



## Unadilla River Watershed (0205010109)

### Water Index Number

SR-146 (portion 1)  
 SR-146 (portion 2)  
 SR-146 (portion 3)  
 SR-146- 1  
 SR-146- 1- 1  
 SR-146- 1- 1-P186  
 SR-146- 1-P188  
 SR-146- 2  
 SR-146- 3 thru 35 (selected)  
 SR-146- 9  
 SR-146-17- 1-P212  
 SR-146-19  
 SR-146-19- 6-1-P213  
 SR-146-19- 6-P214

### Waterbody Segment

Unadilla River, Lower, Main Stem (0601-0003)  
 Unadilla River, Middle, and minor tribs (0601-0037)  
 Unadilla River, Upper, and minor tribs (0601-0188)  
 Guilford Creek and tribs (0601-0049)  
 Upper Peckam Brook and tribs (0601-0189)  
 Sidney Reservoir (0601-0137)  
 Guilford Lake (0601-0012)  
 Rogers Hollow Creek and tribs (0601-0138)  
 Minor Tribs to Lower Unadilla River (0601-0136)  
*See Butternut Creek Watershed*  
 Whites Pond (0601-0084)  
 Great Brook and tribs (0601-0051)  
 Chenango Lake (0601-0013)  
 Jackson Pond (0601-0085)

### Category

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

<b>Water Index Number</b>	<b>Waterbody Segment</b>	<b>Category</b>
SR-146-26-P215	Hunts Pond (0601-0086)	UnAssessed
SR-146-33-P216	Silver Lake (0601-0023)	UnAssessed
SR-146-36	<i>See Wharton Creek Watershed</i>	
SR-146-38	<a href="#">Center Brook and minor tribs (0601-0147)</a>	NoKnownImpct
SR-146-38- 1	Shawler Brook and tribs (0601-0148)	UnAssessed
SR-146-43	Tallete Creek and tribs (0601-0150)	UnAssessed
SR-146-44	<a href="#">Beaver Creek, Lower, and tribs (0601-0053)</a>	NoKnownImpct
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	<a href="#">North Winfield Creek and tribs (0601-0035)</a>	Impaired Seg
SR-146-69- 5-P241	Cedar Lake (0601-0088)	UnAssessed
SR-146-P244	Unadilla Lake (0601-0089)	UnAssessed

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

Impaired Seg

## Waterbody Location Information

Revised: 09/16/2009

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

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

# 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.

# Guilford Creek and tribs ( 0601-0049)

NoKnownImpct

## Waterbody Location Information

Revised: 07/19/2000

<b>Water Index No:</b>	SR-146- 1	<b>Drain Basin:</b>	Susquehanna River
<b>Hydro Unit Code:</b>	02050101/180	<b>Str Class:</b>	C,C(T)
<b>Waterbody Type:</b>	River (Low Flow)	<b>Reg/County:</b>	7/Chenango Co. ( 9)
<b>Waterbody Size:</b>	36.2 Miles	<b>Quad Map:</b>	SIDNEY (L-19-4) ...
<b>Seg Description:</b>	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

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

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

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

<b>Use(s) Impacted</b>	<b>Severity</b>	<b>Problem Documentation</b>
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

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

# Great Brook and tribs ( 0601-0051)

NoKnownImpet

## Waterbody Location Information

Revised: 07/19/2000

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

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

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

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

# Center Brook and minor tribs ( 0601-0147)

NoKnownImpct

## Waterbody Location Information

Revised: 06/22/2009

<b>Water Index No:</b>	SR-146-38	<b>Drain Basin:</b>	Susquehanna River
<b>Hydro Unit Code:</b>	02050101/140	<b>Str Class:</b>	C(T)
<b>Waterbody Type:</b>	River	<b>Reg/County:</b>	7/Chenango Co. ( 9)
<b>Waterbody Size:</b>	28.4 Miles	<b>Quad Map:</b>	()
<b>Seg Description:</b>	entire stream and selected 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

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