Upper, and tribs (0601-0187)	UnAssessed

...Upper Susquehanna River Watershed

Water Index Number	Waterbody Segment	Category
Lower Unadilla River Watershed, Sidney to New Berlin		
SR-146 (portion 1)	Unadilla River, Lower, Main Stem (0601-0003)	Impaired Seg
SR-146- 1	Guilford Creek and tribs (0601-0049)	NoKnownImpact
SR-146- 1- 1	Upper Peckam Brook and tribs (0601-0189)	UnAssessed
SR-146- 1- 1-P186	Sidney Reservoir (0601-0137)	UnAssessed
SR-146- 1-P188	Guilford Lake (0601-0012)	NoKnownImpact
SR-146- 2	Rogers Hollow Creek and tribs (0601-0138)	UnAssessed
SR-146- 3 thru 35 (selected)	Minor Tribs to Lower Unadilla River (0601-0136)	UnAssessed
SR-146- 9 (portion 1)	Butternut Creek, Lower, and minor tribs (0601-0050)	NoKnownImpact
SR-146- 9 (portion 2)	Butternut Creek, Middle, and tribs (0601-0140)	NoKnownImpact
SR-146- 9 (portion 3)	Butternut Creek, Middle, and tribs (0601-0190)	NoKnownImpact
SR-146- 9 (portion 4)	Butternut Creek, Upper, and tribs (0601-0141)	NoKnownImpact
SR-146- 9- 7	Dunderberg Creek , Upper, and tribs (0601-0191)	Need Verific
SR-146- 9-11-P194	Allen Pond (0601-0077)	UnAssessed
SR-146- 9-14-P195	Pickens Pond (0601-0078)	UnAssessed
SR-146- 9-29-2-P205a	Duck Pond (0601-0079)	UnAssessed
SR-146- 9-34-P207	Card Pond (0601-0080)	UnAssessed
SR-146- 9-36-P208	Crystal Lake (0601-0081)	UnAssessed
SR-146- 9-40-P210	Gardners Pond (0601-0082)	UnAssessed
SR-146- 9-45-P211	Zimmermans Pond (0601-0083)	UnAssessed
SR-146-17- 1-P212	Whites Pond (0601-0084)	UnAssessed
SR-146-19	Great Brook and tribs (0601-0051)	NoKnownImpact
SR-146-19- 6-1-P213	Chenango Lake (0601-0013)	NoKnownImpact
SR-146-19- 6-P214	Jackson Pond (0601-0085)	UnAssessed
SR-146-26-P215	Hunts Pond (0601-0086)	UnAssessed
SR-146-33-P216	Silver Lake (0601-0023)	UnAssessed
Upper Unadilla River Watershed, above New Berlin		
SR-146 (portion 2)	Unadilla River, Middle, and minor tribs (0601-0037)	Impaired Seg
SR-146 (portion 3)	Unadilla River, Upper, and minor tribs (0601-0188)	Impaired Seg
SR-146-36	Wharton Creek, Lower, and minor tribs (0601-0052)	NoKnownImpact
SR-146-36	Wharton Creek, Middle, and tribs (0601-0145)	UnAssessed
SR-146-36	Wharton Creek, Upper, and tribs (0601-0146)	UnAssessed
SR-146-36- 9	Mill Creek and tribs (0601-0149)	UnAssessed
SR-146-36-23-P228	Summit Lake (0601-0024)	NoKnownImpact
SR-146-38	Center Brook and minor tribs (0601-0147)	NoKnownImpact
SR-146-38- 1	Shawler Brook and tribs (0601-0148)	UnAssessed
SR-146-43	Tallete Creek and tribs (0601-0150)	UnAssessed
SR-146-44	Beaver Creek, Lower, and tribs (0601-0053)	NoKnownImpact
SR-146-44	Beaver Creek, Upper and tribs (0601-0151)	UnAssessed
SR-146-44-P243a	Chittning Lake (0601-0087)	UnAssessed
SR-146-64	West Branch Unadilla River and tribs (0601-0153)	UnAssessed
SR-146-69	North Winfield Creek and tribs (0601-0035)	Impaired Seg
SR-146-69- 5-P241	Cedar Lake (0601-0088)	UnAssessed
SR-146-P244	Unadilla Lake (0601-0089)	UnAssessed

...Upper Susquehanna River Watershed

Water Index Number	Waterbody Segment	Category
Tribs to Upper Susquehanna River, Sidney to Otego		
SR-147 thru 171 (selected)	Minor Tribs to Susquehanna River (0601-0154)	UnAssessed
SR-153	Carrs Creek, Lower and tribs (0601-0005)	NoKnownImpct
SR-154	Carrs Creek, Upper and tribs (0601-0155)	UnAssessed
SR-155	Ouleout Creek, Lower, and tribs (0601-0054)	UnAssessed
SR-155	Ouleout Creek, Upper, and minor tribs (0601-0057)	UnAssessed
SR-155- 3	Handsome Br/West Branch and minor tribs (0601-0055)	NoKnownImpct
SR-155- 3-2-3-P265	Chisholm Pond (0601-0091)	UnAssessed
SR-155- 3-2-P268	Bourn Pond (0601-0092)	UnAssessed
SR-155- 7	Treadwell Creek and tribs (0601-0058)	NoKnownImpct
SR-155-P262	East Sidney Reservoir (0601-0001)	Need Verific
SR-156-P279a	Buckhorn Lake (0601-0093)	UnAssessed
SR-158	Sand Hill Creek and tribs (0601-0156)	UnAssessed
SR-165	Otsdawa Creek and minor tribs (0601-0059)	NoKnownImpct
Otego Creek Watershed		
SR-172	Otego Creek, Lower, and minor tribs (0601-0046)	NoKnownImpct
SR-172	Otego Creek, Middle and tribs (0601-0161)	UnAssessed
SR-172	Otego Creek, Upper/Clark Brook and tribs (0601-0162)	UnAssessed
SR-172- 8-15-P282a	YMCA Pond (0601-0094)	UnAssessed
SR-172-18-P287	Gilbert Lake (0601-0095)	UnAssessed
SR-172-29	West Branch Otego Creek and tribs (0601-0165)	UnAssessed
SR-172-34b-P290a	Hartwick Reservoir (0601-0096)	UnAssessed
Tribs to Upper Susquehanna River, Otego to Portlandville		
SR-173 thru 185	Minor Tribs to Susquehanna River (0601-0192)	UnAssessed
SR-179	Oneonta Creek, Upper, and tribs (0601-0166)	Need Verific
SR-179-P295	Oneonta Lower Reservoir (0601-0097)	Need Verific
SR-179-P297	Wilber Lake (0601-0098)	NoKnownImpct
Charlotte Creek Watershed		
SR-183	Charlotte Creek, Lower, and tribs (0601-0014)	NoKnownImpct
SR-183	Charlotte Creek, Middle, and minor tribs (0601-0167)	NoKnownImpct
SR-183	Charlotte Creek, Upper, and tribs (0601-0193)	UnAssessed
SR-183- 7-P303	Pine Lake (0601-0099)	UnAssessed
SR-183- 8	Kortright Creek and tribs (0601-0060)	NoKnownImpct
SR-183-15-P310	Beaver Spring Pond (0601-0100)	UnAssessed
SR-183-17-P311	Sexsmith Lake (0601-0101)	NoKnownImpct
SR-183-19	Middle Brook and minor tribs (0601-0061)	NoKnownImpct
SR-183-19- 8	Center Brook and tribs (0601-0168)	UnAssessed
SR-183-19-11-P320	Titus Lake (0601-0102)	UnAssessed
SR-183-23-P327	Clapper Lake (0601-0103)	UnAssessed
SR-183-P335	Fox Vly (0601-0104)	UnAssessed

...Upper Susquehanna River Watershed

Water Index Number	Waterbody Segment	Category
Schenevus Creek Watershed		
SR-187	Schenevus Creek, Lower and tribs (0601-0062)	NoKnownImpact
SR-187	Schenevus Creek, Upper and minor tribs (0601-0169)	UnAssessed
SR-187-12a-1-P341	Seward Lake (0601-0105)	UnAssessed
SR-187-14	Elk Creek, Lower and tribs (0601-0019)	NoKnownImpact
SR-187-14	Elk Creek, Upper and tribs (0601-0170)	UnAssessed
SR-187-20-1-P346	Caryl Lake (0601-0106)	UnAssessed
SR-187-21	Decatur Creek and tribs (0601-0173)	UnAssessed
SR-187-26-P352	Hudson Lake (0601-0107)	UnAssessed
SR-187-28-P359	Bear Swamp Pond (0601-0108)	UnAssessed
Upper Susquehanna River Watershed, Portlandville to Otsego Lake		
SR (portion 9)	Susquehanna River, Upper, Main Stem (0601-0041)	Impaired Seg
SR-188 thru 207 (selected)	Minor Tribs to Susquehanna River (0601-0194)	UnAssessed
SR-190-P362	Arnold Lake (0601-0109)	NoKnownImpact
SR-191a-P363	Saddlebag Lake (0601-0116)	UnAssessed
SR-193-P366	Crumhorn Lake (0601-0110)	UnAssessed
SR-195	Cherry Valley Creek, Lower and tribs (0601-0022)	NoKnownImpact
SR-195	Cherry Valley Creek, Upper and tribs (0601-0174)	MinorImpacts
SR-195-21	Pleasant Brook and tribs (0601-0175)	UnAssessed
SR-195-23-P376	Belvedere Lake (0601-0111)	UnAssessed
SR-196-2-P378	Little (Goey) Pond (0601-0112)	UnAssessed
Oaks Creek Watershed		
SR-204	Oaks Creek and minor tribs (0601-0047)	NoKnownImpact
SR-204- 5	Fly Creek and tribs (0601-0176)	UnAssessed
SR-204- 5- 8-P385a	Muskrat Pond (0601-0113)	UnAssessed
SR-204-P392	Canadarago Lake (0601-0016)	NoKnownImpact
SR-204-P392-	Minor Tribs to Canadarago Lake (0601-0171)	UnAssessed
SR-204-P392- 1	Herkimer Creek and tribs (0601-0177)	UnAssessed
SR-204-P392- 3	Hyder Creek and tribs (0601-0178)	UnAssessed
SR-204-P392- 5	Ocuionis Creek and tribs (0601-0034)	MinorImpacts
SR-204-P393- 7-P400	Bailey Pond (0601-0114)	UnAssessed
SR-204-P399	Mud Lake (0601-0115)	UnAssessed
Otsego Lake Watershed		
SR-P404	Otsego Lake (0601-0033)	NoKnownImpact
SR-P404-	Minor Tribs to Otsego Lake (0601-0179)	UnAssessed
SR-P404- 9-P405	Allen Lake (0601-0117)	NoKnownImpact
SR-P404-10	Cripple Creek and tribs (0601-0027)	Need Verify
SR-P404-10-P408	Young Lake (0601-0026)	Need Verify
SR-P404-10-P409	Weaver Lake (Maumee Swamp) (0601-0025)	Need Verify
SR-P404-10-P409-	Minor Tribs to Weaver Lake (0601-0039)	MinorImpacts
SR-P404-11-P406	Clarke Pond (0601-0118)	UnAssessed
SR-P404-12	Hayden Creek and tribs (0601-0180)	Need Verify
SR-P404-12-P411	Summit Lake (0601-0119)	UnAssessed
SR-P404-14	Shadow Brook and tribs (0601-0181)	Need Verify

Susquehanna River, Main Stem (0601-0182)

Impaired Seg

Waterbody Location Information

Revised: 06/23/2009

Water Index No: SR (portion 5) **Drain Basin:** Susquehanna River
Hydro Unit Code: 02050101/ **Str Class:** A Upper Susquehanna
Waterbody Type: River (High Flow) **Reg/County:** 7/Broome Co. (4)
Waterbody Size: 16.7 Miles **Quad Map:** BINGHAMTON EAST (M-17-3) ...
Seg Description: from Binghamton to NY-Pa state line nr Riverside

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

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Possible
FISH CONSUMPTION	Impaired	Known

Type of Pollutant(s)

Known: METALS (mercury)
Suspected: - - -
Possible: Nutrients, Pathogens

Source(s) of Pollutant(s)

Known: - - -
Suspected: ATMOSPHERIC DEPOSITION
Possible: Agriculture

Resolution/Management Information

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

Further Details

Overview

Fish consumption in this portion of the Susquehanna River is known to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination. Water supply uses of this portion of the Susquehanna River are thought to experience threats from pathogens due to the level of agricultural pasturelands in the watershed and the number of wastewater discharges. Current information does not indicate any impacts to water supply or other uses, but the use of the resources as a water supply and the activities in the watershed suggest additional protection efforts are appropriate.

Fish Consumption Advisories

Fish consumption in this portion of the Susquehanna is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Owego, Johnson City, Kirkwood and Bainbridge. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling

A biological (macroinvertebrate) survey of the Susquehanna River at multiple sites along its entire length was conducted in 2003. Sampling results indicated non-impacted to slightly impacted water quality conditions, with most of the river displaying very good water quality. Results at a number of sites showed better water quality than previous sampling. However this may be at least in part the result of high flows at the time of the survey. High flow conditions tend to de-emphasize point source contribution due to increased dilution and increase nonpoint source contributions due to increase runoff. This survey included sampling sites on the Susquehanna River in Conklin (at Sandy Beach Park). Sampling results at the site indicated slightly impacted conditions, but very near the non-impacted range. In such samples the community is only slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities. Aquatic life support is considered to be fully supported in the stream. These results are consistent with previous sampling conducted at this site in 1997 which revealed non-impacted conditions, with a diverse and well-balanced fauna dominated by clean water mayflies. (Susquehanna River Biological Assessment Report, DEC/DOW, BWAM/SBU, January 2004)

Source (Drinking) Water Assessment

A source water assessment of Susquehanna River found an elevated susceptibility to pathogen contamination due to the high amount of pastureland in the watershed. There is also an elevated potential for contamination due to the total amount of wastewater discharged in the watershed. This assessment was conducted 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 water supply source provides water to the City of Binghamton. (NYSDOH, Source Water Assessment Program, 2005)

Section 303(d) Listing

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

Segment Description

This segment includes the main stem portion of the river from the Rock Bottom Dam in Binghamton to the NY-PA state line near Riverside. This reach of the river is Class A from the Rock Bottom Dam to a point one mile upstream of the Conklin-Kirkwood bridge (near Conklin Station) and is designated Class B for the remainder of the reach.

Susquehanna River, Main Stem (0601-0040)

Impaired Seg

Waterbody Location Information

Revised: 06/19/2009

Water Index No:	SR (portion 6)	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/220	Str Class:	B
Waterbody Type:	River (High Flow)	Reg/County:	7/Broome Co. (4) ...
Waterbody Size:	53.3 Miles	Quad Map:	GULF SUMMIT (M-18-3) ...
Seg Description:	from NY-Pa state line to Sidney		

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: ATMOSPHERIC DEPOSITION
Possible: ---

Resolution/Management Information

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

Further Details

Overview

Fish consumption in this portion of the Susquehanna River is known to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination.

Fish Consumption Advisories

Fish consumption in this portion of the Susquehanna is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Owego, Johnson City, Kirkwood and Bainbridge. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling

A biological (macroinvertebrate) survey of the Susquehanna River at multiple sites along its entire length was conducted in 2003. Sampling results indicated non-impacted to slightly impacted water quality conditions, with most of the river displaying very good water quality. Results at a number of sites showed better water quality than previous sampling.

However this may be at least in part the result of high flows at the time of the survey. High flow conditions tend to de-emphasize point source contribution due to increased dilution and increase nonpoint source contributions due to increase runoff. This survey included sampling sites on the Susquehanna River in Windsor (at Route 17) and in Bainbridge (at Route 206). Sampling results at both sites indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. (Susquehanna River Biological Assessment Report, DEC/DOW, BWAM/SBU, January 2004)

Previous biological sampling on the Susquehanna in Bainbridge in 1997 revealed slightly impacted condition. Filamentous algae and diatoms were numerous, indicating some enrichment. A site near the head of this reach in Unadilla was assessed as clearly non-impacted in 1997 and 1998, with a diverse and well-balanced fauna. (DEC/DOW, BWAR, SBU, October 1999)

Section 303(d) Listing

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

Segment Description

This segment includes the main stem portion of the river from the NY-PA state line at State Line to the Unadilla River (-146) in Sydney. This reach of the river is Class B.

Susquehanna River, Main Stem (0601-0020)

Impaired Seg

Waterbody Location Information

Revised: 09/11/2009

Water Index No: SR (portion 7)
Hydro Unit Code: 02050101/220 **Str Class:** B
Waterbody Type: River (Med. Flow)
Waterbody Size: 9.2 Miles
Seg Description: from Sidney to Colliersville

Drain Basin: Susquehanna River
Upper Susquehanna
Reg/County: 4/Otsego Co. (39) ...
Quad Map: UNADILLA FORKS (J-20-4) ...

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

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

Type of Pollutant(s)

Known: METALS (mercury)
Suspected: Pathogens
Possible: Nutrients

Source(s) of Pollutant(s)

Known: On-Site/Septic Syst
Suspected: ATMOSPHERIC DEPOSITION, Agriculture
Possible: ---

Resolution/Management Information

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

Further Details

Overview

Fish consumption in this portion of the Susquehanna River is thought to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination. Recreational uses are also thought to experience minor impacts due to inadequate on-site wastewater treatment (septic) systems.

Fish Consumption Advisories

Fish consumption in this portion of the Susquehanna is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Owego, Johnson City, Kirkwood and Bainbridge. Although monitoring data above that point is not available, this reach is included in the advisory as a precaution. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling

A biological (macroinvertebrate) survey of the Susquehanna River at multiple sites along its entire length was conducted in 2003. Sampling results indicated non-impacted to slightly impacted water quality conditions, with most of the river displaying very good water quality. Results at a number of sites showed better water quality than previous sampling. However this may be at least in part the result of high flows at the time of the survey. High flow conditions tend to de-emphasize point source contribution due to increased dilution and increase nonpoint source contributions due to increase runoff. This survey included sampling sites on the Susquehanna River in Unadilla (at DEC fishing access) and in Oneonta (at Route 23). Sampling results at both sites indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. (Susquehanna River Biological Assessment Report, DEC/DOW, BWAM/SBU, January 2004)

Previous biological sampling on the Susquehanna in Colliersville (1991, 92 97) revealed slightly impacted condition, with low species richness and absence of stoneflies. Crayfish, caddisflies and riffle beetles were numerous. However, these impacts are now considered to be primarily the result of impoundment effects from Goodyear Lake. The results at the Oneonta site farther downstream are considered to be more representative on this reach. (DEC/DOW, BWAR/SBU, January 2004)

RIBS Intensive Network monitoring of the river was conducted at Unadilla in 1998. Water quality at the site was assessed as good. Biologic communities were non-impacted, and there were no significant chemical parameters of concern in the water column. A fishery assessment indicates an abundant, diverse and healthy fishery. Elevated levels of some pesticides (chlordan, lindane) which may impact aquatic life were noted in bottom sediment samples. RIBS sampling of the river in Colliersville in 1991-92 also revealed good water quality. (DEC/DOW, BWAR/RIBS, 1999)

Water Quality Management

In a number of small unsewered communities along this reach, inadequate residential and commercial on-site wastewater treatment systems result in the discharge of untreated or poorly treated wastewater to the ground or directly into the river. Such instances have been documented in the Hamlet of Riverside and elsewhere in the Town of Unadilla (Otego, Wells Bridge, Unadilla). Construction of a collection and conveyance system to address the discharges to the Susquehanna and Unadilla Rivers in the town has been discussed, but adequate funding has not been identified. Individual discharges are currently being addressed on a case-by-case basis by NYSDEC and health department staff. (DEC/DOW, Region 4, September 2009)

Section 303(d) Listing

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

Segment Description

This segment includes the main stem portion of the river from the Unadilla River (-146) in Sydney to Goodyear Lake in Colliersville. This reach of the river is Class B.

Goodyear Lake (0601-0015)

Impaired Seg

Waterbody Location Information

Revised: 06/26/2001

Water Index No: SR (portion 8)/P360
Hydro Unit Code: 02050101/030 **Str Class:** B
Waterbody Type: Lake
Waterbody Size: 352.2 Acres
Seg Description: entire lake

Drain Basin: Susquehanna River
Upper Susquehanna
Reg/County: 4/Otsego Co. (39)
Quad Map: MILFORD (K-21-4)

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	Suspected
Recreation	Stressed	Known
Aesthetics	Stressed	Known

Type of Pollutant(s)

Known: ---
Suspected: METALS (mercury), Algal/Weed Growth (vegetation, algal blooms), Nutrients, Silt/Sediment
Possible: Pathogens

Source(s) of Pollutant(s)

Known: ---
Suspected: ATMOSPHERIC DEPOSITION, On-Site/Septic Syst
Possible: Agriculture, Unknown Source

Resolution/Management Information

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

Further Details

Overview

Fish consumption in the Goodyear Lake portion of the Susquehanna River is known to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination. Recreational uses are also thought to experience minor impacts due to algal blooms and weed growth.

Fish Consumption Advisories

Fish consumption in this portion of the Susquehanna is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Owego, Johnson City, Kirkwood and Bainbridge. Although monitoring data above that point is not available, this reach is included in the advisory as a precaution. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Previous Assessment

Public Bathing and other recreational uses (swimming, boating) in Goodyear Lake are thought to be affected by high nutrient levels and resulting algal blooms and excessive aquatic vegetation. Failing and/or inadequate on-site septic systems are considered a likely source of pollutants. Nutrients loading from the Cherry Valley Creek watershed is also considered to be significant. (DEC/DOW, Region 4, January 2001)

Section 303(d) Listing

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

Segment Description

This segment includes the total area of the entire lake.

Minor Tribs to Susquehanna River (0601-0028)

MinorImpacts

Waterbody Location Information

Revised: 07/10/2009

Water Index No: SR- 45 thru 78 (selected) **Drain Basin:** Susquehanna River
Hydro Unit Code: 02050101/ **Str Class:** C Upper Susquehanna
Waterbody Type: River (Low Flow) **Reg/County:** 7/Broome Co. (4)
Waterbody Size: 3.0 Miles **Quad Map:** BINGHAMTON WEST (M-17-4) ...
Seg Description: total length of selected tribs fr Binghamton to Pa line

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

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: - - -
Suspected: CONSTRUCTION (resident, comm develop), URBAN/STORM RUNOFF
Possible: Streambank Erosion

Resolution/Management Information

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

Further Details

Overview

Aquatic life support in these small tribs to the Susquehanna are thought to be affected by silt/sedimentation from ongoing land development and residential construction project. Sampling has been limited to only a few of the multiple tribs that make up this segment, but results for these streams are considered to be representative of the segment as a whole.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Pierce Creek in Binghamton (at Beldon Road) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated slightly impacted conditions. In such samples some replacement of sensitive ubiquitous species by more tolerant species occurs, although the sample also includes a balanced distribution of all expected species. Aquatic life is considered to be fully supported in the stream, however the community composition and nutrient biotic evaluation suggest conditions and high levels of enrichment that are sufficient to cause stress to aquatic life. Impact source determination found the fauna to be most similar to communities influenced by aquatic toxicity. (DEC/DOW, BWAM/SBU, January 2009)

Previous Assessment

Concerns were raised by local agencies during previous (1996) assessment efforts regarding rapid urbanization of the watershed and the resulting deterioration of streambed and banks. The Town of Binghamton does not require stormwater detention basins in new subdivision, which would help the situation. (Broome County WQCC, 1998)

Segment Description

This segment includes the total length of selected/smaller tribs to the Susquehanna River from Chenango River (-44) and the PA state line. Tribs within this segment, including Park Creek (-45), Brandywine Creek (-46), Pierce Creek (-47), Acre Creek (-50), Stratton Mill Creek (-52), Carlin Creek (-57), Riverside Creek (-67) and Trowbridge Creek (-68), are Class C,C(T). Chenango River (-44), Park Creek (-53), Little Snake Creek (-64) and Snake Creek (-66) are listed separately.

Park Creek and tribs (0601-0031)

Impaired Seg

Waterbody Location Information

Revised: 09/10/2009

Water Index No:	SR- 53	Drain Basin:	Susquehanna River	
Hydro Unit Code:	02050101/370	Str Class:	C	Upper Susquehanna
Waterbody Type:	River (Low Flow)	Reg/County:	7/Broome Co. (4)	
Waterbody Size:	0.5 Miles	Quad Map:	BINGHAMTON EAST (M-17-3) ...	
Seg Description:	entire stream and tribs			

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

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

Type of Pollutant(s)

Known: AESTHETICS (odors, floatables), NUTRIENTS (phosphorus), PATHOGENS
Suspected: D.O./Oxygen Demand
Possible: Restricted Passage

Source(s) of Pollutant(s)

Known: ON-SITE/SEPTIC SYST (West Windsor)
Suspected: - - -
Possible: Habitat Modification

Resolution/Management Information

Issue Resolvability:	3 (Strategy Being Implemented)	
Verification Status:	5 (Management Strategy has been Developed)	
Lead Agency/Office:	DOW/Reg7	Resolution Potential: High
TMDL/303d Status:	1->4b	

Further Details

Overview

Recreational uses (swimming, fishing), aesthetics and aquatic life support are thought to be impaired by raw sewage discharges from failing/inadequate on-site septic systems.

Source Assessment

A subdivision was built with central sewers in mind. However, only septic tanks have been installed and the effluent from these enters a central pipe which flows untreated into a field below the subdivision and into the creek. There are other ongoing septic system problems in the hamlet of West Windsor as well. However the Town of Windsor recently broke ground for a new wastewater treatment plant for the hamlet of West Windsor. This 110,000 gpd plant will serve about 350 homes, about 80% of which have failing on-site systems. (DEC/DOW, Region 7, June 2009)

Water Quality Sampling

A biological (macroinvertebrate) assessment of Park Creek in Binghamton (at Beldon Road) was conducted as part of

the RIBS biological screening effort in 2003. Sampling results indicated slightly impacted conditions. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be satisfactory. The nutrient biotic index and impact source determination indicate some/elevated enrichment in the stream and fauna that is most similar to communities influenced by nonpoint sources. This sampling indicates that in spite of these impacts, aquatic life support is considered to be fully supported at this site. However known impacts upstream result in impaired uses in the stream. (DEC/DOW, BWAM/SBU, January 2009)

Habitat Assessment

DEC fisheries staff indicated during a previous assessment effort in 2000, that the stream channel and fishery habitat was impacted by past and on-going NYS DOT work on Route 17 (future I-86). This work included several long culverts which restrict fish passage. (DEC/DFWMR, Region 7, October 2000).

Section 303(d) Listing

Park Creek is included on the NYS 2006 Section 303(d) List of Impaired Waters. The lake is included on Part 1 of the List as a waterbody segment requiring the development of a TMDL or other strategy to attain water quality standards for pathogens. However based on the construction of the wastewater treatment plant that is currently underway, it is considered more appropriate to include this waterbody among "category 4b" waters, for which required control measures other than a TMDL are expected to restore uses. As a result, this waterbody will be proposed for delisting in the 2010 Section 303(d) List. (DEC/DOW, BWAM/WQAS, June 2009)

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 Stanley Hollow Creek (-1), are also Class C.

Little Snake Creek and tribs (0601-0042)

NoKnownImpct

Waterbody Location Information

Revised: 07/10/2009

Water Index No: SR- 64
Hydro Unit Code: 02050101/340 **Str Class:** C
Waterbody Type: River (Low Flow) **Drain Basin:** Susquehanna River
Waterbody Size: 50.5 Miles **Reg/County:** 7/Broome Co. (4)
Seg Description: entire stream and tribs (within NYS) **Quad Map:** BINGHAMTON EAST (M-17-3) ...

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

Assessment of Little Snake Creek in Brackney, PA, by the Susquehanna River Basin Commission has found non-impacted to slightly impacted conditions in the years from 2002 through 2006. These results reflect an improvement over moderately impaired conditions in 1997, though the 1997 results may have been influenced by low flows. (Assessment of Interstate Streams, SRBC, 2007)

Segment Description

This segment includes the entire stream and all tribs within New York State. The waters of the stream are Class C. Tribs to this reach/segment, including Gratsinger Run (-3), Horton Creek (-4) and Upper Little Snake Creek (-5), are also Class C. Above Upper Little Snake Creek (-5) stream is known as West Fork Little Snake Creek.

Snake Creek and tribs (0601-0043)

NoKnownImpct

Waterbody Location Information

Revised: 09/16/2009

Water Index No:	SR- 66	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/300	Str Class:	C
Waterbody Type:	River (Low Flow)	Reg/County:	7/Broome Co. (4)
Waterbody Size:	1.7 Miles	Quad Map:	BINGHAMTON EAST (M-17-3)
Seg Description:	entire stream and tribs (within NYS)		

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

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Snake Creek in Corbettsville, Broome County, (at Route 7A and RR bridge) was conducted in 2003 and 2004. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted to slightly impacted water quality conditions, indicating good to very good water quality. Water column sampling revealed no parameter of concerns. Sediment screening for acute toxicity indicated no sediment toxicity and no porewater toxicity was indicated. While sediment sampling revealed some contaminants at low levels but based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. Macroinvertebrates collected at this site and chemically analyzed for selected metals showed elevated levels of metals that should continue to be monitored. Toxicity testing using water from this location showed no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site shows that aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to recreational uses. (DEC/DOW, BWAR/RIBS, August 2009)

Previous biological sampling of Snake Creek in Corbettsville in 1998 also indicated non-impacted water quality conditions. Filter-feeding caddis were dominant, indicating some enrichment, but the fauna was diverse, well-balanced and satisfied screening criteria. (DEC/DOW, BWAR/SBU, January 1999)

Assessment of Snake Creek in Brookdale, PA, by the Susquehanna River Basin Commission in 1998 also found a non-impaired biological community and excellent habitat conditions. The site was designated as a reference site. (Assessment of Interstate Streams, SRBC, May 2007)

Previous Assessment

Concerns were raised in a previous assessment effort in 1998 regarding habitat disturbances from "stone pickers" who gather river stone and rock to sell to landscape companies. Methods of picking varies from hand collection of surface stones to raking up the stream bottom with fork lift-type machinery. A number of complaints have been received about this activity occurring in Snake Creek. Such practices should continue to be monitored. (DEC/DOW, BWAM/WQAS, August 2009)

Segment Description

This segment includes the entire stream and all tribs within New York State. The waters of the stream are Class C. Tribs to this reach/segment are also Class C.

Beaver Lake (0601-0066)

MinorImpacts

Waterbody Location Information

Revised: 07/07/2009

Water Index No:	SR- 99- 1-P174	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/220	Str Class:	C
Waterbody Type:	Lake (Eutrophic)	Reg/County:	7/Broome Co. (4)
Waterbody Size:	35.9 Acres	Quad Map:	WINDSOR (M-18-4)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
Recreation	Stressed	Suspected

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH (algal blooms, clarity), NUTRIENTS (phosphorus)
 Suspected: ---
 Possible: ---

Source(s) of Pollutant(s)

Known: ---
 Suspected: HABITAT MODIFICATION, ON-SITE/SEPTIC SYST
 Possible: ---

Resolution/Management Information

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

Further Details

Overview

Recreational uses (swimming, fishing, boating) in Beaver Lake are thought to experience minor impacts due to algal and aquatic weed growth and elevated nutrients levels in the lake. Inadequate on-site septic systems serving lakeshore residences are a possible source of these impacts. More recent sampling indicates steadily improving water quality.

Water Quality Sampling

Beaver Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1992 through 1994 and from 2002 through 2006. An Interpretive Summary report of the findings of this sampling was published in 2007. These data indicate that the lake continues to be best characterized as eutrophic, or highly productive. However in recent years productivity in the lake has steadily decreased. Phosphorus levels in the lake are regularly above the state guidance values indicating impacted/stressed recreational uses, though less so in recent years. Corresponding transparency measurements have typically met the recommended minimum for swimming beaches since 2002; clarity readings fell below this threshold in 2006 but this is thought to be the result of heavy flooding at the time. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is weakly to moderately colored. (DEC/DOW, BWAM/CSLAP, august 2007)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be favorable. 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," an assessment that is somewhat more favorable than expected based on measured water quality characteristics but is perhaps reflective on improving water quality in recent years. Assessments have noted that aquatic plants typically grow to the lake surface, but weed growth is not cited as limiting recreational uses. Aquatic plants are dominated by a mix of native species. (DEC/DOW, BWAM/CSLAP, August 2007)

Lake Uses

This lake waterbody is designated class C, suitable for use as a general recreation and aquatic life support, but not for drinking 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. Monitoring to assess potable water supply and public bathing use is generally the responsibility of state and/or local health departments.

Section 303d Listing

Beaver Lake 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 impacts to water quality and uses are not sufficient to warrant continued listing. This lake will be considered for delisting during the development of the 2010 Section 303(d) List. (DEC/DOW, BWAM/WQAS, June 2009)

Segment Description

This segment includes the total area of the entire lake.

White Birch Lake (0601-0068)

MinorImpacts

Waterbody Location Information

Revised: 07/08/2009

Water Index No:	SR-100-P174a(?)	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/220	Str Class:	C
Waterbody Type:	Lake	Reg/County:	7/Broome Co. (4)
Waterbody Size:	30.7 Acres	Quad Map:	WINDSOR (M-18-4)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
Recreation	Stressed	Suspected

Type of Pollutant(s)

Known: ALGAL/WEED GROWTH (algal blooms, clarity)
Suspected: NUTRIENTS (phosphorus)
Possible: ---

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Overview

Recreational uses (swimming, fishing, boating) in White Birch Lake are thought to experience minor impacts due to algal and aquatic weed growth in the lake.

Water Quality Sampling

White Birch Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 1986 and continuing through 2000. An Interpretive Summary report of the findings of this sampling was published in 2001. These data indicate that the lake continues to be best characterized as eutrophic, or highly productive. Productivity as measured by trophic indicators has been consistent over the sampling period. Phosphorus levels in the lake typically exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements do not meet the recommended minimum for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. (DEC/DOW, BWAM/CSLAP, December 2001)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be generally favorable. 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," an assessment that is somewhat more favorable than expected given measured water quality characteristics. Assessments have noted that aquatic plants typically grow to the lake surface but not densely. Although surface weed coverage is still noted, "excessive weed growth" has not been identified as impacting recreational uses in recent years. have not been cited as impacting recreational uses. (DEC/DOW, BWAM/CSLAP, December 2001)

Lake Uses

This lake waterbody is designated class C, suitable for use as a general recreation and aquatic life support, but not for drinking 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. Monitoring to assess potable water supply and public bathing use is generally the responsibility of state and/or local health departments.

Section 303d Listing

White Birch Lake 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 impacts to water quality and uses are not sufficient to warrant continued listing. This lake will be considered for delisting during the development of the 2010 Section 303(d) List. (DEC/DOW, BWAM/WQAS, June 2009)

Segment Description

This segment includes the total area of the entire lake.

Wylie Brook and tribs (0601-0044)

MinorImpacts

Waterbody Location Information

Revised: 07/16/2009

Water Index No:	SR-123	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/210	Str Class:	C
Waterbody Type:	River (Low Flow)	Reg/County:	7/Chenango Co. (9) ...
Waterbody Size:	47.5 Miles	Quad Map:	AFTON (M-18-2) ...
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	Suspected
Recreation	Stressed	Suspected

Type of Pollutant(s)

Known: ---
Suspected: NUTRIENTS
Possible: Pathogens

Source(s) of Pollutant(s)

Known: ---
Suspected: AGRICULTURE
Possible: On-Site/Septic Syst (Harpursville (v))

Resolution/Management Information

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

Further Details

Overview

Aquatic life support and recreational uses may experience minor impacts from nutrients and organic loadings. Though biological indices are relatively high, indications of organics and possible sewage influences should be investigated. Inadequate on-site wastewater (septic) systems are a possible source.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Wylie Brook in Harpursville was conducted as part of the RIBS biological screening effort in 1997. Sampling results indicated slightly impacted conditions. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be generally limited and water quality is considered to be satisfactory. The nutrient biotic index and impact source determination indicate some enrichment in the stream and fauna that is most similar to communities influenced by organic inputs. Aquatic life support is considered to be fully supported in the stream, however the indications that organics and possible sewage inputs are contributing to water quality impacts should be investigated. (DEC/DOW, BWAM/SBU, January 2009)

Source Assessment

In addition to the agricultural activity in the watershed, failing and/or Inadequate on-site wastewater (septic) systems serving homes in Harpursville may also be a contributing source. Harpursville was identified as an unsewered community where soil characteristics may not be entirely suitable for on-site systems. (DEC/DOW, Region 7, June 2009)

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 also Class C.

Kelsey Brook, Lower and minor tribs (0601-0045)

NoKnownImpet

Waterbody Location Information

Revised: 07/10/2009

Water Index No: SR-134
Hydro Unit Code: 02050101/200 **Str Class:** C
Waterbody Type: River (Low Flow) **Reg/County:** 7/Chenango Co. (9)
Waterbody Size: 14.2 Miles **Quad Map:** WEST BAINBRIDGE (L-18-3) ...
Seg Description: stream and selected tribs from mouth to North Afton

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 Kelsey Creek in Afton was conducted as part of the RIBS biological screening effort in 1997. Sampling results indicated slightly impacted conditions, but very near the range of non-impacted. In such samples the community is only slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities. 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, January 2009)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Wilkins Brook (-8) in North Afton. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment are also Class C. Wilkins Brook (-8) and Upper Kelsey Brook are listed separately.

Afton Lake (0601-0010)

Need Verific

Waterbody Location Information

Revised: 09/14/2009

Water Index No:	SR-135-P180	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/220	Str Class:	B
Waterbody Type:	Lake (Unknown Trophic)	Reg/County:	7/Chenango Co. (9)
Waterbody Size:	32.9 Acres	Quad Map:	AFTON (M-18-2)
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	Stressed	Possible

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: D.O./OXYGEN DEMAND, NUTRIENTS (nutrient recycling), Algal/Weed Growth (algal blooms, vegetation)

Source(s) of Pollutant(s)

Known: ---
Suspected: AGRICULTURE
Possible: On-Site/Septic Syst

Resolution/Management Information

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

Further Details

Overview

Aquatic life support and recreational uses in Afton Lake may experience minor impacts/threats due to low dissolved oxygen in deeper portions of the lake. These conditions may be naturally occurring.

Previous Assessment

Concerns were raised during previous assessments in 1998 that aquatic life support and recreational uses may be threatened by low dissolved oxygen and pH. Nutrients in the lake bottom which contribute to algal blooms and reduced clarity were also noted. These conditions were noted during a 1998 Lake Classification and Inventory (LCI) evaluation. (DEC/DOW, BWM/Lake Services, August 2009).

Section 303(d) Listing

Afton Lake is included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included among the waters listed in Appendix B - Waters Not Meeting Dissolved Oxygen Standards. This part of the List recognizes waterbodies where low dissolved oxygen in lake bottom waters may be the result of morphology and other natural conditions in

thermally stratified lakes. This updated assessment is inconclusive regarding the level of fishery impact due to low dissolved oxygen and whether any incidences of low dissolved oxygen are naturally occurring. However because NYS water quality standards for dissolved oxygen do not include an explicit exception for natural conditions or averaging of dissolved oxygen over lake depth, USEPA requires that the Section 303(d) List recognize such waters. (DEC/DOW, BWAM/WQAS, June 2009)

Big Brook/Bennettsville Creek and tribs (0601-0048)

MinorImpacts

Waterbody Location Information

Revised: 07/16/2009

Water Index No: SR-139
Hydro Unit Code: 02050101/190 **Str Class:** C
Waterbody Type: River (Low Flow) **Drain Basin:** Susquehanna River
Waterbody Size: 28.9 Miles **Reg/County:** 7/Chenango Co. (9)
Seg Description: stream and tribs fr mouth to Bundy Hollow/Masonville Cr **Quad Map:** SIDNEY (L-19-4) ...

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

Use(s) Impacted	Severity	Problem Documentation
Habitat/Hydrology	Stressed	Known

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: HABITAT MODIFICATION
Suspected: STREAMBANK EROSION, Agriculture (cattle grazing)
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

Habitat/hydrology of Big/Bennettsville Creek is known to experience impacts from stream modification and silt/sediment loadings. Agricultural activities have been identified as a major source of the impacts.

Water Quality Sampling

Biological (macroinvertebrate) assessments of Big/Bennettsville Creek in Bennettsville (at Route 206) and Big/Masonville Creek in Masonville (at Church Road) were conducted as part of the RIBS biological screening effort in 2003. Sampling results at both sites indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. These results are consistent with sampling results collected at the Bennettsville site in 1998. (DEC/DOW, BWAM/SBU, January 2009)

Habitat Assessment

The fishery habitat in Big Brook/Bennettsville Creek is affected by severe streambank erosion in the lower reaches downstream of Route 206. Stream is very unstable, and agricultural activity (cattle grazing) in the upper portion of the segment near the Chenango/Delaware County line is thought to exacerbate erosion, loss of riparian vegetation and

thermal conditions in the stream. As a result, wild brook trout habitat has been impacted in this area. (DEC/DFWMR, Region 7, June 2009)

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, including Masonville Creek (-9), and East Masonville Creek (-10), are Class C,C(T),C(TS).

Unadilla River, Lower, Main Stem (0601-0003)

Impaired Seg

Waterbody Location Information

Revised: 09/16/2009

Water Index No:	SR-146 (portion 1)	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/180	Str Class:	B
Waterbody Type:	River (Med. Flow)	Reg/County:	7/Chenango Co. (9) ...
Waterbody Size:	1.3 Miles	Quad Map:	GUILFORD (L-19-1)
Seg Description:	river from mouth to New Berlin		

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: Pathogens

Source(s) of Pollutant(s)

Known: - - -
Suspected: ATMOSPH. DEPOSITION
Possible: On-Site/Septic Syst

Resolution/Management Information

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

Further Details

Overview

Fish consumption in this portion of the Unadilla River is known to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination. Inadequate on-site wastewater treatment (septic) systems have been identified in some communities in the watershed are being addressed on a case-by-case basis.

Fish Consumption Advisories

Fish consumption in this portion of the Unadilla River is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Rockdale. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Unadilla River in Rockdale, Chenango/Otsego Counties, (at Route 40) was conducted in 2003 and 2004. Intensive Network sampling typically

includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted water quality conditions, indicating very good water quality. Water column sampling revealed iron to be a parameter of concern, but iron is considered to be naturally occurring and not a source of water quality impacts. Sediment screening for acute toxicity indicated no sediment toxicity and no porewater toxicity was indicated. While sediment sampling revealed some contaminants at low levels but based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. Macroinvertebrates collected at this site and chemically analyzed for selected metals showed elevated levels of metals that should continue to be monitored. Toxicity testing using water from this location showed no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site shows that aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to recreational uses. (DEC/DOW, BWAR/RIBS, August 2009)

A biological (macroinvertebrate) survey of the Unadilla River was conducted in 1998. The survey included 4 sites along the reach of the Lower Unadilla. Water quality at all sites was found to be non-impacted, although indices approached slight impact. In previous years, during lower stream flows, water quality at some sites fell into the slightly impacted range. The composition of the macroinvertebrate fauna indicated mild nutrient enrichment, but the communities are diverse and well-balanced. (Unadilla River Biological Assessment Report, Bode et al, DEC/DOW, RIBS/SBU, May 1999)

Water Quality Management

In a number of small unsewered communities along this reach, inadequate residential and commercial on-site wastewater treatment systems result in the discharge of untreated or poorly treated wastewater to the ground or directly into the river. Such instances have been documented in the Hamlets of Riverside and Rockdale; similar conditions exist for the Village of New Berlin and several other hamlets along of the stream. Adequate funding to address the problems with a collection system or treatment plant has not been identified. Individual discharges are currently being addressed on a case-by-case basis by NYSDEC and health department staff. (DEC/DOW, Region 4, September 2009)

Various agricultural activity in the watershed are also of concern regarding water quality. Management practices at several dairy and other farms near the river contribute to livestock waste loadings to the river. Some barnyard boundaries permit unrestricted access to the river, resulting in nutrient and pathogen loads and also contributing to streambank destabilization. Row crop production on steep and/or flood prone fields also contribute to erosion and increase silt and sedimentation in the stream. Improper manure application on these fields is also a concern. (Chenango County WQCC, 1996)

Section 303(d) Listing

Due to the fish consumption advisory that extends for the entire length of the river this portion of the Unadilla River remains impaired. However it is not included on the current (2008) Section 303(d) List due to the completion of the Northeast Regional Mercury TMDL which was approved in 2007 and provides coverage specifically for the Unadilla River. (DEC/DOW, BWAM, January 2009)

Segment Description

This segment includes the main stem portion of the river from the mouth in Sidney to Wharton Creek (-36) in New Berlin. This reach of the river is Class B.

Guilford Creek and tribs (0601-0049)

NoKnownImpct

Waterbody Location Information

Revised: 07/19/2000

Water Index No:	SR-146- 1	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/180	Str Class:	C,C(T) Upper Susquehanna
Waterbody Type:	River (Low Flow)	Reg/County:	7/Chenango Co. (9)
Waterbody Size:	36.2 Miles	Quad Map:	SIDNEY (L-19-4) ...
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 Guilford Creek in East Guilford (at Route 8) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. These results are consistent with sampling collected at this site in 1998. (DEC/DOW, BWAM/SBU, January 2009)

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, including Lower Peckam Brook (-1), are Class C,C(T),C(TS). Upper Peckam Brook (-1) is listed separately.

Guilford Lake (0601-0012)

NoKnownImpct

Waterbody Location Information

Revised: 07/02/2009

Water Index No:	SR-146- 1-P188	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/180	Str Class:	AA
Waterbody Type:	Lake (Mesotrophic)	Reg/County:	7/Chenango Co. (9)
Waterbody Size:	72.9 Acres	Quad Map:	OXFORD (L-18-2)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Possible

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: OTHER POLLUTANTS

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: OTHER SOURCE

Resolution/Management Information

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

Further Details

Water Quality Sampling

Guilford Lake was sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 2004 and continuing through the present. An Interpretive Summary report of the findings of this sampling was published in 2008. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive. Phosphorus levels in the lake do not typically exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements exceed what is the recommended minimum for swimming beaches. Measurements of pH are somewhat high but typically fall within the state water quality range of 6.5 to 8.5. The lake water is weakly colored, but color does not limit water transparency. (DEC/DOW, BWAM/CSLAP, January 2008)

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 in 2008. The recreational suitability of the lake is described most frequently as "excellent." The lake itself is most often described as "not quite crystal clear," an assessment that is consistent with water quality measurements. Assessments have noted that aquatic plants grow to the lake surface but not densely enough to impact uses. (DEC/DOW, BWAM/CSLAP, January 2008)

Lake Uses

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

Drinking Water Supply

Gilford Lake has been designated a Class AA water, suitable for use as a drinking water supply. Although there are no specific water quality impacts, the waterbody is considered a highly valued water resource due to its drinking water supply classification as an AA water. The particular resource value reflected in this designation and the need to provide additional protection may result in an assessment of threatened (possible) for drinking water use.

Previous Assessment

Regional Fisheries staff indicate that Guilford Lake exhibits no significant water quality impacts and supports all uses. No algal blooms have been noted and the level of weed coverage is not excessive, but reasonable and expected for any lake. A Lake Classification and Inventory study (DEC/DOW, Lake Services) found some elevated nutrients and low dissolved oxygen at the lake bottom. But Fisheries data (from the late 1960s to present) shows that these levels have remained stable, and likely represent the natural condition of the lake. There is adequate cool water habitat all year round and in spite of low hypolimnetic D.O. trout survival is not affected. (DEC/DFWMR, Region 7, June 1998)

Segment Description

This segment includes the total area of the lake.

Butternut Creek, Lower, and minor tribs (0601-0050) NoKnownImpct

Waterbody Location Information

Revised: 07/19/2000

Water Index No: SR-146- 9 (portion 1) **Drain Basin:** Susquehanna River
Hydro Unit Code: 02050101/180 **Str Class:** C(T)* Upper Susquehanna
Waterbody Type: River (Low Flow) **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 63.5 Miles **Quad Map:** GILBERTSVILLE (L-19-2) ...
Seg Description: stream and selected tribs from mouth to Gilbertsville

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 Butternut Creek at multiple sites from the mouth in Mount Upton to Garrattsville was conducted during the RIBS Biological Screening effort in 2003. Sampling results indicated primarily non-impacted conditions; results at one site located in Morris (well above this reach) indicated slight impacts. The samples from the four sites within this reach (two at Mount Upton, Copes Corners and Gilbertsville) were dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported at these sites and i this reach. These results are consistent with sampling conducted in Mount Upton in 1998. (Butternut Creek Biological Assessment Report, DEC/DOW, BWAM/SBU, March 2004)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from the mouth to/including Cahoon Creek (-8) in Gilbertsville. The waters of this portion of the stream are primarily Class C,C(T), with a small 0.3 mile reach above unnamed trib (-6) designated Class B(T). Tribs to this reach/segment, including Shaw Brook (-2), Dry Brook (-3), Halbert Brook (-4), Lower Dunderberg Creek (-7) and Cahoon Creek (-8), are Class C,C(T),C(TS). Upper Dunderberg Creek (-7) and other portions of Butternut Creek are listed separately.

Butternut Creek, Middle, and tribs (0601-0140)

NoKnownImpct

Waterbody Location Information

Revised: 06/22/2009

Water Index No:	SR-146- 9 (portion 2)	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/180	Str Class:	C(T)
Waterbody Type:	River	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	63.9 Miles	Quad Map:	()
Seg Description:	stream and tribs, from Gilbertsville to Morris		

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 Butternut Creek at multiple sites from the mouth in Mount Upton to Garrattsville was conducted during the RIBS Biological Screening effort in 2003. Sampling results indicated primarily non-impacted conditions; results at one of three sites located in the upper end of this reach in Morris indicated slight impacts. The samples from the three sites within this reach (Gilbertsville, below Morris and in Morris) were dominated by clean-water species and conditions that reflect a natural community with minimal human impacts. The samples reveal no, or only incidental, anomalies. Aquatic life community is clearly fully supported at these sites and in this reach. (Butternut Creek Biological Assessment Report, DEC/DOW, BWAM/SBU, March 2004)

Previous Assessment

Concern had been raised regarding silt/sediment impacts to fishery habitat due to a collapsing retaining wall along a trib (Silver Creek) in the Village of Morris. However the Otsego County SWCD funded repairs to the wall in 2001. (DEC/DOW, Region 4, July 2009)

Segment Description

This segment includes the portion of the stream and all tribs from Cahoon Creek (-8) in Gilbertsville to/including Silver

Creek (-17) in Morris. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Thorp Brook (-10), Morris Brook (-11), Calhoun Creek (-16) and Silver Creek (-17), are Class C,C(T),C(TS). Other portions of Butternut Creek are listed separately.

Butternut Creek, Middle, and tribs (0601-0190)

NoKnownImpct

Waterbody Location Information

Revised: 09/16/2009

Water Index No: SR-146- 9 (portion 3) **Drain Basin:** Susquehanna River
Hydro Unit Code: 02050101/180 **Str Class:** C(T) Upper Susquehanna
Waterbody Type: River **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 74.8 Miles **Quad Map:** ()
Seg Description: stream and tribs, from Morris to Garrattville

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 Integrated Basin Studies (RIBS) Intensive Network monitoring of Butternut Creek in Butternuts, Otsego County, (at Flat Iron Road) was conducted in 2003 and 2004. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non- impacted conditions, indicating very good water quality. Water column sampling revealed no parameters of concern. Sediment screening for acute toxicity indicated some sediment toxicity and no porewater toxicity was indicated. While sediment sampling revealed some contaminants at low levels, based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. Elevated levels of PAHs in sediment samples may have been related to use of creosote during a bridge construction project. Macroinvertebrates collected at this site and chemically analyzed for selected metals showed elevated levels of metals that should continue to be monitored. Toxicity testing using water from this location showed no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site shows that aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to recreational uses. (DEC/DOW, BWAR/RIBS, August 2009)

A biological (macroinvertebrate) survey of Butternut Creek at multiple sites from the mouth in Mount Upton to Garrattsville was conducted during the RIBS Biological Screening effort in 2003. Sampling results indicated primarily non-impacted conditions; results at one of three sites located in the lower end of this reach in Morris indicated slight impacts. The samples from the three sites within this reach (in Morris, in New Lisbon, in Garrattsville) were dominated by clean-water species and conditions that reflect a natural community with minimal human impacts. The samples reveal no, or only incidental, anomalies. Aquatic life community is clearly fully supported at these sites and in this reach. (Butternut Creek Biological Assessment Report, DEC/DOW, BWAM/SBU, March 2004)

Segment Description

This segment includes the portion of the stream and all tribs from Silver Creek (-17) in Morris to/including Garrattville Creek (-37) in Garrattville. The waters of this portion of the stream are Class C(T),C(TS). Tribs to this reach/segment, including Ketchum Creek (-18), Stony Creek (-29), Crystal Lake Outlet (-36) and Garrattville Creek (-37), are Class C,C(T),C(TS). Other portions of Butternut Creek are listed separately.

Butternut Creek, Upper, and tribs (0601-0141)

NoKnownImpct

Waterbody Location Information

Revised: 09/16/2009

Water Index No: SR-146- 9 (portion 4) **Drain Basin:** Susquehanna River
Hydro Unit Code: 02050101/180 **Str Class:** C(TS) Upper Susquehanna
Waterbody Type: River **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 42.4 Miles **Quad Map:** ()
Seg Description: stream and tribs, above Garrattville

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 Integrated Basin Studies (RIBS) Intensive Network monitoring of Butternut Creek in Butternuts, Otsego County, (at Flat Iron Road) was conducted in 2003 and 2004. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-impacted conditions, indicating very good water quality. Water column sampling revealed no parameters of concern. Sediment screening for acute toxicity indicated some sediment toxicity and no porewater toxicity was indicated. While sediment sampling revealed some contaminants at low levels, based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. Elevated levels of PAHs in sediment samples may have been related to use of creosote during a bridge construction project. Macroinvertebrates collected at this site and chemically analyzed for selected metals showed elevated levels of metals that should continue to be monitored. Toxicity testing using water from this location showed no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site shows that aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to recreational uses. (DEC/DOW, BWAR/RIBS, August 2009)

A biological (macroinvertebrate) survey of Butternut Creek at multiple sites from the mouth in Mount Upton to Garrattsville was conducted during the RIBS Biological Screening effort in 2003. Sampling results indicated primarily non-impacted conditions; results at one site located in Morris (well below this reach) indicated slight impacts. The sample from the upper most site within this reach (in Garrattsville) was dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported at these sites and in this reach. (Butternut Creek Biological Assessment Report, DEC/DOW, BWAM/SBU, March 2004)

Segment Description

This segment includes the portion of the stream and all tribs above Garrattville Creek (-37) in Garrattville. The waters of this portion of the stream are Class C(TS). Tribs to this reach/segment, including Gardiners Pond Outlet (-40) and Methodist Hollow Creek (-45), are Class C,C(T),C(TS). Other portions of Butternut Creek are listed separately.

Dunderberg Creek , Upper, and tribs (0601-0191)

Need Verific

Waterbody Location Information

Revised: 06/12/2009

Water Index No: SR-146- 9- 7
Hydro Unit Code: 02050101/180 **Str Class:** AA(T)
Waterbody Type: River
Waterbody Size: 8.7 Miles
Seg Description: stream and tribs, above Gilbertsville

Drain Basin: Susquehanna River
Upper Susquehanna
Reg/County: 4/Otsego Co. (39)
Quad Map: ()

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

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Resolution Potential: Medium

Further Details

Overview

Water supply uses of the Gilbertsville Reservoir and Upper Dunderberg Creek are thought to experience threats from pathogens due to the level of agricultural pasturelands in the watershed. Current information does not indicate any impacts to water supply or other uses, but the use of the resources as a water supply and the activities in the watershed suggest additional protection efforts are appropriate.

Source (Drinking) Water Assessment

A source water assessment of the Upper Dunderberg Creek watershed found an elevated susceptibility to pathogen contamination due to the high amount of pastureland in the watershed. This assessment was conducted 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 water supply source provides water to the Village of Gilbertsville. (NYSDOH, Source Water Assessment Program, 2005)

Segment Description

This segment includes the portion of the stream and all tribs above a point 2.3 miles above the mouth near Gilbertsville. The waters of this portion of the stream are Class AA(T). Tribs to this reach/segment are Class AA.

Great Brook and tribs (0601-0051)

NoKnownImpet

Waterbody Location Information

Revised: 07/19/2000

Water Index No:	SR-146-19	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/170	Str Class:	C
Waterbody Type:	River (Low Flow)		Upper Susquehanna
Waterbody Size:	45.7 Miles	Reg/County:	7/Chenango Co. (9)
Seg Description:	entire stream and tribs	Quad Map:	HOLMESVILLE (K-19-4) ...

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

Biological (macroinvertebrate) sampling of Great Brook in Holmesville (at Route 8) indicated non-impacted water quality conditions. The sample was diverse, well-balanced (dominated by midges) and satisfied screening criteria. (DEC/DOW, BWAR/SBU, January 1999)

Segment Description

This segment includes the entire stream and all tribs. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Chenango Lake Outlet (-3) and West Branch (-6), are also Class C,C(T).

Chenango Lake (0601-0013)

NoKnownImpct

Waterbody Location Information

Revised: 07/06/2009

Water Index No:	SR-146-19- 6-1-P213	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/170	Str Class:	A
Waterbody Type:	Lake(R)	Reg/County:	7/Chenango Co. (9)
Waterbody Size:	133.9 Acres	Quad Map:	HOLMESVILLE (K-19-4)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

Chenango Lake has been sampled as part of the NYSDEC Citizen Statewide Lake Assessment Program (CSLAP) beginning in 2000 and continuing through 2006. An Interpretive Summary report of the findings of this sampling was published in 2007. These data indicate that the lake continues to be best characterized as mesotrophic, or moderately productive. Phosphorus levels in the lake rarely exceed the state guidance values indicating impacted/stressed recreational uses. Corresponding transparency measurements typically exceed the recommended minimum for swimming beaches. Measurements of pH typically fall within the state water quality range of 6.5 to 8.5. The lake water is weakly colored, but color does not limit water transparency. (DEC/DOW, BWAM/CSLAP, July 2007)

Recreational Assessment

Public perception of the lake and its uses is also evaluated as part of the CSLAP program. This assessment indicates recreational suitability of the lake to be very favorable since the lake was first evaluated and continuing through the most recent assessment. The recreational suitability of the lake is described most frequently as "could not be nicer" or "excellent." The lake itself is most often described as "not quite crystal clear," an assessment that is consistent measured water quality characteristics. Assessments have noted that aquatic plants only rarely grows to the lake surface. Aquatic plants are dominated by a mix of native species and non-native Eurasian milfoil and have not been cited as impacting

recreational uses. (DEC/DOW, BWAM/CSLAP, July 2007)

Lake Uses

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

Source (Drinking) Water Assessment

A source water assessment of Chenango Lake found no elevated susceptibility to contaminants. This assessment was conducted 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 water supply source provides water to the City of Norwich. (NYSDOH, Source Water Assessment Program, 2005)

Previous Assessment

Concerns regarding threats to recreational uses in Chenango Lake were raised during previous assessments in 2000. These concerns were based on conditions noted during a 1998 Lake Classification and Inventory (LCI) evaluation and the identification of inadequate and/or failing on-site septic systems serving homes around the lake that were identified by the Norwich Water Department and the local lake association. Conversion of summer cottages to year-round residences coupled with poor site conditions (high water table, small lots, inadequate soils), and poor design of systems were noted. Although efforts to address on-site septic system issues should continue, more recent sampling indicates that any impacts from this or other sources is limited and does not impact uses. (DEC/DOW, BWAM/WQAS, June 2009)

Section 303(d) Listing

Chenango Lake is included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included among the waters listed in Appendix B - Waters Not Meeting Dissolved Oxygen Standards. This part of the List recognizes waterbodies where low dissolved oxygen in lake bottom waters may be the result of morphology and other natural conditions in thermally stratified lakes. This updated assessment suggests that there are no significant impacts to the fishery and other uses are fully supported. Based on this assessment the lake is assessed as having no known impacts. However because NYS water quality standards for dissolved oxygen do not include an explicit exception for natural conditions or averaging of dissolved oxygen over lake depth, USEPA requires that the Section 303(d) List recognize such waters.

Segment Description

This segment includes the total area of the lake.

Unadilla River, Middle, and minor tribs (0601-0037)

Impaired Seg

Waterbody Location Information

Revised: 09/11/2009

Water Index No: SR-146 (portion 2) **Drain Basin:** Susquehanna River
Hydro Unit Code: 02050101/140 **Str Class:** B Upper Susquehanna
Waterbody Type: River (Low Flow) **Reg/County:** 4/Otsego Co. (39) ...
Waterbody Size: 3.2 Miles **Quad Map:** WEST WINFIELD (J-20-1) ...
Seg Description: stream and select tribs, fr New Berlin to Leonardsville

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

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: ext/EPA **Resolution Potential:** Medium
TMDL/303d Status: 1->4a

Further Details

Overview

Fish consumption in this portion of the Unadilla River is thought to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination.

Fish Consumption Advisories

Fish consumption in this portion of the Unadilla River is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Rockdale. Although monitoring data above that point is not available, this reach is included in the advisory as a precaution. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling

A biological (macroinvertebrate) survey of the Unadilla River was conducted in 1998. The survey included two sites along the lower portion of the segment reach. Water quality at both sites (in fact, all Unadilla River sites) was found to

be non-impacted, although indices approached slight impact. In previous years, during lower stream flows, water quality at some sites fell into the slightly impacted range. The composition of the macroinvertebrate fauna indicated some nutrient enrichment, but the communities are diverse and well-balanced. (Unadilla River Biological Assessment Report, Bode et al, DEC/DOW, RIBS/SBU, May 1999)

Watershed Management

While monitoring data show generally good water quality in much of the Susquehanna River Basin, agricultural activity and its impact on water quality in the watershed are of some concern. Local agencies, including the Upper Susquehanna Coalition, conduct assessments, provide technical support and implement watershed management programs to focus attention and protect water quality in the watershed. The incentive-based nonpoint sources control activities support Chesapeake Bay Program goals to reduce nutrients in the watershed and are outlined in a CBP Tributary Strategy developed by New York State. (DEC/DOW, BWAM/BWM, April 2009)

Section 303(d) Listing

Due to the fish consumption advisory that extends for the entire length of the river this portion of the Unadilla River remains impaired. However it is not included on the current (2008) Section 303(d) List due to the completion of the Northeast Regional Mercury TMDL which was approved in 2007 and provides coverage specifically for the Unadilla River. (DEC/DOW, BWAM, January 2009)

This portion of the Unadilla River is also currently included on the NYS 2008 Section 303(d) List of Impaired/TMDL Waters. However the current listing reflects the water quality problems and impairment that occurs primarily in the North Winfield Creek segment (0601-0035), which is a tributary to this segment. The updated assessments for both of these segments suggest it is more appropriate to include North Winfield segment on the List rather than this segment.

It is recommended that this waterbody segment be removed from (replaced) on the 2010 List. (DEC/DOW, BWAM/WQAS, September 2009)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from Wharton Creek (-36) in New Berlin to unnamed trib (-56) in Leonardsville. The waters of this portion of the stream are Class B from New Berlin to unnamed trib (-39) in South Edmeston, Class C to unnamed trib (-40) above south Edmeston, and Class B for the remainder of the reach. Tribs to this reach/segment, including Five Corners Creek (-46) and Button Creek (-52), are also/primarily Class C,C(T). Center Brook (-38), Tallette Creek (-43), Beaver Creek (-44) and Lower/Upper Unadilla River are listed separately.

Unadilla River, Upper, and minor tribs (0601-0188)

Impaired Seg

Waterbody Location Information

Revised: 06/15/2009

Water Index No: SR-146 (portion 3) **Drain Basin:** Susquehanna River
Hydro Unit Code: 02050101/140 **Str Class:** C(T) Upper Susquehanna
Waterbody Type: River **Reg/County:** 6/Herkimer Co. (22)
Waterbody Size: 107.5 Miles **Quad Map:** ()
Seg Description: stream and select tribs, above Leonardsville

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

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: ---
Suspected: ATMOSPHERIC DEPOSITION
Possible: ---

Resolution/Management Information

Issue Resolvability: 3 (Strategy Being Implemented)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: ext/EPA **Resolution Potential:** Medium
TMDL/303d Status: 4a*

Further Details

Overview

Fish consumption in this portion of the Unadilla River is thought to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination.

Fish Consumption Advisories

Fish consumption in this portion of the Unadilla River is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Rockdale. Although monitoring data above that point is not available, this reach is included in the advisory as a precaution. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling

A biological (macroinvertebrate) survey of the Unadilla River was conducted in 1998. The survey included one site near the downstream end of the segment reach. Water quality at this site (in fact, all Unadilla River sites) was found to be

non-impacted, although indices approached slight impact. Initial sampling at this site suggested slight impacts, but these results were determined to be influenced by poor sampling substrate. An adjusted assessment that accounted for the substrate indicated non-impacted conditions. The composition of the macroinvertebrate fauna indicated some nutrient enrichment, but the communities are diverse and well-balanced. (Unadilla River Biological Assessment Report, Bode et al, DEC/DOW, RIBS/SBU, May 1999)

Section 303(d) Listing

Due to the fish consumption advisory that extends for the entire length of the river this portion of the Unadilla River remains impaired. However it is not included on the current (2008) Section 303(d) List due to the completion of the Northeast Regional Mercury TMDL which was approved in 2007 and provides coverage specifically for the Unadilla River. (DEC/DOW, BWAM, January 2009)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs above unnamed trib (-56) in Leonardsville. The waters of this portion of the stream are Class C(T),C(TS). Tribs to this reach/segment, including Button Creek (-52), are also/primarily Class C,C(T). West Branch Unadilla River (-64), North Winfield Creek (-9) and Lower/Middle Unadilla River are listed separately.

Wharton Creek, Lower, and minor tribs (0601-0052) NoKnownImpet

Waterbody Location Information

Revised: 07/19/2000

Water Index No: SR-146-36
Hydro Unit Code: 02050101/150 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 55.4 Miles
Seg Description: stream and selected tribs from mouth to Edmeston

Drain Basin: Susquehanna River
Reg/County: 4/Otsego Co. (39)
Quad Map: NEW BERLIN NORTH (K-19-2) ...

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

Biological (macroinvertebrate) sampling of Wharton Creek in New Berlin (at Route 18) indicated non-impacted water quality conditions. Streambanks were exposed and elevated sediment loads were noted during sampling; but the sample was diverse, well-balanced and satisfied screening criteria. (DEC/DOW, BWAR/SBU, January 1999)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Mill Creek (-9) in Edmeston. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment are Class C,C(T),C(TS). Mill Creek (-9) is listed separately.

Summit Lake (0601-0024)

NoKnownImpct

Waterbody Location Information

Revised: 09/15/2009

Water Index No:	SR-146-36-23-P228	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/150	Str Class:	B
Waterbody Type:	Lake	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	33.5 Acres	Quad Map:	UNADILLA FORKS (J-20-4)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

Summit Lake was sampled as part of the NYSDEC Lake Classification and Inventory (LCI) screening effort in 2008. Nutrient, chlorophyll a and clarity measurements taken at that time revealed no significant eutrophication of the lake and algal growth did not appear to impact recreational uses. Measurement of dissolved oxygen did not indicate any D.O. depletion that would affect the fishery or other aquatic resources. (DEC/DOW, BWAM/LCI, September 2009)

Previous Assessment

Concerns were raised during a previous assessment effort in 1998 regarding impacts on recreational uses (swimming, fishing, boating) in Summit Lake may be affected by high nutrient levels and resulting algal blooms and excessive aquatic vegetation. However more recent sampling could not verify such impacts and water quality was found to be fully supportive of uses. (DEC/DOW, BWAM/WQAS, September 2009)

Center Brook and minor tribs (0601-0147)

NoKnownImpct

Waterbody Location Information

Revised: 06/22/2009

Water Index No: SR-146-38
Hydro Unit Code: 02050101/140 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 28.4 Miles
Seg Description: entire stream and selected tribs

Drain Basin: Susquehanna River
Reg/County: 7/Chenango Co. (9)
Quad Map: ()

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 Center Brook in Five Corners (at Route 8) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. (DEC/DOW, BWAM/SBU, January 2009)

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 Class C. Shawler Brook (-1) is listed separately.

Beaver Creek, Lower, and tribs (0601-0053)

NoKnownImpct

Waterbody Location Information

Revised: 11/08/2000

Water Index No: SR-146-44
Hydro Unit Code: 02050101/130 **Str Class:** C(T)
Waterbody Type: River (Low Flow) **Reg/County:** 7/Madison Co. (27) ...
Waterbody Size: 16.1 Miles **Quad Map:** BROOKFIELD (J-19-3) ...
Seg Description: stream and tribs from mouth to near Brookfield

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

Biological (macroinvertebrate) sampling of Beaver Creek in South Brookfield (off South Brookfield Road) indicated non-impacted water quality conditions. The sample was diverse, well-balanced and satisfied screening criteria. Livestock in the stream were noted during sampling, but apparently did not impact the fauna substantially. (DEC/DOW, BWAR/SBU, January 1999)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to/including West Creek (-9) in West Brookfield. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including West Creek (-9), are also Class C,C(T). Upper Beaver Creek is listed separately.

North Winfield Creek and tribs (0601-0035)

Impaired Seg

Waterbody Location Information

Revised: 09/10/2009

Water Index No: SR-146-69
Hydro Unit Code: 02050101/140 **Str Class:** C(T)
Waterbody Type: River (Low Flow)
Waterbody Size: 8.0 Miles
Seg Description: entire stream and tribs

Drain Basin: Susquehanna River
Upper Susquehanna
Reg/County: 6/Herkimer Co. (22)
Quad Map: WEST WINFIELD (J-20-1)

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

Type of Pollutant(s)

Known: PATHOGENS
Suspected: ---
Possible: Nutrients

Source(s) of Pollutant(s)

Known: ON-SITE/SEPTIC SYST (West Winfield)
Suspected: Agriculture
Possible: ---

Resolution/Management Information

Issue Resolvability: 2 (Strategy Exists, Needs Funding/Resources)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DOW/Reg6
TMDL/303d Status: 4b->1*

Resolution Potential: High

Further Details

Overview

Recreational uses (swimming, fishing) in North Winfield Creek are impaired by pathogen contamination from failing on-site septic systems. While these impacts do not affect the entire segment, the localized impacts are sufficiently significant to suggest assessment as an impaired waterbody.

Source Assessment

Numerous on-site septic systems in the Village of West Winfield are failing due to poor soils and inadequate lot sizes. As a result, untreated sewage is discharged to storm sewers, streams and the ground surface. The village has been pursuing funding for construction of a proposed collection and treatment system to address the discharges to storm sewers and the creek. WQIP funding was awarded to the village during Round 6 (in 2003) to address failing on-site systems with a municipal system. However, after consideration, the Village chose not to pursue the award in part because it covered only 10% of the \$6 million needed. (DEC/DOW, Region 6, July 2009)

Water Quality Sampling

A biological (macroinvertebrate) assessment of North Winfield Creek in West Winfield (at Route 20/Town Park) was

conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and are most similar to a natural community with minimal human impacts. Some additional species, including sensitive non-native species, and additional biomass may be present; the samples reveal no, or only incidental, anomalies. Aquatic life community is fully supported. Note that this sampling was conducted on the upstream side of the village. (DEC/DOW, BWAM/SBU, January 2009)

Section 303(d) Listing

North Winfield Creek is not currently included on the NYS 2008 Section 303(d) List of Impaired/TMDL Waters. However the 2008 List does include a listing for a portion of the Unadilla River that lies downstream of this stream and reflects the water quality problems and impairment outlined for this segment. The updated assessments for both of these segments suggest it is more appropriate to include this waterbody on the List rather than the Unadilla River segment (0601-0037). It is recommended that this waterbody segment be included on Part 1 of the 2010 List due to impairment from pathogens. (DEC/DOW, BWAM/WQAS, September 2009)

Segment Description

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

Carrs Creek, Lower and tribs (0601-0005)

NoKnownImpct

Waterbody Location Information

Revised: 09/10/2009

Water Index No:	SR-153	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/110	Str Class:	C(T)
Waterbody Type:	River (Low Flow)	Reg/County:	4/Delaware Co. (13)
Waterbody Size:	11.3 Miles	Quad Map:	UNADILLA (L-19-3)
Seg Description:	stream and tribs from mouth to Sidney Center		

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

Biological (macroinvertebrate) sampling of Carrs Creek in Youngs (at Poplar Hill Road) indicated non-impacted water quality conditions. The sample was diverse, well-balanced and satisfied screening criteria. (DEC/DOW, BWAR/SBU, January 1999)

Previous Assessment

NYSDEC regional staff had reported during a previous assessment effort that impacts from septic systems and the resulting contamination of private wells were noted in a 1990 nonpoint sources evaluation. More recent discussion with the NYS DOH office in the county indicate that these were isolated problems had been addressed by local code enforcement officials. There were no known direct impacts to the stream. (DEC/DOW, BWAM and NYS DOH, September 2009)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to/including unnamed trib (-6) in Sidney Center. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment are primarily Class C,C(T), with a small subtrib (-6-1-1) designated Class AA. Upper Carrs Creek listed separately.

Handsome Br/West Branch and minor tribs (0601-0055)NoKnownImpet

Waterbody Location Information

Revised: 07/19/2000

Water Index No: SR-155- 3
Hydro Unit Code: 02050101/090 **Str Class:** C(TS)
Waterbody Type: River
Waterbody Size: 32.9 Miles
Seg Description: entire stream (incl West Branch) and smaller tribs

Drain Basin: Susquehanna River
Upper Susquehanna
Reg/County: 4/Delaware Co. (13)
Quad Map: FRANKLIN (L-20-4) ...

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 Handsome Brook in Bartlett Hollow (at Route 357) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. These results are consistent with sampling conducted at this site in 1998. (DEC/DOW, BWAM/SBU, January 2009)

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C(TS). Tribs to this reach/segment, including East Branch (-2) and West Branch (-3), are Class C,C(T),C(TS).

Treadwell Creek and tribs (0601-0058)

NoKnownImpct

Waterbody Location Information

Revised: 07/19/2000

Water Index No:	SR-155- 7	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/090	Str Class:	C(TS)
Waterbody Type:	River (Low Flow)	Reg/County:	4/Delaware Co. (13)
Waterbody Size:	42.7 Miles	Quad Map:	TREADWELL (L-20-3) ...
Seg Description:	entire stream and tribs		

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

Use(s) Impacted	Severity	Problem Documentation
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 Treadwell Creek near Franklin (at Route 357) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. These results are consistent with sampling conducted on the stream in 1998. (DEC/DOW, BWAM/SBU, January 2009)

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C(TS). Tribs to this reach/segment, including Roaring Brook (-5) and Poverty Hollow Creek (-7), are Class C,C(T),C(TS).

East Sidney Reservoir (0601-0001)

Need Verific

Waterbody Location Information

Revised: 09/15/2009

Water Index No:	SR-155-P262	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/090	Str Class:	B(T)
Waterbody Type:	Lake (Eutrophic)	Reg/County:	4/Delaware Co. (13)
Waterbody Size:	115.8 Acres	Quad Map:	FRANKLIN (L-20-4)
Seg Description:	entire lake		

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 (algal blooms, clarity), NUTRIENTS, D.O./Oxygen Demand
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: AGRICULTURE
Possible: On-Site/Septic Syst

Resolution/Management Information

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

Further Details

Overview

Recreational uses (swimming, boating, fishing) in East Sidney Reservoir may experience minor impacts and threats due to elevated nutrient loads that lead to occasional algal blooms and reduced water clarity. Agricultural and other nonpoint sources are likely contributing to the impacts; inadequate on-site septic systems are also a possible source.

Previous Assessment

Occasional algal blooms, reduced clarity and high nutrient loads were noted during a 1984 Lake Classification and Inventory study by NYSDEC. The Army Corps of Engineers had also conducted a watershed study in late 1980s that reported high nutrient loads, algal blooms and low dissolved oxygen in the lake. The Corps installed a bubbler system during the summer of 1989 to try to relieve hypolimnetic anoxia. At that time agricultural runoff was thought to be the primary source of impact. However more recently Delaware County farm management program has helped reduce nonpoint effects from farms. Inadequate on-site septic systems in upstream hamlets were also thought at that time to contribute to water quality issues in the reservoir. Current conditions in the reservoir need to be verified. (DEC/DOW, BWAM/WQAS, August 2009)

Otsdawa Creek and minor tribs (0601-0059)

NoKnownImpct

Waterbody Location Information

Revised: 07/19/2000

Water Index No: SR-165
Hydro Unit Code: 02050101/080 **Str Class:** C(TS)
Waterbody Type: River (Low Flow) **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 2.6 Miles **Quad Map:** OTEGO (L-20-1)
Seg Description: stream and selected tribs fr mouth to East/West Branch

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

Biological (macroinvertebrate) sampling of Otsdawa Creek in Otego (at Main Street) indicated non-impacted water quality conditions. The sample was dominated by midges and was diverse, well-balanced and all indices were indicative of excellent water quality. (DEC/DOW, BWAR/SBU, January 1999)

Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are Class C(TS). Tribs to this reach/segment, including West Branch Otsdawa Creek (-3) and East Branch Otsdawa Creek (-4), are Class C,C(T),C(TS).

Otego Creek, Lower, and minor tribs (0601-0046)

NoKnownImpet

Waterbody Location Information

Revised: 07/10/2009

Water Index No: SR-172
Hydro Unit Code: 02050101/070 **Str Class:** C(T)
Waterbody Type: River (Low Flow) **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 36.7 Miles **Quad Map:** ONEONTA (L-20-2) ...
Seg Description: stream and tribs from mouth to near Laurens

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 Otego Creek in Oneonta was conducted as part of the RIBS biological screening effort in 1997. Sampling results indicated slightly impacted conditions. In such samples the community is only slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities. 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, January 2009)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to/including Wharton Creek (-13) near Laurens. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Harrison Creek (-8) and Wharton Creek (-13), are Class C,C(T),C(TS). Middle/Upper Otego Creek is listed separately.

Oneonta Creek, Upper, and tribs (0601-0166)

Need Verific

Waterbody Location Information

Revised: 06/12/2009

Water Index No:	SR-179	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/120	Str Class:	A
Waterbody Type:	River	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	8.5 Miles	Quad Map:	()
Seg Description:	stream and tribs above Oneonta		

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

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Overview

Water supply uses of the Oneonta Lower Reservoir and Upper Oneonta Creek are thought to experience threats from pathogens due to the level of agricultural pasturelands in the watershed. Current information does not indicate any impacts to water supply or other uses, but the use of the resources as a water supply and the activities in the watershed suggest additional protection efforts are appropriate.

Source (Drinking) Water Assessment

A source water assessment of the Upper Oneonta Creek watershed found an elevated susceptibility to pathogen contamination due to the high amount of pastureland in the watershed. This assessment was conducted 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 water supply source provides water to the City of Oneonta. (NYSDOH, Source Water Assessment Program, 2005)

Segment Description

This segment includes the portion of the stream and all tribs above Lower Reservoir (P295) near Oneonta. The waters of this portion of the stream are Class A. Tribs to this reach/segment are also Class A. Lower Oneonta Creek is listed with Minor Tribs to Susquehanna River.

Oneonta Lower Reservoir (0601-0097)

Need Verific

Waterbody Location Information

Revised: 06/12/2009

Water Index No:	SR-179-P295	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/120	Str Class:	A
Waterbody Type:	Lake(R)	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	5.3 Acres	Quad Map:	ONEONTA (L-20-2)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Suspected

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Overview

Water supply uses of the Oneonta Lower Reservoir and Upper Oneonta Creek are thought to experience threats from pathogens due to the level of agricultural pasturelands in the watershed. Current information does not indicate any impacts to water supply or other uses, but the use of the resources as a water supply and the activities in the watershed suggest additional protection efforts are appropriate.

Source (Drinking) Water Assessment

A source water assessment of the Upper Oneonta Creek watershed found an elevated susceptibility to pathogen contamination due to the high amount of pastureland in the watershed. This assessment was conducted 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 water supply source provides water to the City of Oneonta. (NYSDOH, Source Water Assessment Program, 2005)

Wilber Lake (0601-0098)

NoKnownImpct

Waterbody Location Information

Revised: 06/12/2009

Water Index No:	SR-179-P297	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/120	Str Class:	A
Waterbody Type:	Lake	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	88.7 Acres	Quad Map:	MOUNT VISION (K-20-3)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

Wilber Lake was sampled as part of the NYSDEC Lake Classification and Inventory (LCI) screening effort in 2008. Nutrient, chlorophyll a and clarity measurements taken at that time revealed no significant eutrophication of the lake and algal growth did not appear to impact recreational uses. Measurement of dissolved oxygen did not indicate any D.O. depletion that would affect the fishery or other aquatic resources. (DEC/DOW, BWAM/LCI, September 2009)

Source (Drinking) Water Assessment

A source water assessment of Wilber Lake found no elevated susceptibility to contaminants. This assessment was conducted 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 water supply source provides water to the City of Oneonta. (NYSDOH, Source Water Assessment Program, 2005)

Segment Description

This segment includes the total area of the entire lake.

Charlotte Creek, Lower, and tribs (0601-0014)

NoKnownImpct

Waterbody Location Information

Revised: 06/26/2009

Water Index No: SR-183
Hydro Unit Code: 02050101/060 **Str Class:** C(T)
Waterbody Type: River (Med. Flow) **Reg/County:** 4/Delaware Co. (13)
Waterbody Size: 33.6 Miles **Quad Map:** CHARLOTTEVILLE (K-22-4)
Seg Description: stream and tribs, from mouth to Davenport Center

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 Charlotte Creek in West Davenport (at Hollow Road) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated slightly impacted conditions, but close to the range of non-impacted. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to communities influenced by nonpoint sources. 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 results are somewhat lower yet fairly consistent with field assessment results from sampling conducted at this site in 1997. (DEC/DOW, BWAM/SBU, January 2009)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Kortright Creek (-8) in Davenport Center. The waters of this portion of the stream are Class C(T). Tribs to this reach/segment, including Presser Hollow Creek (-2) and Pumpkin Hollow Creek (-6), are Class C,C(T),C(TS). Kortright Creek (-8) and Middle/Upper Charlotte Creek are listed separately.

Charlotte Creek, Middle, and minor tribs (0601-0167) NoKnownImpet

Waterbody Location Information

Revised: 06/26/2009

Water Index No: SR-183
Hydro Unit Code: 02050101/060 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 76.1 Miles
Seg Description: stream and selected tribs, Davenport Ctr to S.Worcester

Drain Basin: Susquehanna River
Reg/County: 4/Delaware Co. (13) ...
Quad Map: ()

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 Charlotte Creek below this reach in West Davenport (at Hollow Road) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated slightly impacted conditions, but close to the range of non-impacted. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to communities influenced by nonpoint sources. 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 results are somewhat lower yet fairly consistent with field assessment results from sampling conducted at this site in 1997. Though this sampling point is just below the described segment, it is considered representative of water quality in the upper reach. This segment is listed as being evaluated rather than monitored. (DEC/DOW, BWAM/SBU, January 2009)

Segment Description

This segment includes the portion of the stream and selected/smaller tribs from Kortright Creek (-8) in Davenport Center to/including Center Valley Creek (-26) near South Worcester. The waters of this portion of the stream are Class

C(T),C(TS). Tribs to this reach/segment, including Crawford Brook (-10), Dona Brook (-12), Negro Brook (-16) and Center Valley Creek (-26), are Class C,C(T),C(TS). Kortright Creek (-8), Middle Brook (-19) and Lower/Upper Charlotte Creek are listed separately.

Kortright Creek and tribs (0601-0060)

NoKnownImpct

Waterbody Location Information

Revised: 07/19/2000

Water Index No:	SR-183- 8	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/060	Str Class:	C(TS)
Waterbody Type:	River	Reg/County:	4/Delaware Co. (13)
Waterbody Size:	40.7 Miles	Quad Map:	WEST DAVENPORT (L-21-1) ...
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 Kortright Creek in East Meredith (at Route 10) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. These results are consistent with sampling conducted at the same site in 1998. (DEC/DOW, BWAM/SBU, January 2009)

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 Mine Brook (-4), are Class C,C(T),C(TS).

Sexsmith Lake (0601-0101)

NoKnownImpct

Waterbody Location Information

Revised: 09/15/2009

Water Index No:	SR-183-17-P311	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/060	Str Class:	B
Waterbody Type:	Lake	Reg/County:	4/Delaware Co. (13)
Waterbody Size:	31.6 Acres	Quad Map:	DAVENPORT (L-21-2)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

Sexsmith Lake was sampled as part of the NYSDEC Lake Classification and Inventory (LCI) screening effort in 2008. Nutrient, chlorophyll a and clarity measurements taken at that time revealed no significant eutrophication of the lake and algal growth did not appear to impact recreational uses. Measurement of dissolved oxygen did not indicate any D.O. depletion that would affect the fishery or other aquatic resources. (DEC/DOW, BWAM/LCI, September 2009)

Middle Brook and minor tribs (0601-0061)

NoKnownImpet

Waterbody Location Information

Revised: 07/19/2000

Water Index No: SR-183-19
Hydro Unit Code: 02050101/060 **Str Class:** C(T)
Waterbody Type: River (Low Flow) **Drain Basin:** Susquehanna River
Waterbody Size: 43.1 Miles **Reg/County:** 4/Delaware Co. (13) ...
Seg Description: entire stream and selected tribs **Quad Map:** DAVENPORT (L-21-2) ...

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

Biological (macroinvertebrate) sampling of Middle Brook near Butts Corners (at Route 23) indicated non-impacted water quality conditions. The sample was diverse, well-balanced and satisfied screening criteria. (DEC/DOW, BWAR/SBU, January 1999)

Segment Description

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C(T),C(TS). Tribs to this reach/segment, including Tedle Brook (-6), are Class C,C(T),C(TS). Center Brook (-8) is listed separately.

Schenevus Creek, Lower and tribs (0601-0062)

NoKnownImpct

Waterbody Location Information

Revised: 09/16/2009

Water Index No: SR-187
Hydro Unit Code: 02050101/050 **Str Class:** C(T)
Waterbody Type: River (Low Flow) **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 47.2 Miles **Quad Map:** WEST DAVENPORT (L-21-1) ...
Seg Description: stream and tribs, from mouth to near Schenevus

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 Integrated Basin Studies (RIBS) Intensive Network monitoring of Schenevus Creek in Colliersville, Otsego County, (at Route 28) was conducted in 2003 and 2004. Intensive Network sampling typically includes macroinvertebrate community analysis, water column chemistry, sediment and invertebrate tissues analysis and toxicity evaluation. During this sampling the biological (macroinvertebrate) sampling results indicated non-to slightly impacted, indicating good to very good water quality. Water column sampling revealed iron to be a parameter of concern, but iron is considered to be naturally occurring and not a source of water quality impacts. Sediment screening for acute toxicity indicated slight sediment toxicity and no porewater toxicity was indicated. While sediment sampling revealed some contaminants at low levels, based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. Macroinvertebrates collected at this site and chemically analyzed for selected metals showed elevated levels of metals that should continue to be monitored. Toxicity testing using water from this location showed no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site shows that aquatic life is considered to be fully supported in the stream, and there are no other apparent water quality impacts to recreational uses. (DEC/DOW, BWAR/RIBS, August 2009)

Previous biological sampling of Schenevus Creek in Colliersville in 1998 indicated non-impacted water quality conditions. The sample was diverse, well-balanced and satisfied screening criteria. (DEC/DOW, BWAR/SBU, January 1999)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Elk Creek (-14) near Schenevus. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including Potato Creek (-7), Morehouse Brook (-8) and Whitney Brook (-10), are Class C,C(T),C(TS). Elk Creek (-14) and Upper Schenevus Creek are listed separately.

Elk Creek, Lower and tribs (0601-0019)

NoKnownImpct

Waterbody Location Information

Revised: 06/22/2009

Water Index No: SR-187-14
Hydro Unit Code: 02050101/040 **Str Class:** C(TS)
Waterbody Type: River (Low Flow) **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 31.2 Miles **Quad Map:** SCHENEVUS (K-21-3)
Seg Description: stream and tribs, from mouth to Elk Creek

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 Elk Creek in Schenevus (at Route 34) was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and conditions that reflect a natural community with minimal, if any, human impacts. Aquatic life community is clearly fully supported. (DEC/DOW, BWAM/SBU, January 2009)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to/including Little Elk Creek (-4) near Elk Creek. The waters of this portion of the stream are Class C(TS). Tribs to this reach/segment, including Sperry Hollow Brook (-1) and Little Elk Creek (-4), are Class C(T),C(TS). Upper Elk Creek is listed separately.

Susquehanna River, Upper, Main Stem (0601-0041)

Impaired Seg

Waterbody Location Information

Revised: 09/17/2009

Water Index No: SR (portion 9) **Drain Basin:** Susquehanna River
Hydro Unit Code: 02050101/030 **Str Class:** B Upper Susquehanna
Waterbody Type: River (Low Flow) **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 20.8 Miles **Quad Map:** MILFORD (K-21-4) ...
Seg Description: above Portlandville to Cooperstown

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

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

Type of Pollutant(s)

Known: ---
Suspected: METALS (mercury), Unknown Toxicity
Possible: ---

Source(s) of Pollutant(s)

Known: ---
Suspected: ATMOSPHERIC DEPOSITION
Possible: Agriculture, Unknown Source

Resolution/Management Information

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

Further Details

Overview

Fish consumption in this portion of the Susquehanna River is thought to be impaired due to a health advisory that recommend restricting the consumption of fish from the river because of elevated mercury levels. Atmospheric deposition is the likely source of the mercury contamination.

Fish Consumption Advisories

Fish consumption in this portion of the Susquehanna is impaired by a health advisory for the entire river due to mercury contamination. The advisory recommends eating no more than one meal per month of larger walleye (over 22 inches). NYS DOH indicates elevated mercury levels have been documented in the river in the vicinity of Owego, Johnson City, Kirkwood and Bainbridge. Although monitoring data above that point is not available, this reach is included in the advisory as a precaution. Atmospheric deposition is considered a likely source of the mercury contamination. Other sources have not been identified. (2009-10 NYS DOH Health Advisories).

Water Quality Sampling

NYSDEC Rotating Integrated Basin Studies (RIBS) Intensive Network monitoring of Susquehanna River in Hyde Park,

Otsego County, (at Route 11C) was conducted in 2004. 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 slightly impacted water quality conditions, indicating good water quality. Water column sampling revealed no parameters of concern to be present. Sediment screening for acute toxicity indicated slight sediment toxicity but no porewater toxicity was indicated. While sediment sampling revealed some contaminants at low levels, based on sediment quality guidelines developed for freshwater ecosystems, overall sediment quality is not likely to cause chronic toxicity to sediment-dwelling organisms. Macroinvertebrates collected at this site and chemically analyzed for selected metals showed elevated levels of metals that should continue to be monitored. Toxicity testing using water from this location showed no significant mortality or reproductive effects on the test organism. Based on the consensus of these established assessment methods, overall water quality at this site shows some minor impacts but aquatic life is considered to be fully supported in the stream. (DEC/DOW, BWAR/RIBS, August 2009)

The biological assessment of the Susquehanna River in Hyde Park noted above was collected above confluence with Oaks Creek. Sampling results indicated slightly impacted conditions. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be (relatively) insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities. 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, January 2009)

Previous RIBS Intensive Network monitoring of the river was conducted at Hartwick in 1998. The overall water quality at the site was assessed as good. No significant chemical parameters of concern were found at the sites and a fishery assessment indicated an abundant, diverse and healthy fishery. (DEC/DOW, BWAR/RIBS, 1999)

Section 303(d) Listing

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

Segment Description

This segment includes the main stem portion of the river from Goodyear Lake in Portlandville to Ostego Lake in Cooperstown. This reach of the river is Class B.

Arnold Lake (0601-0109)

NoKnownImpct

Waterbody Location Information

Revised: 08/18/2000

Water Index No:	SR-190-P362	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/030	Str Class:	B(T)
Waterbody Type:	Lake (Oligotrophic)	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	63.8 Acres	Quad Map:	MOUNT VISION (K-20-3)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

Arnold Lake was included in the 1991 CSLAP volunteer monitoring effort; results of this study found no evidence of water quality impairment. (DEC/DOW, BWM/Lake Services, August 2000)

Cherry Valley Creek, Lower and tribs (0601-0022)

NoKnownImpct

Waterbody Location Information

Revised: 06/26/2009

Water Index No: SR-195
Hydro Unit Code: 02050101/020 **Str Class:** C
Waterbody Type: River (Low Flow) **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 5.7 Miles **Quad Map:** WESTFORD (K-21-2)
Seg Description: stream and tribs from mouth to near Roseboom

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 Cherry Valley Creek at five sites between the mouth at the Susquehanna River and Cherry Valley was conducted in 2007. Sampling results indicated non-impacted to slightly impacted water quality conditions, with most sites showing some influences from nonpoint sources and nutrient loadings. This survey included three sampling sites within this reach; these sites were located above Milford (at Route 35), in Westville (at Route 43) and in Middlefield (at Route 35). Macroinvertebrate sampling results at the sites indicated non-impacted conditions at the most upstream of these sites, and slightly impacted conditions at the two sites farther downstream, though conditions at these two sites were close to the range of non-impacted. However when concurrent fish community assessments are factored in, all three sites were determined to be non-impacted. The improvement in water quality from upstream to downstream can be attributed to increasing distance from the Village of Cherry Valley (where inadequate on-site septic systems are thought to be the cause of impacts), increasing forest cover and additional flow from adjoining tributaries. (Cherry Valley Creek Biological Assessment Report, DEC/DOW, BWAM/SBU, July 2008)

Segment Description

This segment includes the portion of the stream and all tribs from the mouth to Pleasant Valley Brook (-21) near Roseboom. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment, including O'Connell

Creek (-12) and Shellrock Creek (-17), are also/primarily Class C,C(T). Pleasant Valley Brook (-21) and Upper Cherry Valley Creek are listed separately.

Cherry Valley Creek, Upper and tribs (0601-0174)

MinorImpacts

Waterbody Location Information

Revised: 09/11/2009

Water Index No: SR-195
Hydro Unit Code: 02050101/020 **Str Class:** C(T)
Waterbody Type: River
Waterbody Size: 53.0 Miles
Seg Description: stream and tribs above Roseboom

Drain Basin: Susquehanna River
Upper Susquehanna
Reg/County: 4/Otsego Co. (39)
Quad Map: ()

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

Use(s) Impacted	Severity	Problem Documentation
Recreation	Stressed	Known

Type of Pollutant(s)

Known: ---
Suspected: PATHOGENS, Nutrients (phosphorus)
Possible: ---

Source(s) of Pollutant(s)

Known: ON-SITE/SEPTIC SYST (Cherry Valley (v))
Suspected: Agriculture
Possible: ---

Resolution/Management Information

Issue Resolvability: 2 (Strategy Exists, Needs Funding/Resources)
Verification Status: 5 (Management Strategy has been Developed)
Lead Agency/Office: DOW/Reg4
TMDL/303d Status: n/a

Resolution Potential: Medium

Further Details

Overview

Aquatic life support and recreational uses in this portion of Cherry Valley Creek are known to experience minor impacts believed to be from inadequate on-site wastewater (septic) systems in the Village of Cherry Valley. Other nonpoint sources contributing to nutrient enrichment in the stream are also a concern.

Water Quality Sampling

A biological (macroinvertebrate) survey of Cherry Valley Creek at five sites between the mouth at the Susquehanna River and Cherry Valley was conducted in 2007. Sampling results indicated non-impacted to slightly impacted water quality conditions, with most sites showing some influences from nonpoint sources and nutrient loadings. This survey included two sampling sites within this reach; these sites were located above Roseboom (at Route 166) and below Cherry Valley (at Route 166). Macroinvertebrate sampling results at the Cherry Valley site indicated slightly impacted conditions; farther downstream at the Roseboom site conditions were assessed as non-impacted. When concurrent fish community assessments are factored in, both sites were determined to be slightly impacted. Influences from nonpoint sources were in evidence at both sites as well. Without sampling results from a location above the village (no suitable site was found during this survey), it is difficult to determine if the impacts noted are wholly attributable to development in the village. The rebound in water quality as one moves downstream and lack of other obvious sources suggest the village is a

significant source, but additional sampling is recommended to confirm the source of impacts. (Cherry Valley Creek Biological Assessment Report, DEC/DOW, BWAM/SBU, July 2008)

A biological assessment of Cherry Valley Creek at the site above Roseboom was conducted as part of the RIBS biological screening effort in 2003. Sampling results indicated slightly impacted conditions. In such samples the community is slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be limited and water quality is considered to be satisfactory. The nutrient biotic index and impact source determination indicate some enrichment in the stream and fauna that is most similar to communities influenced by nonpoint sources. In spite of these minor impacts, aquatic life support is considered to be fully supported in the stream. (DEC/DOW, BWAM/SBU, January 2009)

Watershed Management

In the unsewered community of Cherry Valley inadequate residential and commercial on-site wastewater treatment systems result in the discharge of untreated or poorly treated wastewater. Some of the discharge is thought to be conveyed to the stream via storm sewers. Discussions regarding the construction of a municipal wastewater treatment plant are ongoing, but adequate funding to address the problems with a collection system or treatment plant has not been identified. Individual discharges are currently being addressed on a case-by-case basis by NYSDEC and health department staff. (DEC/DOW, Region 4, September 2009)

Segment Description

This segment includes the portion of the stream and all tribs above Pleasant Valley Brook (-21) near Roseboom. The waters of this portion of the stream are Class C,C(T). Tribs to this reach/segment are also/primarily Class C,C(T). Pleasant Valley Creek (-21) and Lower Cherry Valley Brook are listed separately.

Oaks Creek and minor tribs (0601-0047)

NoKnownImpct

Waterbody Location Information

Revised: 07/09/2009

Water Index No: SR-204
Hydro Unit Code: 02050101/010 **Str Class:** C(T)
Waterbody Type: River (Low Flow) **Drain Basin:** Susquehanna River
Waterbody Size: 33.1 Miles **Reg/County:** 4/Otsego Co. (39)
Seg Description: entire stream and selected tribs **Quad Map:** COOPERSTOWN (K-21-1) ...

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

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Water Quality Sampling

A biological (macroinvertebrate) assessment of Oaks Creek in Index (at Route 28) was conducted as part of the RIBS biological screening effort in 2008. Sampling results indicated slightly impacted conditions, but near the range of non-impacted. In such samples the community is only slightly altered from natural conditions. Some sensitive species are not present and the overall abundance of macroinvertebrates is lower. However, the effects on the fauna appear to be relatively insignificant and water quality is considered to be good. The nutrient biotic index and impact source determination indicate low enrichment in the stream and fauna that is most similar to natural communities. These results are consistent with sampling conducted at the site in 1997. 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, July 2009)

Previous Assessment

The stream supports an adequate fishery. NYS DEC regularly stocks the stream with brown trout. (DEC/DFWMR, Region 4, December 2000)

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, including Lidell Creek (-11), are Class C,C(T),C(TS). Fly Creek (-5) is listed separately.

Canadarago Lake (0601-0016)

NoKnownImpct

Waterbody Location Information

Revised: 09/11/2009

Water Index No:	SR-204-P392	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/010	Str Class:	A(T)
Waterbody Type:	Lake (Mesotrophic)	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	1881.7 Acres	Quad Map:	SCHUYLER LAKE (J-20-3)
Seg Description:	entire lake		

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

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

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: ALGAL/WEED GROWTH (vegetation, algal blooms), PROBLEM SPECIES

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: HABITAT MODIFICATION, Agriculture

Resolution/Management Information

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

Further Details

Water Quality Sampling

Canadarago Lake is the focus of a monitoring effort by SUNY Oneonta Biological Field Station. This work began in 2009 and is to conclude in 2010 with a State of the Lake Report. Initial data collected in 2009 found water quality to be mostly favorable and fully supportive of uses. Phosphorus levels in the lake are well below the state guidance values indicating impacted/stressed recreational uses, except for elevated concentrations near the lake bottom that reflect in-lake nutrient recycling. Corresponding transparency measurements significantly exceed the recommended minimum for swimming beaches. Clarity has increased in recent years, corresponding to the appearance of zebra mussels in the lake. Measurements of pH are somewhat high but typically fall within the state water quality range of 6.5 to 8.5 and do not appear to have any impact on aquatic life support. Limited bacteriological sampling shows coliform levels to be well below the state standard for safe swimming or any other full-body contact activities. (SUNY Oneonta Biological Field Station, August 2009)

The NYSDEC collected a number of fish species from the lake to be analyzed for mercury in 2003-06. Results from this effort found some detectable levels of mercury, but at concentrations well below FDA criteria and no health advisories for the lake were issued. (DEC/DFWMR, September 2009)

The most recent NYSDEC sampling of Canadarago Lake was conducted in 1994 through the Citizens Statewide Lake Assessment Program (CSLAP). This sampling identified only minor threats to the lake. Regional Fisheries staff indicated at the time that the lake supported a very productive fishery and is a popular recreational fishery. The threats of greatest concern include the potential future impacts of invasives (zebra mussels and invasive plants), and nonpoint sources of nutrients and sediments in the surrounding lake watershed. (DEC/DOW, BWAM/RIBS and WQAS, August 2009).

Recreational Assessment

Though water quality measurements indicate full support of recreational uses, local residents have raised concerns regarding aquatic weed growth. Given the increased clarity of the water such complaints may increase in the future. Aquatic plant surveys find that the lake is dominated by primarily native species; two non-native species (Eurasian milfoil and Curly pondweed) have been noted but they do not dominant. (SUNY Oneonta Biological Field Station, August 2009)

Lake Uses

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

Ocquionis Creek and tribs (0601-0034)

MinorImpacts

Waterbody Location Information

Revised: 07/10/2009

Water Index No: SR-204-P392- 5
Hydro Unit Code: 02050101/010 **Str Class:** C(T)
Waterbody Type: River (Low Flow) **Drain Basin:** Susquehanna River
Waterbody Size: 2.3 Miles **Reg/County:** 4/Otsego Co. (39)
Seg Description: entire stream and tribs **Quad Map:** RICHFIELD SPRINGS (J-21-4)

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

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: 3 (Cause Identified, Source Unknown)
Lead Agency/Office: ext/WQCC **Resolution Potential:** Medium
TMDL/303d Status: n/a

Further Details

Overview

Aquatic life support and recreational uses in Ocquionis Creek are known to experience minor impacts due to nutrient enrichment from agricultural and other nonpoint sources.

Water Quality Sampling

A biological (macroinvertebrate) assessment of Ocquionis Creek in Richfield Springs was conducted as part of the RIBS biological screening effort in 1997. Sampling results indicated slightly impacted conditions. In such samples some replacement of sensitive ubiquitous species by more tolerant species occurs, although the sample also includes a balanced distribution of all expected species. Aquatic life is considered to be fully supported in the stream, however the community composition and nutrient biotic evaluation suggest conditions and levels of enrichment are sufficient to cause some stress to aquatic life. Impact source determination found the fauna is most similar to communities influenced by nonpoint sources and toxicity. Considerable urban debris was also noted at the site. (DEC/DOW, BWAR/SBU, June 2009)

Previous Assessment

Impacts from ammonia, residual chlorine and other pollutants attributed to the Richfield Springs WWTP discharge noted in earlier assessments have been addressed by the upgrading of the plant in 1995. (DEC/DOW, Region 4, January 2001)

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 also/primarily Class C,C(T),C(TS).

Otsego Lake (0601-0033)

NoKnownImpct

Waterbody Location Information

Revised: 09/14/2009

Water Index No: SR-P404
Hydro Unit Code: 00300501/ **Str Class:** A
Waterbody Type: Lake (Mesotrophic) **Reg/County:** 4/Otsego Co. (39)
Waterbody Size: 4099.9 Acres **Quad Map:** COOPERSTOWN (K-21-1) ...
Seg Description: entire lake

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

Use(s) Impacted	Severity	Problem Documentation
Water Supply	Threatened	Possible
Recreation	Threatened	Possible

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: NUTRIENTS (Phosphorus), PROBLEM SPECIES

Source(s) of Pollutant(s)

Known: ---
Suspected: ---
Possible: AGRICULTURE, HABITAT MODIFICATION, On-Site/Septic Syst, Urban/Storm Runoff

Resolution/Management Information

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

Further Details

Water Quality Sampling

Otsego Lake is the focus of an extensive monitoring effort by SUNY Oneonta Biological Field Station. This sampling finds water quality to be mostly favorable and fully supportive of uses. Nutrient levels in the lake are well below the state guidance values that correspond to impacted/stressed recreational uses. Transparency measurements exceed the recommended minimum for swimming beaches. Clarity has increased in recent years, corresponding to the appearance of zebra mussels in the lake. (SUNY Oneonta Biological Field Station, August 2009)

The NYSDEC collected a number of fish species from the lake to be analyzed for mercury in 2003-06. Results from this effort found some detectable levels of mercury, but at concentrations well below FDA criteria and no health advisories for the lake were issued. (DEC/DFWMR, September 2009)

Fishery Assessment

Warmwater game fish including largemouth and smallmouth bass and chain pickerel inhabit the lake's shoreline areas. Otsego Lake also supports a diverse cold water fishery, the only lake trout fishery in the immediate area. The cold hypolimnetic waters support a high level lake trout population, with mostly wild fish being caught. Most assessments

indicate a fishery resource of outstanding quality. Standard gill netting indicates lake trout populations and growth rates are currently at their highest levels in this century. Recent improvement in trout growth rates is due to the unauthorized introduction of the alewife, which is now abundant and provides a readily accessible forage base. Although the alewife introduction has improved lake trout growth, it negatively affect the walleye fishery. Walleye fingerlings have been stocked annually since 2000 and an abundant population is now present. However, establishment of a self sustaining walleye fishery is unlikely due to the abundant alewife population. Since young of year walleye remain suspended in the water column for about 6-8 weeks after hatching, these fish are preyed upon extensively by alewife and it is believed that the entire year class is wiped out. The walleye fishery in the lake will be dependent upon continued stocking. The impact of the alewife and zebra mussel on the ecology of the lake will continue to be monitored. (DEC/DFWMR, Region 4, September 2009)

Lake Uses

This lake waterbody is designated class A, suitable for use as a water supply, public bathing beach, general recreation and aquatic life support. Water quality monitoring currently available focuses primarily on support of general recreation and aquatic life. Samples to evaluate the bacteriological condition and bathing use of the lake are limited and sampling to evaluate contamination from organic compounds, metals or other inorganic pollutants have not been collected. Monitoring to assess potable water supply and public bathing use is generally the responsibility of state and/or local health departments.

Source (Drinking) Water Assessment

A source water assessment of Otsego Lake found a moderately elevated susceptibility to contaminants. This level of susceptibility is typical of many water supplies that experience no impacts to water supply use and reflects the need to protect the resource. This assessment was conducted 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 water supply source provides water to the City of Oneonta. (NYSDOH, Source Water Assessment Program, 2005)

Watershed Management

While there are no current impairments to its use as a water supply, there are concerns for future and continuing support of various recreational activities (swimming, boating). The threats of greatest concern include the potential future impacts of invasives (zebra mussels and invasive plants), and nonpoint sources of nutrients and sediments in the surrounding lake watershed. Phosphorus loadings to the lake may come from a variety of sources including agricultural runoff, small direct dischargers, individual household systems, and some urban runoff. The SUNY Oneonta Biological Field Station has done a phosphorus budget for Otsego Lake. Annual loading ranges from 6,444-13,119 kg/yr. Tributaries are the major source of total loading, contributing 75-88 percent of the total phosphorus entering the lake (Shadow Brook contributes the highest phosphorus loading of all the tributaries with Hayden Brook being the next highest). Remaining phosphorus loadings come from atmospheric deposition (8-15 percent) and on-site septic systems (4-10 percent). There is evidence of some internal recycling of phosphorus from the lake's bottom muds. Phosphorus loadings to the lake must continue to be monitored and regulated to ensure that levels do not reach the point of causing water quality impairments. (SUNY Oneonta Biologic Field Station, 1998)

Segment Description

This segment includes the total area of the entire lake.

Allen Lake (0601-0117)

NoKnownImpct

Waterbody Location Information

Revised: 06/12/2009

Water Index No:	SR-P404- 9-P405	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/030	Str Class:	A
Waterbody Type:	Lake	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	52.6 Acres	Quad Map:	RICHFIELD SPRINGS (J-21-4)
Seg Description:	entire lake		

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

Use(s) Impacted	Severity	Problem Documentation
NO USE IMPAIRMNT		

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

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

Resolution/Management Information

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

Further Details

Source (Drinking) Water Assessment

A source water assessment of Allen Lake found no elevated susceptibility to contaminants. This assessment was conducted 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 water supply source provides water to the Village of Richfield Springs. (NYSDOH, Source Water Assessment Program, 2005)

Segment Description

This segment includes the total area of the entire lake.

Cripple Creek and tribs (0601-0027)

Need Verific

Waterbody Location Information

Revised: 07/09/2009

Water Index No: SR-P404-10
Hydro Unit Code: 02050101/030 **Str Class:** C(T)
Waterbody Type: River (Low Flow) **Reg/County:** 6/Herkimer Co. (22) ...
Waterbody Size: 2.1 Miles **Quad Map:** RICHFIELD SPRINGS (J-21-4)
Seg Description: stream and tribs from mouth/Otsego Lake to Weaver Lake

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

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

Type of Pollutant(s)

Known: NUTRIENTS, SILT/SEDIMENT
Suspected: ---
Possible: D.O./Oxygen Demand, Salts

Source(s) of Pollutant(s)

Known: AGRICULTURE, STREAMBANK EROSION
Suspected: ---
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 support in Cripple Creek and its tributaries may experience minor impacts due to nutrient enrichment and excessive sedimentation; agricultural activities and streambank erosion are the suspected sources. Sampling to verify impacts to the stream is recommended.

Previous Assessment

Agricultural activities (barnyard runoff, manure spreading, livestock access to streams) and streambank erosion in the tributary watersheds have been cited as significant sources of impacts. Increases in nutrient loads and chlorides have been documented by the SUNY Oneonta Biological Field Station. Although impacts to the stream itself need to be verified, the trib has been identified as a significant contributor of nutrients and sediments to Otsego Lake. (The State of Otsego Lake, Harmon etal, SUNY Oneonta Biologic Field Station, 1997)

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 Class C.

Young Lake (0601-0026)

Need Verific

Waterbody Location Information

Revised: 09/14/2009

Water Index No:	SR-P404-10-P408	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/030	Str Class:	B
Waterbody Type:	Lake	Reg/County:	6/Herkimer Co. (22)
Waterbody Size:	66.7 Acres	Quad Map:	RICHFIELD SPRINGS (J-21-4)
Seg Description:	entire lake		

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

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: ---
Suspected: 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->B->n/a	

Further Details

Overview

Aquatic life support and recreational uses in Young Lake may experience minor impacts/threats due to nutrient and sediment loadings from agricultural and other nonpoint sources.

Previous Assessment

Concerns were raised during previous assessments in 1998 that aquatic life support and recreational uses may be threatened by increasing nutrient and sediment loads from agricultural runoff in the watershed. Aerial observations of drainage basin suggests that much of the agricultural land in the upper basin is not being farmed in accordance with Best Management Practices. The lake flows into Otsego Lake which has documented increases in nutrients and chlorides. However conditions in Young Lake itself need to be verified. (DEC/DOW, BWAM/WQAS, August 2009)

Section 303(d) Listing

Young Lake is included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included among the waters listed in Appendix B - Waters Not Meeting Dissolved Oxygen Standards. This part of the List recognizes waterbodies where low dissolved oxygen in lake bottom waters may be the result of morphology and other natural conditions in thermally stratified lakes. This updated assessment is inconclusive regarding the level of fishery impact due to low

dissolved oxygen and whether any incidences of low dissolved oxygen, if they occur, are naturally occurring. Due to the lack of data indicating the occurrence or impact of low dissolved oxygen, it is recommended that this waterbody be considered for delisting during the development of the next Section 303(d) List in 2010. (DEC/DOW, BWAM/WQAS, June 2009)

Weaver Lake (Maumee Swamp) (0601-0025)

Need Verific

Waterbody Location Information

Revised: 09/14/2009

Water Index No:	SR-P404-10-P409	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/030	Str Class:	C
Waterbody Type:	Lake	Reg/County:	6/Herkimer Co. (22)
Waterbody Size:	85.0 Acres	Quad Map:	RICHFIELD SPRINGS (J-21-4)
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	Stressed	Possible

Type of Pollutant(s)

Known: ---
Suspected: ---
Possible: D.O./OXYGEN DEMAND, NUTRIENTS

Source(s) of Pollutant(s)

Known: ---
Suspected: 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->B	

Further Details

Overview

Aquatic life support and recreational uses in Weaver Lake (Maumee Swamp) may experience minor impacts/threats due to nutrient and sediment loadings from agricultural and other nonpoint sources. Low dissolved oxygen may also contribute to the threats, though this could be naturally occurring.

Previous Assessment

Concerns were raised by local agencies and organizations during previous assessments in 1998 that aquatic life support and recreational uses may be threatened by increasing nutrient and sediment loads from agricultural runoff in the watershed. Some elevated phosphorus concentrations were noted. Aerial observations of the drainage basin suggests that much of the agricultural land in the upper basin is not being farmed in accordance with Best Management Practices. Improperly applied manure, stream and field erosion, barnyard runoff and direct livestock access to the stream were noted. (DEC/DOW, BWAM/WQAS, August 2009)

Natural Resources Assessment

Weaver Lake and a portion of Maumee Swamp that surrounds the lake have been acquired by New York State. Weaver

Lake is considered a Marl Pond, an ecological designation that the Natural Heritage Program considers to be rare and vulnerable. The lake could be listed on the PWL due to natural resources concerns and value. (DEC/BEP, Region 6, 1998)

Section 303(d) Listing

Weaver Lake is included on the NYS 2008 Section 303(d) List of Impaired Waters. The lake is included among the waters listed in Appendix B - Waters Not Meeting Dissolved Oxygen Standards. This part of the List recognizes waterbodies where low dissolved oxygen in lake bottom waters may be the result of morphology and other natural conditions in thermally stratified lakes. This updated assessment is inconclusive regarding the level of fishery impact due to low dissolved oxygen and whether any incidences of low dissolved oxygen are naturally occurring. However because NYS water quality standards for dissolved oxygen do not include an explicit exception for natural conditions or averaging of dissolved oxygen over lake depth, USEPA requires that the Section 303(d) List recognize such waters. (DEC/DOW, BWAM/WQAS, June 2009)

Minor Tribs to Weaver Lake (0601-0039)

MinorImpacts

Waterbody Location Information

Revised: 09/10/2009

Water Index No:	SR-P404-10-P409-	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/030	Str Class:	C
Waterbody Type:	River (Low Flow)	Reg/County:	6/Herkimer Co. (22)
Waterbody Size:	13.2 Miles	Quad Map:	RICHFIELD SPRINGS (J-21-4) ...
Seg Description:	selected/minor tribs to lake		

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: NUTRIENTS (Phosphorus)
Suspected: Silt/Sediment
Possible: ---

Source(s) of Pollutant(s)

Known: AGRICULTURE
Suspected: ---
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

Aquatic life support in various Weaver Lake tribs is thought to experience minor impacts from elevated nutrient and sediment loads from agricultural runoff in the watershed. These tribs contribute significant loadings to the lake, which is also listed (0601-0025).

Source Assessment

Local/county agencies have raised concerns regarding management practices at several dairy and other farms near the streams as potential problems. Considerable work with area farm owners through the CAFO program has been conducted to help prevent nutrient loadings and other nonpoint impacts. The Herkimer County Resources Strategy identifies streambanks and field erosion, sedimentation, direct livestock access to streams and barnyard runoff as sources of water quality impacts. (Herkimer County SWCD/WQCC, July 2009).

The Bureau of Environment Protection has also raised concerns with nutrient loading to small streams that flows into the Weaver Lake watershed. The wetlands and its drainage area have been identified as a significant ecosystem. (DEC/BEP, Region 6, 6/26/96)

Segment Description

This segment includes the total length of selected/smaller tribs to Weaver Lake. Tribs within this segment are Class C.

Hayden Creek and tribs (0601-0180)

Need Verific

Waterbody Location Information

Revised: 07/09/2009

Water Index No:	SR-P404-12	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/030	Str Class:	C(T)
Waterbody Type:	River	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	16.0 Miles	Quad Map:	RICHFIELD SPRINGS (J-21-4) ...
Seg Description:	entire stream and tribs		

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

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: AGRICULTURE, STREAMBANK EROSION
Suspected: ---
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 support in Hayden Creek and its tributaries may experience minor impacts due to nutrient enrichment and excessive sedimentation; agricultural activities and streambank erosion are the suspected sources. Sampling to verify impacts to the stream is recommended.

Previous Assessment

Agricultural activities (barnyard runoff, manure spreading, livestock access to streams) and streambank erosion in the tributary watersheds have been cited as significant sources of impacts. Increases in nutrient loads and chlorides have been documented by the SUNY Oneonta Biological Field Station. Although impacts to the stream itself need to be verified, the trib has been identified as a significant contributor of nutrients and sediments to Otsego Lake. (The State of Otsego Lake, Harmon etal, SUNY Oneonta Biologic Field Station, 1997)

Segment Description

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

Shadow Brook and tribs (0601-0181)

Need Verific

Waterbody Location Information

Revised: 07/09/2009

Water Index No:	SR-P404-14	Drain Basin:	Susquehanna River
Hydro Unit Code:	02050101/030	Str Class:	C(T)
Waterbody Type:	River	Reg/County:	4/Otsego Co. (39)
Waterbody Size:	33.3 Miles	Quad Map:	EAST SPRINGFIELD (J-21-3) ...
Seg Description:	entire stream and tribs		

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

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

Type of Pollutant(s)

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

Source(s) of Pollutant(s)

Known: AGRICULTURE, STREAMBANK EROSION
Suspected: ---
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 support in Shadow Brook and its tributaries may experience minor impacts due to nutrient enrichment and excessive sedimentation; agricultural activities and streambank erosion are the suspected sources. Sampling to verify impacts to the stream is recommended.

Previous Assessment

Agricultural activities (barnyard runoff, manure spreading, livestock access to streams) and streambank erosion in the tributary watersheds have been cited as significant sources of impacts. Increases in nutrient loads and chlorides have been documented by the SUNY Oneonta Biological Field Station. Although impacts to the stream itself need to be verified, the trib has been identified as a significant contributor of nutrients and sediments to Otsego Lake. (The State of Otsego Lake, Harmon etal, SUNY Oneonta Biologic Field Station, 1997)

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 also Class C,C(T).