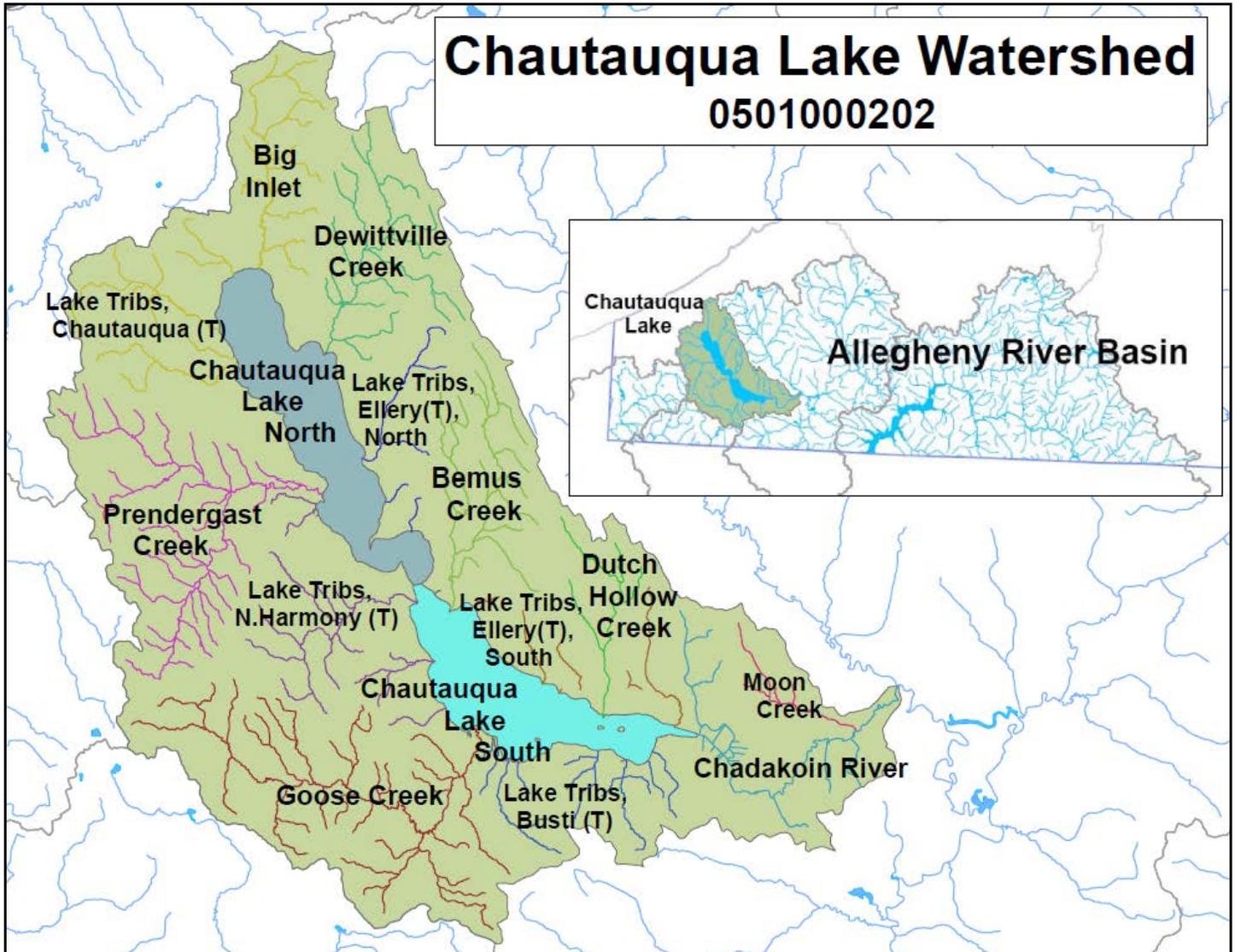


# Chautauqua Lake Watershed 0501000202



## Chautauqua Lake Watershed (0501000202)

Pa-63-13- 4	Chadakoin River (0202-0018)	Impaired Seg
Pa-63-13- 4-1	Moon Creek and tribs (0202-0032)	Needs Verification
Pa-63-13- 4-P122	Chautauqua Lake, South (0202-0020)	Impaired Seg
Pa-63-13- 4-P122	Chautauqua Lake, North (0202-0072)	Impaired Seg
Pa-63-13- 4-P122- 1 thru 7	Tribs to Chautauqua Lake, Town of Busti (0202-0033)	UnAssessed
Pa-63-13- 4-P122- 8	Goose Creek and tribs (0202-0023)	MinorImpacts
Pa-63-13- 4-P122- 9 thru 14	Tribs to Chautauqua Lake, North Harmony (0202-0034)	UnAssessed
Pa-63-13- 4-P122-15	Prendergast Creek and tribs (0202-0024)	Threatened
Pa-63-13- 4-P122-16 thru 21	Minor Tribs to Chautauqua Lk, Chautauqua (0202-0021)	No Known Impacts
Pa-63-13- 4-P122-22	Dewittville Creek (0202-0022)	Minor Impacts
Pa-63-13- 4-P122-23 thru 26	Minor Tribs to Chautauqua Lake, N.Ellery (0202-0025)	UnAssessed
Pa-63-13- 4-P122-27	Bemus Creek and tribs (0202-0035)	Needs Verification
Pa-63-13- 4-P122-28-31	Minor Tribs to Chautauqua Lake, S.Ellery (0202-0036)	UnAssessed
Pa-63-13- 4-P122-30	Dutch Hollow Creek and tribs (0202-0037)	Threatened

# Chadakoin River (0202-0018)

# Impaired Seg

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4  
**Hydro Unit Code:** 05010002/020      **Str Class:** C  
**Waterbody Type:** River      22.2 Miles  
**Seg Description:** entire stream and selected tribs

**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

Uses Evaluated	Severity	Problem Documentation
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Impaired	Suspected
Aquatic Life	Impaired	Known
Fish Consumption	Unassessed	-

**Conditions Evaluated**

Habitat/Hydrology	Fair
Aesthetics	Fair

**Type of Pollutant(s)** (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Known: UNKNOWN TOXICITY  
Suspected: NUTRIENTS (Phosphorus), Metals (copper), Priority Organics (PCBs), Pathogens  
Unconfirmed: - - -

**Source(s) of Pollutant(s)**

Known: URBAN/STORM RUNOFF, Habitat Alteration  
Suspected: INDUSTRIAL DISCHARGES, Municipal Discharges,  
Unconfirmed: - - -

## Management Information

**Management Action:** Verification of Sources Needed  
**Lead Agency/Office:** DOW/Reg9  
**IR/305(b) Code:** Impaired Water Requiring a TMDL (IR Category 5)

## Further Details

### Overview

Chadakoin River is assessed as an impaired waterbody due to aquatic life support and recreational uses that are known or thought to be impaired by nutrients and other toxic substances thought to be from industrial discharges and urban/storm runoff. Stream habitat has been modified (channelized) in portions of the river.

### Use Assessment

Chadakoin River is a Class C waterbody, suitable for use for general recreation and support of aquatic life, but not as a water supply or as a public bathing beach.

Aquatic life support is considered to be impaired based on significant impacts to the macroinvertebrate community. Portions of the stream exhibit habitat alteration (channelized) which may also impact the fishery. The impacts to aquatic life also result in a suspected impairment to recreational uses, since fishing is one of the primary recreational uses of the

stream. (DEC/DOW, BWAM/SMAS, December 2014)

Fish Consumption is considered to be unassessed. There are no health advisories limiting the consumption of fish from this waterbody (beyond the general advice for all waters). However due to the presence of contaminants in the stream and the uncertainty as to whether the lack of a waterbody-specific health advisory is based on actual sampling, fish consumption use is noted as unassessed, rather than fully supported but unconfirmed. (DEC/DOW, BWAM, December 2014)

#### Water Quality Information

Biological (macroinvertebrates) assessments of the Chadakoin River in Falconer near its mouth was conducted in 2012, 2011 and 2006. Sampling results indicated slightly to moderately impacted water quality conditions. Sampling at an upstream site at Dow Street reflected moderate impacts in 2011. Municipal/industrial inputs are considered the primary sources of impacts. A biological survey of the Chadakoin at multiple sites between Falconer and Chautauqua Lake was conducted in 1995. These sampling results also indicated moderately impacted water quality. Elevated levels of metals and PAHs have been documented in river sediments and invertebrate tissue. Some of the impact found at the two most upstream sites may be attributed to impoundment effects from Chautauqua Lake, but the downstream sites exhibit effects indicating toxic contaminants. (DEC/DOW, BWAM/SBU, June 2005)

NYSDEC Rotating Intensive Basin Studies (RIBS) Intensive Network monitoring of the Chadakoin River in Falconer, Chautauqua County, (at South Work Street) was conducted in 2002. Sampling of the water column, sediments, and invertebrate tissues was conducted, as well as macroinvertebrate community analysis. Water column sampling revealed copper to be a parameter of concern; present in concentrations above the assessment criteria in two of five samples. Toxicity testing of water column showed no significant impacts. Neither sediment nor tissue samples were collected for analysis at this site in 2002. However previous sampling found metals and priority organics (PCBs, PAHs, pesticides and volatiles) to be present. (DEC/DOW, BWAM/RIBS, January 2005)

#### Source Assessment

Based on available sampling results, surrounding land use and other knowledge of the waterbody, the most likely sources of pollutants in Chadakoin River are industrial activities and urban/storm runoff. Municipal wastewater inputs may also be present. (DEC/DOW, BWAM, December 2014)

#### Management Action

No specific management actions have been identified for this waterbody. The SPDES permit program is in place to address direct dischargers to the waterbody. Implementation of the TMDL Plan to address phosphorus in Chautauqua Lake may also provide water quality benefits to Chadakoin River. (DEC/DOW, BWP, December 2014)

#### Section 303(d) Listing

Chadakoin River is included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. The waterbody is included on Part 3b of the List as an impaired waterbody for which TMDL development may be deferred pending verification of the cause/pollutant; currently the waterbody is listed for aquatic toxicity, reflecting the documented biological impacts. This waterbody was first listed on the 2008 List. (DEC/DOW, BWAM/WQAS, December 2014)

#### Segment Description

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C. Tribs to this reach/segment are primarily Class C,C(T); with a few waters designated Class B. Moon Creek (-1) is listed separately.

# Moon Creek and tribs (0202-0032)

# Needs Verification

## Waterbody Location Information

Revised: 12/01/2014

**Water Index No:** Pa-63-13- 4-1  
**Hydro Unit Code:** 05010002/020      **Str Class:** B  
**Waterbody Type:** River      6.4 Miles  
**Seg Description:** entire stream and selected tribs  
**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

Uses Evaluated	Severity	Problem Documentation
Water Supply/Shellfishing	N/A	-
Public Bathing	Stressed	Suspected
Recreation	Stressed	Suspected
Aquatic Life	Impaired	Unconfirmed
Fish Consumption	Unassessed	-

**Conditions Evaluated**

Habitat/Hydrology	Poor
Aesthetics	Poor

**Type of Pollutant(s)** (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)  
Known: ---  
Suspected: UNKNOWN TOXICITY, UNKNOWN POLLUTANT (biological impacts)  
Unconfirmed: ---

**Source(s) of Pollutant(s)**  
Known: URBAN/STORM RUNOFF  
Suspected: Industrial Discharges, Municipal Discharges,  
Unconfirmed: ---

## Management Information

**Management Action:** Verification of Problem Severity Needed  
**Lead Agency/Office:** DOW/BWAM  
**IR/305(b) Code:** Water with Insufficient Data (IR Category 3)

## Further Details

### Overview

Moon Creek is currently assessed as needing verification of minor impacts/possible impairment due to aquatic life that is thought to be impaired, but these conditions need to be more fully assessed. Specific pollutants have not been identified but industrial and municipal sources and urban/storm runoff are likely sources.

### Use Assessment

Moon Creek is a Class B waterbody, suitable for public bathing use, general recreation and support of aquatic life, but not as a water supply.

Aquatic life is known to experience some impacts and may be impaired, however additional sampling is needed to verify the level of impact/impairment. This sampling can also be used to infer that there is minor impact to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. Additional sampling is also needed to more fully evaluate other recreational and swimming use. (DEC/DOW, BWAM/SBU, December 2014)

Fish Consumption is considered to be unassessed. There are no health advisories limiting the consumption of fish from this waterbody (beyond the general advice for all waters). However due to indications of possible presence of contaminants in the stream and the uncertainty as to whether the lack of a waterbody-specific health advisory is based on actual sampling, fish consumption use is noted as unassessed, rather than fully supported but unconfirmed. (DEC/DOW, BWAM, December 2014)

#### Water Quality Information

A biological (macroinvertebrate) assessment of Moon Creek in Falconer (at Route 394) was conducted in 2006. Sampling results reflect moderately impacted (poor) water quality, with sensitive taxa reduced, and the distribution of major taxonomic groups significantly different from what is naturally expected. Aquatic life is considered to be impaired, however this evaluation is noted as unconfirmed because it is based on a single sample; additional sampling to confirm this result is needed. Information on the habitat condition and any resulting influence on biology is not available. (DEC/DOW, BWAM/SBU, July 2014)

#### Source Assessment

Specific sources of pollutants to Moon Creek have not been identified. But based on the biologic community composition, surrounding land use and other knowledge of the waterbody, the most likely source(s) of pollutants in the waterbody are industrial municipal wastewater inputs and urban/storm runoff. (DEC/DOW/BWAM, December 2014)

#### Management Action

No specific management actions have been identified for the waterbody. The SPDES permit program is in place to address direct dischargers to the waterbody. (DEC/DOW, BWP, December 2014)

#### Section 303(d) Listing

Moon Creek is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. However this updated assessment suggests it may be appropriate to consider including this waterbody on the next List, pending additional sampling to verify an impairment. (DEC/DOW, BWAM/WQAS, January 2015)

#### Segment Description

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class B. Tribs to this reach/segment are primarily Class C.

# Chautauqua Lake, South (0202-0020)

Impaired Seg

## Waterbody Location Information

---

Revised: 12/01/2014

**Water Index No:** Pa-63-13- 4-P122  
**Hydro Unit Code:** 05010002/020      **Str Class:** A  
**Waterbody Type:** Lake      6206.4 Acres  
**Seg Description:** portion of lake, south of Bemus Point  
**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

---

Uses Evaluated	Severity	Problem Documentation
Water Supply	Impaired	Known
Public Bathing	Impaired	Known
Recreation	Impaired	Known
Aquatic Life	Stressed	Suspected
Fish Consumption	Unassessed	-

**Conditions Evaluated**

Habitat/Hydrology	Fair
Aesthetics	Fair

**Type of Pollutant(s)** (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)  
Known: NUTRIENTS (Phosphorus, Nitrogen), HARMFUL ALGAL BLOOMS, ALGAL/PLANT GROWTH (native), AQUATIC INVASIVE SPECIES  
Suspected: Low D.O./Oxygen Demand  
Unconfirmed: Metals (arsenic)

**Source(s) of Pollutant(s)**  
Known: OTHER SOURCE (Internal Loading), AGRICULTURE  
Suspected: Urban/Storm Runoff, Onsite/Septic Systems  
Unconfirmed: - - -

## Management Information

---

**Management Action:** Strategy Implementation Scheduled or Underway  
**Lead Agency/Office:** DOW/Reg9  
**IR/305(b) Code:** Impaired Water, TMDL Completed (IR Category 5a)

## Further Details

---

### Overview

Chautauqua Lake, South is assessed as an impaired waterbody due to public bathing and other recreational uses that are known to be impaired by nutrients (phosphorus), resulting algal blooms and excessive plant growth. The most significant sources of nutrient loading to the lake include internal loads – the result of years of nutrient loading that resides in lake sediments – and nutrients transported to the lake via groundwater inflow. Other sources include wastewater point sources that for the most part originate in the North Basin of the Lake, agricultural sources and onsite septic systems. Nutrient loads may also impact water supply use (though such impacts have not been verified) and may contribute to lower dissolved oxygen levels in the lake, which may impact aquatic life support.

### Use Assessment

This waterbody is designated class A, suitable for use as a water supply, public bathing beach, general recreation and aquatic life support. Both basins of the lake support a number of public swimming beaches.

Recreation use and public bathing are considered to be impaired by elevated nutrients (phosphorus), excessive algae, poor water clarity, and shoreline harmful algal blooms. These uses are also impaired by the frequent closure of several beaches by the county health department due to harmful algal blooms. Additional bacteriological sampling is needed to more fully evaluate the impact of pathogen levels on public bathing (swimming) use. Non-contact recreation (boating, fishing) is also affected by excessive aquatic vegetation and the presence of invasive plant growth (Eurasian watermilfoil, curly leafed pondweed). Aesthetic conditions of the lake are considered to be poor due to excessive algae, shoreline algal blooms and excessive aquatic vegetation. (DEC/DOW, BWAM/CSLAP, July 2013)

Regarding water supply use, note that the evaluation of this use includes conditions of the lake water prior to treatment, as well as the quality of water distributed for use after treatment. Monitoring of water quality at the tap is conducted by local water suppliers and public health agencies. That being said, water supply use in the waterbody is considered to be impaired by elevated nutrient and chlorophyll levels in the lake that may result in the formation of disinfection by-products (DBPs) in finished potable water and make treatment to meet drinking water standards more difficult. DBPs are formed when disinfectants such as chlorine used in water treatment plants react with natural organic matter (i.e., decaying vegetation) present in the source water. Prolonged exposure to DBPs may increase the risk of certain health effects. There are currently no public water supplies drawing water from this portion of the Lake. However the Chautauqua Water District #2 reported levels of specific DBPs – THMs and haloacetic acids – in excess of regulatory limits during a portion of the year and it is reasonable to assume similar conditions would occur in the South Basin of the Lake. (DEC/DOW, BWAM and NYSDOH, Public Water Supply, December 2014)

There are no known restrictions to aquatic life. Concerns have been noted regarding hypolimnetic oxygen depletion impacts on aquatic life support, however tiger muskie and walleye have been stocked by NYSDEC, and the lake provides a good smallmouth bass and largemouth bass fishery. (DEC/DFWMR, Region 9, January 2007)

Fish Consumption use is considered to be unassessed. There are no health advisories limiting the consumption of fish from this waterbody (beyond the general advice for all waters). However due to the presence of impacts/contaminants in the stream and the uncertainty as to whether the lack of a waterbody-specific health advisory is based on actual sampling, fish consumption use is noted as unassessed, rather than fully supported but unconfirmed. (NYS DOH Health Advisories and DEC/DOW, BWAM, December 2014)

Water quality monitoring by NYSDEC lakes programs focuses primarily on the 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 are not usually collected as part of these monitoring programs. Monitoring to assess public bathing use and assessments of restrictions on fish consumption are generally the responsibility of state and/or local health departments.

#### Water Quality Information

The south basin of Chautauqua Lake has been sampled as part of the NYSDEC Citizens Statewide Lake Assessment Program (CSLAP) from 1991 through 2013. CSLAP data indicate that the lake continues to be best characterized as eutrophic, or highly productive. Phosphorus levels in the lake consistently exceed the state guidance values of 20 ug/l, and chlorophyll a levels are also very high for much of the summer season. Lake clarity is frequently restricted, with water transparency most often at or below minimally recommended levels for swimming beaches to protect swimmers safety. Readings of pH occasionally exceed the state water quality standards for protection of aquatic life, most likely in response to elevated algae levels. (DEC/DOW, BWAM/CSLAP, March 2014)

CSLAP volunteers frequently describe the lake as being "slightly" impacted for most recreational uses, and occasionally describe the lake as "substantially" impacted. This is consistent with "definite algal greenness" often reported at the lake. Rooted aquatic weeds frequently reached the lake surface, and both algae and weeds are implicated in recreational use problems for the south basin. (DEC/DOW, BWAM/CSLAP, March 2014)

Shoreline harmful algal blooms (HABs) were present for much of the 2014 season. Multiple samples collected from 2010 thru 2014 revealed toxin (microcystin-LR) levels well above swimming criteria; however these toxins were limited to shoreline locations as open water samples did not indicate similar levels. (DEC/DOW, BWAM/LMAS, December

2014)

The public beaches throughout the lake are regularly monitored and evaluated by the Chautauqua County Department of Health. Aquatic plant surveys are regularly conducted by Racine-Johnson Aquatic Ecologists.

#### Source Assessment

Nutrient (phosphorus) sources to the lake have been identified in the 2012 Chautauqua Lake Phosphorus TMDL. The TMDL indicates that more than half of the phosphorus load is from internal loading. Overtime excess phosphorus that enters the Lake but cannot be assimilated is deposited in lake sediments. Under certain conditions (resuspension, sediment anoxia) this internal load is released into the water. Other significant sources of phosphorus load include groundwater inflow and load from the North Basin of the Lake. Small loads come from agricultural activities, wastewater point sources, and onsite wastewater treatment (septic) systems. (DEC/DOW, BWRM, TMDL for Phosphorus in Chautauqua Lake, November 2012)

#### Management Action

Recommendations for specific sources of nutrients loads to the Lake are outlined in the Chautauqua Lake Phosphorus TMDL. In addition, Chautauqua County prepared an extensive *State of the Lake Report* in May 2000 and followed it up with a *Lake Management Report* later that year. These reports outline a range of options and recommendations to address sources of water quality impacts to the lake. These include management of aquatic vegetation though both in lake measures (harvesting, herbicide use), the need to maintain wastewater treatment (on site septics and sewer areas) to protect the uses of the lake, and erosion controls to address wet weather/stormwater runoff that contributes silt/sediment and nutrients to the lake. These reports also recognize the need to address development pressures in the basin that will also impact water quality in the lake. (DEC/DOW, BWRM, TMDL for Phosphorus in Chautauqua Lake, November 2012 and Chautauqua Lake Entering the 21st Century: State of the Lake Report, Chautauqua County Department of Planning and Development, May 2000 and The Management of Chautauqua Lake and its Watershed, Chautauqua County, November 2000).

#### Section 303(d) Listing

Chautauqua Lake, South, is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. Although it is assessed as an impaired water, it is categorized as an IR Category 4a water that is not listed due to the fact that a TMDL has already been completed and is being implemented. (DEC/DOW, BWAM, January 2014)

#### Segment Description

This segment includes the total area of the South Basin of the Lake. The South Basin includes waters of the Lake south of Bemus Point.

# Chautauqua Lake, North (0202-0072)

Impaired Seg

## Waterbody Location Information

Revised: 12/01/2014

**Water Index No:** Pa-63-13- 4-P122  
**Hydro Unit Code:** 05010002/020      **Str Class:** A  
**Waterbody Type:** Lake      7220.5 Acres  
**Seg Description:** portion of lake, north of Bemus Point  
**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

Uses Evaluated	Severity	Problem Documentation
Water Supply	Impaired	Known
Public Bathing	Impaired	Known
Recreation	Impaired	Known
Aquatic Life	Stressed	Suspected
Fish Consumption	Unassessed	-

**Conditions Evaluated**

Habitat/Hydrology	Fair
Aesthetics	Fair

**Type of Pollutant(s)** (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)  
Known: NUTRIENTS (Phosphorus), HARMFUL ALGAL BLOOMS, ALGAL/PLANT GROWTH (native), AQUATIC INVASIVE SPECIES  
Suspected: Low D.O./Oxygen Demand  
Unconfirmed: Metals (arsenic)

**Source(s) of Pollutant(s)**  
Known: OTHER SOURCE (Internal Loading), AGRICULTURE  
Suspected: Urban/Storm Runoff, Onsite/Septic Systems  
Unconfirmed: - - -

## Management Information

**Management Action:** Strategy Implementation Scheduled or Underway  
**Lead Agency/Office:** DOW/Reg9  
**IR/305(b) Code:** Impaired Water, TMDL Completed (IR Category 4a)

## Further Details

### Overview

Chautauqua Lake, North is assessed as an impaired waterbody due to public bathing and other recreational uses that are known to be impaired by nutrients (phosphorus), resulting algal blooms, excessive plant growth and disinfection byproducts in treated drinking water from the lake. The most significant sources of nutrient loading to the lake include internal loads – the result of years of nutrient loading that resides in lake sediments – and nutrients transported to the lake via groundwater inflow. Other sources include wastewater point sources that for the most part originate in the North Basin of the Lake, agricultural sources and onsite septic systems. Nutrient loads may also impact water supply use (though such impacts have not been verified) and may contribute to lower dissolved oxygen levels in the lake, which may impact aquatic life support.

### Use Assessment

This waterbody is designated class A, suitable for use as a water supply, public bathing beach, general recreation and

aquatic life support. Both basins of the lake support a number of public swimming beaches.

Recreation use and public bathing are considered to be impaired by elevated nutrients (phosphorus), excessive algae, poor water clarity, and shoreline harmful algal blooms. These uses are also impaired by the frequent closure of several beaches by the county health department due to harmful algal blooms. Additional bacteriological sampling is needed to more fully evaluate the impact of pathogen levels on public bathing (swimming) use. Non-contact recreation (boating, fishing) is also affected by excessive aquatic vegetation and the presence of invasive plant growth (Eurasian watermilfoil, curly leafed pondweed). Aesthetic conditions of the lake are considered to be poor due to excessive algae, shoreline algal blooms and excessive aquatic vegetation. (DEC/DOW, BWAM/CSLAP, July 2013)

Regarding water supply use, note that the evaluation of this use includes conditions of the lake water prior to treatment, as well as the quality of water distributed for use after treatment. Monitoring of water quality at the tap is conducted by local water suppliers and public health agencies. That being said, water supply use in the waterbody is considered to be impaired by elevated nutrient and chlorophyll levels in the lake that result in the formation of disinfection by-products (DBPs) in finished potable water and make treatment to meet drinking water standards more difficult. DBPs are formed when disinfectants such as chlorine used in water treatment plants react with natural organic matter (i.e., decaying vegetation) present in the source water. Prolonged exposure to DBPs may increase the risk of certain health effects. The Chautauqua Water District #2 reported levels of specific DBPs – THMs and haloacetic acids – in excess of regulatory limits during a portion of the year. (DEC/DOW, BWAM and NYSDOH, Public Water Supply, December 2014)

There are no known restrictions to aquatic life. Concerns have been noted regarding hypolimnetic oxygen depletion impacts on aquatic life support, however tiger muskie and walleye have been stocked by NYSDEC, and the lake provides a good smallmouth bass and largemouth bass fishery. (DEC/DFWMR, Region 9, January 2007)

Fish Consumption use is considered to be unassessed. There are no health advisories limiting the consumption of fish from this waterbody (beyond the general advice for all waters). However due to the presence of impacts/contaminants in the stream and the uncertainty as to whether the lack of a waterbody-specific health advisory is based on actual sampling, fish consumption use is noted as unassessed, rather than fully supported but unconfirmed. (NYS DOH Health Advisories and DEC/DOW, BWAM, December 2014)

Water quality monitoring by NYSDEC lakes programs focuses primarily on the 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 are not usually collected as part of these monitoring programs. Monitoring to assess public bathing use and assessments of restrictions on fish consumption are generally the responsibility of state and/or local health departments.

#### Water Quality Information

The north basin of Chautauqua Lake has been sampled as part of the NYSDEC Citizens Statewide Lake Assessment Program (CSLAP) from 19871 through 2013. CSLAP data indicate that the lake continues to be best characterized as eutrophic, or highly productive. Phosphorus levels, though generally lower than in the South Basin, still consistently exceed the state guidance values of 20 ug/l, and chlorophyll a levels are also very high for much of the summer season. Lake clarity is rarely restricted, with water transparency most often above minimally recommended levels for swimming beaches to protect swimmers safety. Readings of pH occasionally exceed the state water quality standards for protection of aquatic life, most likely in response to elevated algae levels. (DEC/DOW, BWAM/CSLAP, March 2014)

CSLAP volunteers frequently describe the lake as being "slightly" impacted for most recreational uses, and occasionally describe the lake as "substantially" impacted. This is consistent with "definite algal greenness" often reported at the lake. Rooted aquatic weeds frequently reached the lake surface, and both algae and weeds are implicated in recreational use problems for the south basin. (DEC/DOW, BWAM/CSLAP, March 2014)

Shoreline harmful algal blooms (HABs) were present for much of the 2014 season. Multiple samples collected from 2010 thru 2014 revealed toxin (microcystin-LR) levels well above swimming criteria; however these toxins were limited to shoreline locations as open water samples did not indicate similar levels. (DEC/DOW, BWAM/LMAS, December

2014)

The public beaches throughout the lake are regularly monitored and evaluated by the Chautauqua County Department of Health. Aquatic plant surveys are regularly conducted by Racine-Johnson Aquatic Ecologists.

#### Source Assessment

Nutrient (phosphorus) sources to the lake have been identified in the 2012 Chautauqua Lake Phosphorus TMDL. The TMDL indicates that wastewater point sources, agricultural activities, and onsite wastewater treatment (septic) systems are more significant sources of the phosphorus load than is the case in the South Basin. Internal loading of nutrients is also significantly less in the North Basin. Groundwater inflow load is similar for both Basins, but makes up a greater percentage (one-third) of the load in the North Basin. (DEC/DOW, BWRM, TMDL for Phosphorus in Chautauqua Lake, November 2012)

#### Management Action

Recommendations for specific sources of nutrients loads to the Lake are outlined in the Chautauqua Lake Phosphorus TMDL. In addition, Chautauqua County prepared an extensive *State of the Lake Report* in May 2000 and followed it up with a *Lake Management Report* later that year. These reports outline a range of options and recommendations to address sources of water quality impacts to the lake. These include management of aquatic vegetation through both in lake measures (harvesting, herbicide use), the need to maintain wastewater treatment (on site septic and sewer areas) to protect the uses of the lake, and erosion controls to address wet weather/stormwater runoff that contributes silt/sediment and nutrients to the lake. These reports also recognize the need to address development pressures in the basin that will also impact water quality in the lake. (DEC/DOW, BWRM, TMDL for Phosphorus in Chautauqua Lake, November 2012 and Chautauqua Lake Entering the 21st Century: State of the Lake Report, Chautauqua County Department of Planning and Development, May 2000 and The Management of Chautauqua Lake and its Watershed, Chautauqua County, November 2000).

#### Section 303(d) Listing

Chautauqua Lake, North, is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. Although it is assessed as an impaired water, it is categorized as an IR Category 4a water that is not listed due to the fact that a TMDL has already been completed and is being implemented. (DEC/DOW, BWAM, January 2014)

#### Segment Description

This segment includes the total area of the North Basin of the Lake. The North Basin includes waters of the Lake north of Bemus Point.

# Minor Tribs to Chautauqua Lake, Busti (0202-0033)

Unassessed

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4-P122- 1 thru 7  
**Hydro Unit Code:** 05010002/020      **Str Class:** C  
**Waterbody Type:** River                      17.9 Miles  
**Seg Description:** total length of selected streams and tribs

**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	
Public Bathing	Unassessed	-
Recreation	Unassessed	-
Aquatic Life	Unassessed	-
Fish Consumption	Unassessed	-
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: ---

### Source(s) of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: ---

## Management Information

**Management Status:** Unassessed  
**Lead Agency/Office:** DOW/BWAM  
**IR/305(b) Code:** Water with Insufficient Data (IR Category 3)

## Further Details

### Overview

Currently there is inadequate data/information to evaluate uses and determine a water quality assessment for this waterbody.

### Segment Description

This segment includes the total length of selected/smaller tribs to Chautauqua Lake in the Town of Busti. Tribs within this segment, including Crescent Creek (-4), are Class C.

# Goose Creek and tribs (0202-0023)

# Minor Impacts

## Waterbody Location Information

Revised: 12/21/2014

**Water Index No:** Pa-63-13- 4-P122- 8  
**Hydro Unit Code:** 05010002/020      **Str Class:** C\*  
**Waterbody Type:** River      61.2 Miles  
**Seg Description:** entire stream and tribs  
**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Problem Documentation
Water Supply/Shellfishing	N/A	-
Public Bathing	N/A	-
Recreation	Fully Supported	Suspected
Aquatic Life	Stressed	Known
Fish Consumption	Fully Supported	Unconfirmed
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Fair	
Aesthetics	Good	

## Type of Pollutant(s)

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Known: ---  
Suspected: UNKNOWN POLLUTANTS (biological impacts), Nutrients (phosphorus)  
Unconfirmed: ---

## Source(s) of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: UNKNOWN SOURCE

## Management Information

**Management Action:** Verification of Pollutants/Causes Needed  
**Lead Agency/Office:** DOW/Reg9  
**IR/305(b) Code:** Water Attaining All Standards (IR Category 1)

## Further Details

### Overview

Goose Creek is assessed as having minor impacts due to aquatic life that is known to be stressed. No specific pollutants or sources have been identified in the waterbody.

### Use Assessment

Goose Creek is primarily a Class C waterbody, suitable for general recreation and support of aquatic life, but not as a water supply or public bathing beach. On small portion of the waterbody is designated Class B.

Aquatic life is considered to be supported but stressed, based on biological sampling of the stream. This sampling can also be used to infer that there may be minor impact to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. (DEC, DOW, BWAM, July 2014)

Goose Creek and its tribs support a limited population of wild brown trout. NYSDEC stock trout each spring from

Ashville to Wall Street. The major limiting factors for wild trout appear to be heavy sedimentation (likely from stream bank erosion) and high water temperatures (likely from unshaded riparian areas and excessive numbers of beaver impoundments). The stream does support abundant warm-water tolerant fish species throughout its length, however the ability to support trout year-round is somewhat limited. The stream supports large congregations of walleye at spawning time, however their ability to spawn successfully and the contribution to the Chautauqua Lake population is still unsubstantiated. (DEC/DFWMR, Region 9, January 2007)

Other uses have not been fully assessed. There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014).

#### Water Quality Information

A biological (macroinvertebrate) assessment of Goose Creek in Ashville (at Route 474) was conducted as part of the RIBS biological screening effort in 2011 and again in 2012. Sampling results reflect fair water quality, with the macroinvertebrate community altered from what is expected under natural conditions. Some expected sensitive species are not present and overall macroinvertebrate species richness is lower than expected. Some changes in community composition have occurred due to replacement of sensitive ubiquitous taxa by more tolerant taxa, but overall there is still balanced distribution of all expected taxa. In spite of these minor impacts, aquatic life is considered to be supported. Similar biological sampling results were found in 2001. (DEC/DOW, BWAM/SBU, July 2014)

#### Source Assessment

The biologic community composition is inconclusive regarding pollutants and sources. The fauna appeared to reflect some toxic stress, although impoundment effects were also evident. Based on surrounding land use and other knowledge of the waterbody, the most cause of the impacts are nutrient loading and other impacts related to agricultural activity in the watershed. (DEC/DOW, BWAM/SBU, July 2014)

#### Management Action

While no specific management actions have been identified for this waterbody, the stream is within the Chautauqua Lake watershed and will be subject to actions outlined in the 2012 Chautauqua Lake TMDL for the reduction of phosphorus. (DEC/DOW, BRWM, December 2014)

#### Section 303(d) Listing

Goose Creek is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. (DEC/DOW, BWAM/WQAS, July 2014)

#### Segment Description

This segment includes the entire stream and all tribs. The waters of the stream are primarily Class C,C(T); with the reach from unnamed trib (-6) to Little Cranberry Stream (-7) designated Class B. Tribs to this reach/segment, including Little Cranberry Stream (-7) and Twenty-four Creek (-22), are Class C,C(T).

# Minor Tribs to Chautauqua Lake, N. Harmony (0202-0034)

Unassessed

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4-P122- 98 thru 14  
**Hydro Unit Code:** 05010002/020      **Str Class:** C  
**Waterbody Type:** River                      25.6 Miles  
**Seg Description:** total length of selected streams and tribs

**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	
Public Bathing	Unassessed	-
Recreation	Unassessed	-
Aquatic Life	Unassessed	-
Fish Consumption	Unassessed	-
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: ---

### Source(s) of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: ---

## Management Information

**Management Status:** Unassessed  
**Lead Agency/Office:** DOW/BWAM  
**IR/305(b) Code:** Water with Insufficient Data (IR Category 3)

## Further Details

### Overview

Currently there is inadequate data/information to evaluate uses and determine a water quality assessment for this waterbody.

### Segment Description

This segment includes the total length of selected/smaller tribs to Chautauqua Lake in the Town of North Harmony. Tribs within this segment, including Ball/Stow Creek (-11), are Class C.

# Prendergast Creek and tribs (0202-0024)

Threatened

## Waterbody Location Information

Revised: 12/21/2014

**Water Index No:** Pa-63-13- 4-P122-15  
**Hydro Unit Code:** 05010002/020      **Str Class:** C  
**Waterbody Type:** River      53.4 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Fully Supported	Suspected
Aquatic Life	Threatened	Suspected
Fish Consumption	Fully Supported	Unconfirmed

### Conditions Evaluated

Habitat/Hydrology	Fair
Aesthetics	Unknown

### Type of Pollutant(s)

Known:	---
Suspected:	THERMAL CHANGES, Silt/Sediment
Unconfirmed:	---

### Source(s) of Pollutant(s)

Known:	---
Suspected:	HABITAT ALTERATION, Hydrologic Alteration
Unconfirmed:	---

## Management Information

**Management Status:** No Action Needed  
**Lead Agency/Office:** DEC/FWMR  
**IR/305(b) Code:** Water Attaining All Standards (IR Category 1)

## Further Details

### Overview

Prendergast Creek is assessed as being threatened due to aquatic life that may be impacted in portions of the waterbody. High summer temperatures may limit trout populations in some trib reaches. A cold water fishery is supported in much of the Class C(T) waters of this segment.

### Use Assessment

Portions of Prendergast Creek and Wing Creek (-3) sustain a productive wild brown trout population. The lower section of Wing Creek flows subsurface in the summer and emerges very cold just above its junction with Prendergast Creek creating favorable conditions in the trib and main creek. Above Wing Creek, Prendergast Creek typically has higher summer water temperatures and does not support wild trout. Stream sedimentation and bank erosion were noted as moderate at some sites and this may also limit the wild trout population in some locations. The stream also supports large

congregations of walleye at spawning time, however their ability to spawn successfully and the contribution to the Chautauqua Lake population is still unsubstantiated. Impacts from a recreational boating marina located at the mouth of Prendergast Creek and periodic dredging of the lower creek channel for recreational boater may also impact fishery habitat. (DEC/DFWMR, Region 9, January 2007)

In spite of these concern, aquatic life is considered to be fully supported in the waterbody. This sampling can also been used to infer that there are no significant impacts to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. (DEC/DOW, BWAM, December 2014)

There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014).

#### Water Quality Information

No water quality sampling has been conducted for this waterbody. The assessment is based on an assessment of the fishery conducted by the DEC fisheries unit staff.

#### Source Assessment

Specific sources of pollutants to Prendergast Creek have not been identified.

#### Management Actions

No specific management actions have been identified for waterbody. However monitoring through the DEC/DOW statewide monitoring program is recommended.

#### Section 303(d) Listing

Prendergast Creek is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. (DEC/DOW, BWAM, December 2014)

#### 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 Wing Creek (-3) and Hubbard Creek (-5), are also Class C,C(T).

# Minor Tribes to Chautauqua Lk, Chautauqua (0202-0021) No Known Impact

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4-P122-16 thru 21  
**Hydro Unit Code:** 05010002/020      **Str Class:** C  
**Waterbody Type:** River      42.9 Miles  
**Seg Description:** total length of selected streams and tribs

**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	-
Public Bathing	N/A	-
Recreation	Fully Supported	Suspected
Aquatic Life	Fully Supported	Suspected
Fish Consumption	Fully Supported	Unconfirmed

### Conditions Evaluated

Habitat/Hydrology	Fair
Aesthetics	Unknown

### Type of Pollutant(s)

Known:	---
Suspected:	---
Unconfirmed:	---

### Source(s) of Pollutant(s)

Known:	---
Suspected:	---
Unconfirmed:	---

## Management Information

**Management Status:** No Action Needed  
**Lead Agency/Office:** DOW/BWAM  
**IR/305(b) Code:** Water Attaining All Standards (IR Category 1)

## Further Details

### Overview

Big Inlet within this waterbody segment is assessed as having No Known Impacts; all evaluated uses are considered to be Fully Supported. This trib is thought to be representative of the larger waterbody segment, but the assessment is noted as suspected because water quality conditions have not been verified in all tribs within the segment.

### Use Assessment

Aquatic life is considered to be fully supported based on biological sampling of Big Inlet that shows non-impacted conditions. This waterbody is thought to be representative of waters in this multiple-stream segment, but additional sampling is necessary to verify this. This sampling can also be used to infer that there are no significant impacts to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. Additional sampling is also needed to more fully evaluate other recreational use.

There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014).

#### Water Quality Information

A biological (macroinvertebrate) survey/assessment of Big Inlet in Hartfield (at Route 127) was conducted as part of the RIBS biological screening effort in 2011. Sampling results indicated non-impacted conditions. Such samples are dominated by clean-water species and are unaltered from a natural community with minimal human impacts. Aquatic life community is fully supported. The habitat at this site was notably influenced by human activity and the surrounding riparian buffer has been degraded. In spite of the habitat condition aquatic life is fully supported, indicating either the degraded habitat variables at this site are less influential on macroinvertebrate community composition or water quality is of high enough condition to overcome habitat impacts. (DEC/DOW, BWAM/SBU, December 2014)

#### Source Assessment

There are no apparent sources of pollutants to the waterbody.

#### Management Action

No specific management actions have been identified or are deemed necessary for the waterbody.

#### Section 303(d) Listing

This Minor Tribs to Chautauqua Lake segment is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. (DEC/DOW, BWAM/WQAS, January 2009)

#### Segment Description

This segment includes the total length of selected/smaller tribs to Chautauqua Lake in the Town of Chautauqua. Tribs within this segment, including Lighthouse/Clear Creek (-17), Black Creek (-18), Mud Creek (-19), Little Inlet (-20) and Big Inlet/Hartfield Creek (-21), are primarily Class C, with some small portions designated Class C(T).

# Dewittville Creek (0202-0022)

# Minor Impacts

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4-P122-22  
**Hydro Unit Code:** 05010002/020      **Str Class:** C  
**Waterbody Type:** River      30.4 Miles  
**Seg Description:** entire stream and tribs  
**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Problem Documentation
Water Supply/Shellfishing	N/A	-
Public Bathing	N/A	-
Recreation	Fully Supported	Suspected
Aquatic Life	Stressed	Known
Fish Consumption	Fully Supported	Unconfirmed
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Good	
Aesthetics	Good	

## Type of Pollutant(s)

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Known: ---  
Suspected: UNKNOWN POLLUTANTS (biological impacts), NUTRIENTS (phosphorus)  
Unconfirmed: ---

## Source(s) of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: AGRICULTURE

## Management Information

**Management Action:** Verification of Pollutants/Causes Needed  
**Lead Agency/Office:** DOW/Reg9  
**IR/305(b) Code:** Water Attaining Some Standards (IR Category 2)

## Further Details

### Overview

Dewittville Creek is assessed as having minor impacts due to aquatic life that is known to be stressed. No specific pollutants or sources have been identified in the waterbody.

### Use Assessment

Dewittville Creek is a Class C waterbody, suitable for for general recreation and support of aquatic life, but not as a water supply or public bathing beach.

Aquatic life is considered to be supported but stressed, based on biological sampling of the stream. This sampling can also be used to infer that there may be minor impact to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. (DEC, DOW, BWAM, July 2014)

Dewittville Creek does support abundant warm-water tolerant fish species throughout its length. The stream also supports

a limited population of wild brown trout, however the ability to support trout year-round is somewhat limited by higher water temperatures in the summer and silt/sedimentation. Streambank erosion and unshaded riparian areas contribute to these impacts. The stream supports large congregations of walleye at spawning time, however their ability to spawn successfully and the contribution to the Chautauqua Lake population is still unsubstantiated. NYSDEC DFWMR has suggested additional portions of this segment be reclassified as trout waters. (DEC/DFWMR, Region 9, January 2007)

Other uses have not been fully assessed. There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014).

#### Water Quality Information

A biological (macroinvertebrate) assessment of Dewittville Creek in Chautauqua (at East Lake Road) was conducted as part of the RIBS biological screening effort in 2011. Sampling results reflect fair water quality, with the macroinvertebrate community altered from what is expected under natural conditions. Some expected sensitive species are not present and overall macroinvertebrate species richness is lower than expected. Some changes in community composition have occurred due to replacement of sensitive ubiquitous taxa by more tolerant taxa, but overall there is still balanced distribution of all expected taxa. Aquatic life is supported. (DEC/DOW, BWAM/SBU, July 2014)

#### Source Assessment

The biologic community composition is inconclusive regarding pollutants and sources. Based on surrounding land use and other knowledge of the waterbody, the most cause of the impacts are nutrient loading and other impacts related to agricultural activity in the watershed. (DEC/DOW, BWAM/SBU, July 2014)

#### Management Action

While no specific management actions have been identified for this waterbody, the stream is within the Chautauqua Lake watershed and will be subject to actions outlined in the 2012 Chautauqua Lake TMDL for the reduction of phosphorus. (DEC/DOW, BRWM, December 2014)

#### Section 303(d) Listing

Dewittville Creek is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. (DEC/DOW, BWAM/WQAS, July 2014)

#### Segment Description

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

# Minor Tribs to Chautauqua Lake, N. Ellery (0202-0025)

Unassessed

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4-P122-23 thru 26  
**Hydro Unit Code:** 05010002/020      **Str Class:** C(T)  
**Waterbody Type:** River      8.4 Miles      **Reg/County:** 9/Chautauqua Co. ( 7)  
**Seg Description:** total length of selected streams and tribs

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	
Public Bathing	Unassessed	-
Recreation	Unassessed	-
Aquatic Life	Unassessed	-
Fish Consumption	Unassessed	-
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: ---

### Source(s) of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: ---

## Management Information

**Management Status:** Unassessed  
**Lead Agency/Office:** DOW/BWAM  
**IR/305(b) Code:** Water with Insufficient Data (IR Category 3)

## Further Details

### Overview

Currently there is inadequate data/information to evaluate uses and determine a water quality assessment for this waterbody.

### Segment Description

This segment includes the total length of selected/smaller tribs to Chautauqua Lake in the Town of North Ellery. Tribs within this segment, including Trout Creek (-23) and Whitesides Creek (-26), are primarily Class C,C(T).

# Bemus Creek and tribs (0202-0035)

# Needs Verification

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4-P122-27  
**Hydro Unit Code:** 05010002/020      **Str Class:** C(T)  
**Waterbody Type:** River      27.7 Miles      **Reg/County:** 9/Chautauqua Co. ( 7)  
**Seg Description:** total length of selected streams and tribs

## Water Quality Problem/Issue Information

Uses Evaluated	Severity	Problem Documentation
Water Supply/Shellfishing	N/A	-
Public Bathing	N/A	-
Recreation	Stressed	Suspected
Aquatic Life	Impaired	Unconfirmed
Fish Consumption	Unassessed	-
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

**Type of Pollutant(s)** (CAPS indicate MAJOR Use Impacts/Pollutants/Sources)  
Known: - - -  
Suspected: UNKNOWN TOXICITY, UNKNOWN POLLUTANT (biological impacts)  
Unconfirmed: - - -

**Source(s) of Pollutant(s)**  
Known: URBAN/STORM RUNOFF  
Suspected: Industrial Discharges, Municipal Discharges,  
Unconfirmed: - - -

## Management Information

**Management Action:** Verification of Problem Severity Needed  
**Lead Agency/Office:** DOW/BWAM  
**IR/305(b) Code:** Water with Insufficient Data (IR Category 3)

## Further Details

### Overview

Bemus Creek is currently assessed as having minor impacts/possible impairment due to aquatic life that is thought to be impaired, but these conditions need to be more fully assessed. Specific pollutants have not been identified but sewage effluent/animal wastes are likely causes; agricultural activity in the watershed may be a sources of these pollutants.

### Use Assessment

Bemus Creek is a Class C waterbody, suitable for general recreation and support of aquatic life, but not as a water supply or public bathing use.

Aquatic life is known to experience some impacts and may be impaired, however additional sampling is needed to verify the level of impact/impairment. This sampling can also be used to infer that there are impacts to recreational (fishing) uses, although more specific sampling is necessary to confirm this is the case. Additional sampling is also needed to more fully evaluate other recreational and swimming use. (DEC/DOW, BWAM/SBU, December 2014)

Fish Consumption is considered to be unassessed. There are no health advisories limiting the consumption of fish from this waterbody (beyond the general advice for all waters). However due to indications of possible presence of contaminants in the stream and the uncertainty as to whether the lack of a waterbody-specific health advisory is based on actual sampling, fish consumption use is noted as unassessed, rather than fully supported but unconfirmed. (DEC/DOW, BWAM, December 2014)

#### Water Quality Information

A biological (macroinvertebrate) assessment of Bemus Creek in Bemus Point (at Route 430) was conducted in 2006. Sampling results reflect moderately impacted (poor) water quality, with sensitive taxa reduced, and the distribution of major taxonomic groups significantly different from what is naturally expected. Aquatic life is considered to be impaired, however this evaluation is noted as unconfirmed because it is based on a single sample; additional sampling to confirm this result is needed. Information on the habitat condition and any resulting influence on biology is not available. (DEC/DOW, BWAM/SBU, July 2014)

#### Source Assessment

Specific sources of pollutants to Bemus Creek have not been clearly identified. But based on the biologic community composition, surrounding land use and other knowledge of the waterbody, the most likely causes of pollutants in the waterbody are sewage effluent and animal wastes. Sources of these pollutants are thought to be agricultural activity in the watershed and possibly some contribution from onsite wastewater treatment (septic) systems. However these sources have not been verified. (DEC/DOW/BWAM, December 2014)

#### Management Action

While no specific management actions have been identified for this waterbody, the stream is within the Chautauqua Lake watershed and will be subject to actions outlined in the 2012 Chautauqua Lake TMDL for the reduction of phosphorus. (DEC/DOW, BRWM, December 2014)

#### Section 303(d) Listing

Bemus Creek is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. However this updated assessment suggests it may be appropriate to consider including this waterbody on the next List, pending additional sampling to verify an impairment. (DEC/DOW, BWAM/WQAS, January 2010)

#### Segment Description

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C. Tribs to this reach/segment, including Browns Creek (-1) are Class C,C(T).

# Minor Tribs to Chautauqua Lake, S. Ellery (0202-0023)

Unassessed

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4-P122-28 thru 31  
**Hydro Unit Code:** 05010002/020      **Str Class:** C(T)  
**Waterbody Type:** River                      9.2 Miles      **Reg/County:** 9/Chautauqua Co. ( 7)  
**Seg Description:** total length of selected streams and tribs

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Confidence
Water Supply	N/A	
Public Bathing	Unassessed	-
Recreation	Unassessed	-
Aquatic Life	Unassessed	-
Fish Consumption	Unassessed	-
<b>Conditions Evaluated</b>		
Habitat/Hydrology	Unknown	
Aesthetics	Unknown	

### Type of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: ---

### Source(s) of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: ---

## Management Information

**Management Status:** Unassessed  
**Lead Agency/Office:** DOW/BWAM  
**IR/305(b) Code:** Water with Insufficient Data (IR Category 3)

## Further Details

### Overview

Currently there is inadequate data/information to evaluate uses and determine a water quality assessment for this waterbody.

### Segment Description

This segment includes the total length of selected/smaller tribs to Chautauqua Lake in the Town of South Ellery. Tribs within this segment, including Belleview Creek (-28), Driftwood Creek (-29), Sunnyside Canal (-30a) and Fluvanna/Martin Brook (-31), are primarily Class C,C(T). Dutch Hollow Creek (-30) is listed separately.

# Dutch Hollow Creek and tribs (0202-0037)

**Threatened**

## Waterbody Location Information

Revised: 12/18/2014

**Water Index No:** Pa-63-13- 4-P122-30  
**Hydro Unit Code:** 05010002/020      **Str Class:** B  
**Waterbody Type:** River      10.3 Miles  
**Seg Description:** entire stream and tribs

**Drain Basin:** Allegheny River  
Conewango Creek  
**Reg/County:** 9/Chautauqua Co. ( 7)

## Water Quality Problem/Issue Information

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Uses Evaluated	Severity	Problem Documentation
Water Supply/Shellfishing	N/A	-
Public Bathing	Unassessed	-
Recreation	Fully Supported	Suspected
Aquatic Life	Threatened	Suspected
Fish Consumption	Fully Supported	Unconfirmed

**Conditions Evaluated**

Habitat/Hydrology	Good
Aesthetics	Good

## Type of Pollutant(s)

(CAPS indicate MAJOR Use Impacts/Pollutants/Sources)

Known: ---  
Suspected: UNKNOWN POLLUTANTS (biological impacts)  
Unconfirmed: ---

## Source(s) of Pollutant(s)

Known: ---  
Suspected: ---  
Unconfirmed: AGRICULTURE

## Management Information

**Management Action:** No Action Needed  
**Lead Agency/Office:** DOW/Reg9  
**IR/305(b) Code:** Water Attaining Some Standards (IR Category 2)

## Further Details

### Overview

Dutch Hollow Creek is assessed as being threatened due to aquatic life that is thought to be threatened by unspecified pollutants. Biological sampling results show slightly impacted conditions with minimal anthropogenic impacts and with a community that is most similar to natural conditions.

### Use Assessment

Dutch Hollow Creek is a Class B waterbody, suitable for use as a public bathing beach, general recreation and support of aquatic life, but not as a water supply.

Aquatic life is considered to be supported with minimal impacts. Biological sampling of the stream show conditions to be in the slightly impacted range, but with a community that is most similar to natural conditions. Recreational use is thought to be fully supported based on the aquatic life evaluation, since fishing is a primary recreational use of the waterbody. However additional sampling is needed to more fully evaluate other recreational and swimming use.

(DEC, DOW, BWAM, July 2014)

There are no health advisories in place limiting the consumption of fish from this waterbody (beyond the general advice for all waters). Fish consumption is considered to be fully supported based on the absence of any waterbody-specific advisory, but is noted as unconfirmed since routine monitoring of contaminants in fish is limited. (NYS DOH Health Advisories and DEC/DOW, BWAM, January 2014).

#### Water Quality Information

A biological (macroinvertebrate) assessment of Dutch Hollow Creek in Greenhurst (at Route 430) was conducted as part of the RIBS biological screening effort in 2006. Sampling results reflect good water quality, with conditions in the slightly impacted range, but approaching an assessment of nonimpacted. The macroinvertebrate community showing some beginning signs of alteration from natural conditions. Some expected sensitive species are not present and overall macroinvertebrate species richness is somewhat lower than expected, but overall there is still balanced distribution of all expected taxa. Aquatic life is supported. Assessment of the habitat condition and any resulting influence on biology was not conducted, but the biological community indicates water quality reflective of minimal anthropogenic influences. (DEC/DOW, BWAM/SBU, July 2014)

#### Source Assessment

Based on the biologic community composition, water quality is reflective of minimal anthropogenic sources. Surrounding land use and other knowledge of the waterbody indicate agricultural and other nonpoint source runoff to be the most likely potential sources. (DEC/DOW, BWAM/SBU, July 2014)

#### Management Action

While no specific management actions have been identified for this waterbody, the stream is within the Chautauqua Lake watershed and will be subject to actions outlined in the 2012 Chautauqua Lake TMDL for the reduction of phosphorus. (DEC/DOW, BRWM, December 2014)

#### Section 303(d) Listing

Dutch Hollow Creek is not included on the current (2014) NYS Section 303(d) List of Impaired/TMDL Waters. (DEC/DOW, BWAM/WQAS, July 2014)

#### Segment Description

This segment includes the entire stream and selected/smaller tribs. The waters of the stream are Class C from the mouth to trib -1, and Class B for the remainder of the stream. Tribs to this reach/segment are also Class B.