

Chapter 1. Project Background



1. Project Background

1.1 Purpose of Report

The Cayuga Lake Preliminary Watershed Characterization Report has two purposes: (1) describe the current understanding of the state of the watershed; and (2) describe the history and status of the watershed management planning process.

A watershed is drainage basin which includes the land and associated water resources (ground and surface water and wetlands) including streams which drain to larger streams, rivers, or lakes and eventually drains to another waterbody from one downstream location. A watershed management plan is a working document that describes the activities to be undertaken by government, the private sector, and individuals, which will result in the optimum use and enjoyment of the lake and surrounding land, by all members of society both now and in the future. A watershed management plan is also a process that requires several overlapping and interrelated phases that include fact finding, public participation and education. Just as no two watersheds are the same, no two watershed management planning processes are the same. However, what all the processes have in common is a need to understand the existing state of the watershed, a need to involve all of the interests in determining a desired state of the watershed, and a set of agreed upon implementation goals, objectives, and strategies that describe how the watershed will get from the existing state to the desired state.

The Cayuga Lake Watershed Management Plan process began in 1998 with several short-term goals. These goals included the following:

- Develop a Preliminary Watershed Characterization to provide the basis for the understanding of the state of the watershed
- Develop an intermunicipal organization which can bring all municipal governments within the watershed together, to work together
- Foster greater awareness and understanding about the Cayuga Lake Watershed
- Involve the citizens of the watershed in the development of Watershed Characterization and Watershed Management Plan

It is therefore the purpose of this Preliminary Watershed Characterization to both report on the progress of the process and the state of the understanding of the watershed. The process has included watershed information and data collection, synthesis, preliminary analysis, and findings, including the identification of information and data gaps. The process has also included education, public participation and the development of a structure for watershed-wide and intermunicipal cooperation. Within this document these two components can be separated into the technical portion and the description of the process.

The technical portion of this document is embodied in Chapters 2 through 6, which include the following categories:

- General Watershed Description
- Limnology
- Potential Sources of Contamination
- Programmatic and Regulatory Environment
- Subwatershed Description
- Watershed and Subwatershed Technical Findings

The technical portion of this document provides an understanding of the watershed and not necessarily the state of the watershed. It is meant to be a living document that provides a compendium of current data and information related to the Cayuga Lake Watershed that has been synthesized and analyzed to provide findings, guidance and identification of information gaps. Hopefully, as the data and information gaps are filled, a true state of the watershed will emerge.

The description of the process is embodied in Chapters 1, 7, and 8, which include the following categories:

- Project Background
- Public Perceptions in the Watershed
- Watershed Education

- **Interim Recommendations**

The description of the process gives a state of understanding of the watershed management plan process and the work that has been accomplished toward that end. This is a constantly evolving process that ultimately leads to a watershed management plan.

It is important to point out that within the Preliminary Watershed Characterization, the technical component and description of the process are interrelated. The technical component helps to drive awareness, and both affects and is affected by public perceptions and participation. The technical component begins to establish the existing state of the watershed. The description of the process helps to establish the desired state of the watershed. Together, the science embodied in technical component and the public participation embodied in the description of the process, can develop the goals, objectives and strategies to move from the existing state to the desired state of the watershed.

1.2 Project History

The Preliminary Cayuga Lake Watershed Characterization is the first phase of the Cayuga Lake Watershed Management Plan project. The project was initially funded by a grant to the Town of Ledyard from the New York State Environmental Protection Fund through the New York State Department of State Local Waterfront Revitalization Program. Additional funding for the Preliminary Watershed Characterization has been provided by the Empire State Development Corporation. Local and in-kind match has been provided by the Town of Ledyard, Cayuga Nature Center, Cornell Cooperative Extension of Cayuga and Tompkins Counties, Central New York Regional Planning & Development Board, Genesee/Finger Lakes Regional Planning Council, and the members of the Intermunicipal Organization, the Technical Committee, and the Education and Public Participation Committee.

1.3 Project Oversight

1.3.1 Intermunicipal Organization

Mission Statement: To create, modify, and implement a watershed management plan to allow local governments within the watershed to work together for the purposes of accessing dollars, cost savings, cost sharing, and efficiency of activities among municipalities. This plan when completed will prioritize water quality problems and solutions. The Intermunicipal Organization will provide direction for the regional planning boards and other staff, and oversee the entire project.

Intermunicipal Organization (IO) membership is comprised of watershed municipalities (counties, cities, towns and villages) (see Table 1.2.1.1). Approximately 66% of watershed municipalities have participated in IO activities to date, with 28 of the 50 having signed the cooperative agreement developed by the IO (see Figure 1.3.1.1) (a few of the 50 municipalities are not expected to participate as their land area in the watershed is so small.). Generally the IO meets monthly with a set agenda.

The IO has defined organizational issues such as quorums, voting and committees. Committees that function under the IO include Technical, Membership and Education/Outreach/Public Participation Committees. Additionally, the goal is to form Finance and Agriculture Committees. Non-municipal stakeholders will participate via avenues such as membership on IO committees, the Cayuga Lake Watershed Network, and forums to occur throughout the project.

Table 1.2.1.1

CAYUGA LAKE WATERSHED INTERMUNICIPAL ORGANIZATION MEMBERSHIP, PARTICIPATION AND AGREEMENT SIGNATORY STATUS -- 4/26/0			
MUNICIPALITY	DESIGNATED REPRESENTATIVE/ ALTERNATE	NON-REP ATTENDEE	SIGNED CALL FOR COOP.
Cayuga County		Sara Young	
Aurelius (T)	Edward Ide		Yes
Aurora (V)	Ken Zabriskie		Yes
Cayuga (V)	Ronald Erickson		Yes
Fleming (T)	Jim Young		Yes
Genoa (T)	Don Franklin/Don Potter		Yes
Ledyard (T)	Dave Morehouse/Sylvia Huribut		Yes
Locke (T)*	Not participating at this time.		
Scipio (T)	Chuck Howell		Yes
Sempronius (T)			
Springport (T)	Robert Bower		Yes
Summer Hill (T)	Deborah Davenport		Yes
Union Springs (V)	Eli Shockey	John Dellonte	Yes
Venice (T)	Jack Rejman		Yes
Cortland County	Sandra Price		Yes
Cortlandville (T)			
Harford (T)		Ed Drake	
Homer (T)	Not participating at this time.		
Scott (T)*	Not participating at this time.		
Virgil (T)	Ed Eaton		Yes
Schuyler County			
Catharine (T)*			
Hector (T)			
Seneca County	Thomas Fox		
Covert (T)	John Sipos		Yes
Fayette (T)	Patrick Morrell		Yes
Interlaken (V)	Barbara Stewart/Doug Burlew		Yes
Lodi (T)	Not participating at this time.		
Ovid (T)			
Romulus (T)	Raymond Zajac		Yes
Seneca Falls (T)	Jeffrey Warrick		Yes
Varick (T)	John Sipos		Yes
Tioga County*	Not participating at this time.		
Spencer (T)*	Not participating at this time.		
Tompkins County	Dan Winch/Sharon Anderson/Kate Hackett		Yes
Caroline (T)		Fern DeLise	
Cayuga Heights (V)	Dave Allee/Dooley Kiefer	Ron Anderson	Yes
Danby (T)			
Dryden (T)	Deb Grantham		Yes
Dryden (V)			
Enfield (T)			
Freeville (V)	Bruce Johnson		Yes
Groton (T)	Teresa Robinson/Lyle Raymond		Yes
Ithaca (C)	Larry Fabbroni	Gary Gleason, Jeff Soule	Yes
Ithaca (T)	Carolyn Grigorov		Yes
Lansing (T)	Stephen Farkas/Katrina Greeley/Jerry Codner		Yes
Lansing (V)	Lynn Leopold		Yes
Newfield (T)			
Trumansburg (V)			
Ulysses (T)	Krys Cail/George Kennedy		Yes

* Municipalities with less than 3 sq. mi. in watershed

Figure 1.3.1.1

**CALL FOR COOPERATION
and
RESOLUTION TO ENDORSE A WATERSHED STUDY
FOR CAYUGA LAKE**

WHEREAS, the Intermunicipal Organization is being formed to create, modify and implement a watershed management plan to allow counties, towns, villages, and cities in the watershed to work together for the purpose of accessing dollars, cost savings, cost sharing and efficiency of activities among the municipalities, prioritize water quality issues, and

WHEREAS, the Intermunicipal Organization is made up of municipalities within the watershed to oversee the development of a watershed management plan, and

WHEREAS, this Board acknowledges the importance of water quality and natural resources of the Cayuga Lake Watershed, and

WHEREAS, the size of the watershed dictates that cooperation between varied user groups will be essential in protecting this natural resource,

NOW THEREFORE, BE IT RESOLVED that this Board of the Town/Village/City/County of:
will participate in the efforts of the Intermunicipal Organization to: 1) define the structure of the Intermunicipal Organization; 2) promote scientific analysis of the watershed's resources in order to determine the state of the watershed; 3) develop an education and awareness program to educate local residents and stimulate their interest in protecting the watershed; 4) develop coalitions for cooperation and participation in projects relevant to the protection of the watershed; 5) prioritize water issues within the watershed; and 6) participate in solutions to water quality problems, including possible sources of funding.

THIS IS TO CERTIFY that the foregoing Resolution was duly adopted on _____, 1999.

_____ is hereby appointed as the delegate to represent
Intermunicipal Organization

Signature and Title of Presiding Officer:

1.3.2 Technical Committee

The Technical Committee was formed by the IO to oversee the technical findings portion of the Watershed Management Plan project. The Technical Committee is comprised of a representative of the following: each County Water Quality Coordinating Committee, New York State Department of State (NYSDOS), New York State Department of Environmental Conservation (NYSDEC) Division of Water, NYSDEC Regional Water Engineers, Montezuma Wildlife Refuge, Cayuga Lake Watershed Network (CLWN), United States Geological Survey (USGS), United State Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Wells College, Cornell University Center for the Environment, and the Atlantic Legal Services Foundation.

The main functions of the Technical Committee is data and information identification, technical education and public participation review, interim recommendation criteria and project review, and Preliminary Watershed Characterization and Watershed Management Plan development.

1.3.3 Education/Public Participation/Outreach Committee

The Education/Public Participation/Outreach Committee was formed by the IO to undertake activities that interface between the IO and the general public. The group consists of members of the IO and the CLWN. To date, the main task of the group has been overseeing the public review process for the draft Preliminary Watershed

Characterization. In addition to a series of three public meetings, which are co-sponsored by the Cayuga Lake Watershed Network and distributed throughout the watershed, comments are being solicited from citizen groups, professionals and municipal officials.

1.3.4 Agricultural Committee

The Agricultural Committee was formed by the IO and the Cayuga Lake Watershed Network to have agricultural input into the Watershed Management Plan process. The mission of the committee is as follows: *Since agriculture is recognized as a preferred land use in maintaining and protecting water quality, the mission of the Cayuga Lake Watershed Agricultural Committee will be to enhance agriculture through sound environmental stewardship and provide guidance for an agricultural program within the Cayuga Lake Watershed.*

Representatives of the following organizations developed the structure of the committee: County Soil & Water Conservation Districts, Natural Resource Conservation Service, and Cornell Cooperative Extension. These organizations agreed on a structure of individual county producer representation according to a percent of agricultural land in the watershed on the whole. It was a consensus of the group that the Committee should consist of 11 agricultural producers according to the following membership: Tompkins County (3), Cayuga County (3), Seneca County (2), Cortland County (1), Schuyler County (1), and one seat determined by the other ten committee members as at-large.

1.4 Scope and Statement of Goals and Objectives

1.4.1 Project Scope

The project scope for Phase I (Preliminary Watershed Characterization) of the Cayuga Lake Watershed Management Plan includes the following:

- Develop and Coordinate an Intermunicipal Organization
- Hire Project Administrator
- Provide Forums for Public Participation
- On-going Public Education
- Prepare Contracts
- Undertake Project Scoping
- Prepare Draft Watershed Characterization
- Provide Measurable Results

1.4.2 Watershed Management Plan Project Goals and Objectives

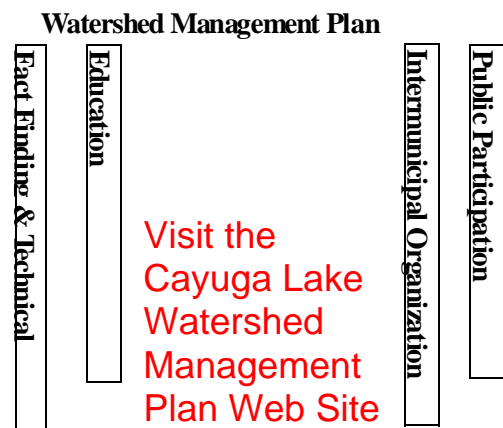
The Cayuga Lake Watershed Management Planning Project has four major components: 1) the Intermunicipal Organization; 2) Technical Findings; 3) Education and Outreach; and 4) Public Participation. The goals and objectives of each component are listed below.

Intermunicipal Organization (IO) Goals:

To create, modify, and implement a watershed management plan to allow local governments within the watershed to work together for the purposes of accessing dollars, cost savings, cost sharing, and efficiency of activities among municipalities. This plan when completed will prioritize water quality problems and solutions. The Intermunicipal Organization will provide project and watershed direction.

Intermunicipal Organization (IO) Objectives:

- Form and maintain support of the IO
- Determine IO membership, committees, quorums, voting and mission
- Establish committees to help advise and work on critical areas of plan development



- Identify water quality issues of concern to the IO
- Conduct project review and oversight
- Provide assistance in the development of recommendations
- Assist with identifying and coordinating water-related programs throughout the watershed
- Facilitate watershed-wide communication
- Facilitate intermunicipal cooperation.

Technical Findings Goals:

To develop a Draft Preliminary Cayuga Lake Watershed Characterization report that focuses on the current state of Cayuga Lake, its tributaries and the surrounding land contributing to the water quality of the Lake. The report will include project background, related projects and processes in the watershed, a general description of the watershed, a description of the programmatic and regulatory environment, public perceptions of watershed issues, an analysis of the Lake's limnology and potential sources of contamination, and interim implementation recommendations.

Technical Findings Objectives:

- Delineate watershed and subwatershed
- Provide presentations to and input from technical stakeholders
- Form Technical Committee
- Develop geographical information database
- Undertake water quality data acquisition and development
- Select technical consultant
- Inventory potential sources of contamination
- Analyze and synthesize data and information
- Data and information gap identification
- Develop interim list of recommendations

Education and Outreach Goals:

To strengthen plan development and implementation by creating awareness and knowledge in the watershed about the watershed itself, about the Cayuga Lake Watershed Management Planning Project and the need for a Plan, as well as by fostering awareness and knowledge about water resource issues and the connection between human activities and water quality.

Education and Outreach Objectives:

- Develop, maintain and advertise a Cayuga Lake Watershed Management Plan website
- Develop and distribute printed materials about the project and water resource issues
- Hold workshops and seminars about the project and water resource and land use issues
- Develop and utilize presentations about the planning process and water issues
- Develop and circulate displays and exhibits about the project and water resource issues in the watershed
- Work with residents in the watershed to assess their individual impact and remedial or preventive actions they can take
- Utilize the media as a vehicle for fostering public awareness and involvement
- Maintain and update interested stakeholder mailing list.

Public Participation Goals:

To meaningfully involve non-municipal stakeholders and the general public in developing the Cayuga Lake Watershed Management Plan to ensure that it is locally accepted, supported and thereby implemented.

Public Participation Objectives:

- Hold public forums in multiple locations around the watershed to:
 - broaden knowledge of the planning project
 - broaden knowledge of the Cayuga Lake Watershed and its water quality
 - identify public perceptions as to water quality issues in the watershed
 - identify the public's vision for the future of the watershed
 - obtain public feedback on findings of the Draft Watershed Characterization
 - obtain public feedback on potential solutions to water quality problems in the watershed

- obtain public feedback on draft recommendations
- obtain public feedback on final recommendations
- Distribute plan drafts to interested stakeholders for their review and input
- Survey residents throughout the watershed about issues and solutions.

The process of getting from the existing (Characterization) to the desired state (implementation of the watershed management plan involves the recognition of differences between those states and the involvement of the watershed community. This involvement will allow for consensus on restoration and protection strategies which will be embodied in the watershed management plan (see Figure 1.4.1).

1.5 Related Projects and Processes in the Watershed

[Visit the Cayuga Lake Watershed Network Web Site](#)

1.5.1 Cayuga Lake Watershed Network

The Cayuga Lake Watershed Network (CLWN) is a community-based organization made up of citizens, businesses, associations, agencies, and local governments that advocates for a healthy and sustainable Cayuga Lake Watershed. Anyone who lives, works, or plays in the watershed is invited to participate. The Network seeks to promote understanding of how to maintain and improve the ecological health, economic vitality, and overall beauty of the watershed environment. The Network provides education by encouraging individual stewardship throughout the watershed by raising awareness of watershed concerns; communication by providing an interactive, responsive forum that strives for the discovery and exchange of information; and leadership by acting as a proactive advocate for an economically sustainable and ecologically balanced watershed.

1.5.2 County Water Quality Coordinating Committees

The purpose of County Water Quality Coordinating Committees (WQCC) is to integrate the diverse point/nonpoint source water quality pollution control and abatement programs of various county, regional, state, and federal agencies and organizations into a coordinated, comprehensive, and effective inter-agency approach at the county level. WQCCs provide a forum for involvement in water resources planning and management, and more efficient use of the limited resources available. Table 1.5.2.1 summarizes the mission, function, membership, goals, objectives, and issues of each county's WQCC.

1.5.3 Academic Institutions

The academic institutions of high education in the watershed, as well as some outside the watershed, are carrying on research and other programs related to the Cayuga Lake Watershed. The institutions in the watershed include Cornell University, Ithaca College, and Wells College. Cornell University's Center for the Environment coordinates and facilitates watershed research and outreach at the University.

1.5.4 State and Federal Programs

New York State programs that relate to the Cayuga Lake Watershed are broadly discussed in Chapter 5. Programmatic Environment as they affect nonpoint source pollution management in the watershed. The state and federal agencies that have programs include the following:

New York State Department of Environmental Conservation
 New York State Department of State
 New York State Department of Health
 New York State Department of Agriculture and Markets
 United States Environmental Protection Agency
 United States Department of Interior
 United States Department of Agriculture
 United States Geologic Survey
 United States Army Corps of Engineers
 United States Fish & Wildlife Service
 Natural Resource Conservation Service

**Table 1.5.2.1
County Water Quality Coordinating Committees**

	Cayuga WQMA	Cortland WQCC	Seneca WQC	Tompkins WRC
Mission	The mission of the Cayuga County Water Quality Management Agency (WQMA) is to protect and improve the quality of water in Cayuga County.	Protect and improve the quality of water within Cortland County	To foster a coordinated inter-agency and public approach to protect and improve the water quality in Seneca County.	The purpose of the County Water Quality Strategy Plan is to promote education, policies and guidelines to protect and improve the quality of surface and ground water in Tompkins County
Function	The WQMA was established in November 1990 by the Cayuga County Legislature to provide a correlated approach to water quality management in Cayuga County. The agency's primary functions are to perform comprehensive planning of goals and implementation of strategies for water quality management programs by coalescing the efforts, activities, and responsibilities of member agencies; and to increase public awareness, and participation in water quality and quantity issues.	The CCWQCC was developed to provide for a coordinated a cooperative approach to water quality management in Cortland County. Water quality and nonpoint source pollution encompass a wide range of areas that no one department, agency or organization can adequately address on their own, Agencies from all levels of government and groups from the private sector are concerned with the nonpoint source water quality issue. A need existed for a pooling of resources and effort, closer working relationships, and awareness of the programs and mandates of all working toward the common goal of water quality enhancement. The CCWQCC serves this purpose and will further serve the residents of Cortland County by developing a coordinated county-wide water quality strategy. The CCWQCC will then monitor the implementation of the strategy, evaluate progress, continue to assess water quality conditions, and revise the strategy as needed.	To set overall direction for policy making by local government, and to identify problems that should be addressed and to target assistance. Other functions of the Committee include advisory, information sharing, and team-building. Assistance will be multi-disciplinary with technical expertise being provided to define problems and describe potential solutions. Educational assistance will afford an opportunity for public and private individuals to learn about water quality and quantity issues	The function of the Steering Committee is to act as a facilitator to implement the County Water Quality Strategy Plan by recommending policy changes to the County Board of Representatives and Municipalities as the need arises. It also acts as a coordinator of programs to reduce overlap and maximize the use of limited resources. The Steering Committee prepares a program document with specific goals and objectives and prioritizes tasks as part of its annual report to the Board of Representatives. It is the overall function of the Steering Committee to assure that the annual work plan is funded and implemented. The Steering Committee also invites representatives of various groups to participate in Task Groups. Minutes and information on the activities of the Steering Committee are distributed to all groups and agencies participating in the actions of the Committee as well as to public information sources such as Tompkins County Library and Cooperative Extension.
Membership	County S&WCD, County Health Department, County Planning Board, CCE, County EMC, City of Auburn, County Association of Towns, County Association of Villages, County Water Association	County S&WCD, County Health Department, County Planning, CCE, County Highway Department, Cortland Water Board, County Economic Development Committee, County EMC, County Farm Bureau, Local Government Representative, County Private Enterprise Representative	County S&WCD, Department of Economic Development & Planning, County Health Department, County CCE, Seneca County Pure Waters Association, Inc., Montezuma Wildlife Refuge, County Chamber of Commerce, County Farm Bureau, Member-at-Large (2)	County Planning Department, County Environmental Health, County S&WCD, CCE, Cornell University Water Resources Institute, Boulton Point Water System, USGS, NRCS, County EMC, County Agricultural and Farmland Protection Board or Agricultural Representative
Membership (Advisory)	NYS S&W Conservation Committee, NYSDEC Division of Water, ASCS, NRCS	NYS S&W Conservation Committee, NYSDEC, USDA-NRCS, USDA Farm Service Agency, USGS	NRCS – USDA, NYSDEC, NYS S&WC Committee, Farm Service Agency	
Goal(s) & Objectives	To establish and implement a coordinated water quality program, which identifies and addresses	Establish and implement a coordinated water quality program emphasizing local roles and responsibilities to	Public Education, Promote Sound Agricultural Practices, County Household Hazardous Waste Collection,	Public Information Program, Water Quality Monitoring and Assessment, Technical Assistance for Implementing Water Quality Strategy Goals, Addressing Watershed Specific and County-Wide Issues, Address

	nonpoint source pollution in Cayuga County	identify and address nonpoint source water pollution	Roadbank Stabilization, Coordination of Public Water and Sewer Supplies	Regional Watershed Issues
Issues/Concerns	Stormwater Runoff – Agriculture, Stormwater Runoff – Construction/ Diffuse Urban Runoff, Stormwater Runoff – Hydraulic Modification, Illegal/Improper Disposal (including toxic or hazardous substances)	Stormwater Runoff/Infiltration (high) – construction, diffuse urban runoff, agriculture, hydromodification; Illegal/Improper Disposal/Storage (high); On-site Wastewater (high); Storage and Application of Deicing Agents (medium); Natural (medium)		County-Wide: Lack of public awareness and understanding on water quality and nonpoint pollution, Lack of intermunicipal coordination and cooperation in reviewing projects affecting whole watersheds, Lack of coordination of local legislation and or agencies on project which affect watersheds or use of best management practices for stream corridors, Lack of adequate data on water quality and quantity to allow for adequate coordination and interpretation, Lack of watershed inventory information; County-Wide Problems: Sedimentation in the Lake from land and stream bank erosion, construction, highway maintenance and ditching and agricultural practices in the various watersheds, Surface and groundwater contamination by excess introduction of nutrients, road salts, and chemicals from point and nonpoint pollutant sources (e.g. application practices of road salt by highway departments, fertilization and spreading of manure by agriculture and excessive use of lawn chemicals), Discharge of on-site septage where it may impact ground or surface waters (especially in rapidly urbanizing areas or where soils are limiting), Impact and threats to public water supply and recreation by exotic species and pathogens entering watersheds and various aquatic eco-systems in the county (e.g. zebra mussels, Eurasian watermilfoil, giardia and cryptosporidium), Brownfield threats to groundwater from historic land use conditions or practices (e.g. industrial sites, municipal dumps, buried, abandoned petroleum tanks); Watershed Specific Concerns: Fall Creek (excess sediment, nitrogen, organic phosphorus, barnyards discharge, sewage overflow, storm water management, threats to public water supply), Six Mile Creek (heavy stream bank erosion, flooding, sedimentation, nitrogen and organic phosphorus loading, sewage overflow, stormwater management, threats to public water supply), Cayuga Lake (high levels of turbidity from storm events and algal blooms due to nutrient input, aquatic weed growth, possible threats to public water supply and filtration concerns, and limitations to recreational uses), Dryden Lake (agricultural runoff, excessive aquatic weed growth, threats to recreational uses), Salmon Creek (heavy loading of agricultural nutrients, flooding, stream bank erosion and sedimentation), Cascadilla Creek (heavy sediment loading, septic systems, stormwater management), Cayuga Inlet (streambank erosion, sedimentation and flooding); Groundwater Problems: Probable nitrate contamination Seepage from inactive hazardous waste sites, Hazardous material spills impacting groundwater

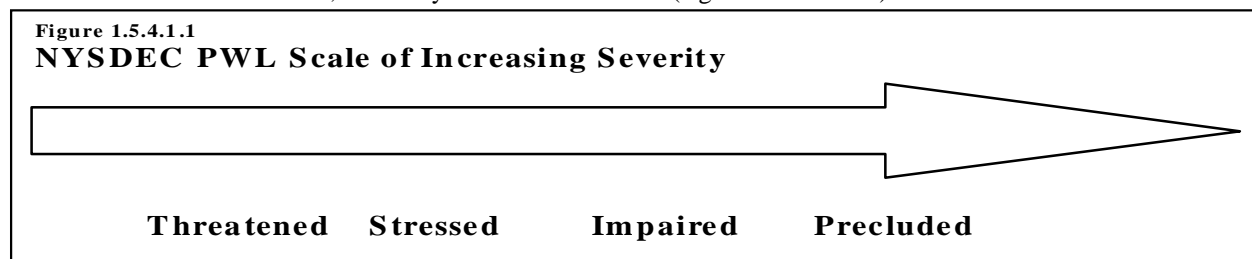
Source: Cayuga WQMA, Cortland County WQCC, Seneca County WQC, Tompkins County WRC

Specific programs of note include the following:

1.5.4.1 Priority Waterbodies List

Periodically, the NYSDEC Division of Water publishes a list of surface waters that either cannot be fully used as a resource, or have problems that can damage their environmental integrity. This list – The Priority Waterbodies List (PWL) – is used as a base resource for Division of Water program management. The listing of the PWL includes individual waterbody data sheets describing the conditions, causes, and sources of water quality problems in a given basin. The conditions use a scale of increasing severity ranging from threatened to stressed to impaired to precluded (see Figure 1.5.4.1.1). Users of the information contained in the PWL are reminded of the following special considerations:

- The PWL is a reflection of priority waterbodies at a specific moment in time.
- In many cases, surface water systems are highly interrelated.
- Resolution potential can be noted as high, medium, or low. High resolution potential indicates that the water quality problem has been deemed to be worthy of the expenditure of available resources (time and dollar) because of the level of public interest and the expectation that the commitment of these resources will result in a measurable improvement in the situation. Medium resolution generally indicates that the resources necessary to address the problem are beyond what is currently available. Segments with low potential for resolution indicate water quality problems so persistent that improvements are expected to require an unrealistically high commitment of resources, not likely to become available (e.g. acid rain lakes).



The latest PWL that includes the Cayuga Lake Watershed is called *The 1996 Priority Waterbodies List for the Oswego-Seneca-Oneida River Basin*. An overview of the Cayuga Lake Watershed portion can be seen on Table 1.5.4.1.1.

1.5.4.2 Unified Watershed Assessment and Watershed Restoration and Protection Strategies (NYSDEC, USDA & NRCS)

Unified Watershed Assessments provide a road map of priority areas to be addressed in 1999, 2000 and beyond. Watershed Restoration and Protection Strategies are described in the United States Clean Water Action Plan as response plans to restore those watersheds that do not meet clean water, natural resource, and public health goals and are most in need of restoration.

The Watershed Assessment began with selection of natural resource and water quality factors used to evaluate each 8-digit hydrologic unit code (HUC) watershed. The Cayuga Lake Watershed is part of the Oswego-Seneca-Oneida Rivers HUC. The initial assessment identified factors of concern for each watershed. Based on this information, each 8-digit HUC was categorized. The draft assessments and categorizations were reviewed with partners, stakeholders, and neighboring states.

Considering only the natural resource factors used in the assessment of the 8-digit HUCs, all watersheds were categorized as needing additional restoration (Category 1). Based on water quality factors used, less than half of the 8-digit HUC watersheds were categorized as needing additional restoration (Category 1). A unified watershed assessment for New York State was created by combining the highest priority watersheds from a natural resources perspective with the watershed identified as needing additional restoration based on water quality factors. The

For more information on the UWA visit the NYSDEC web site

**Table 1.5.4.1.1
Priority Waterbodies List
Cayuga Lake and Watershed**

Name	Resolution Potential	Use Impairment(s)	Severity	Documentation	Type of Pollutant(s)	Source(s) of Pollutant(s)	County
Big Salmon Creek	Medium	Fishing*	Threatened	Some	Nutrients* Thermal Changes Silt (Sediment) Water Level/Flow Oxygen Demand Pathogens	Agriculture* Streambank Erosion Roadbank Erosion	Cayuga
		Fish Propagation	Threatened	Some			
		Fish Survival	Threatened	Some			
		Aesthetics	Stressed	Good			
		Boating	Stressed	Poor			
Cayuga Lake (Cayuga County Portion)	Medium	Water Supply	Stressed	Good	Nutrients* Silt (Sediment)*	On-Site Septic* Agriculture Roadbank Erosion Municipal Urban Runoff Acid Rain Streambank Erosion	Cayuga
		Bathing	Stressed	Some			
		Fishing	Impaired	Good			
		Fish Propagation	Stressed	Good			
		Aesthetics	Impaired	Some			
		Boating*	Impaired	Some			
Cayuga Lake (Seneca County Portion)	Medium	Water Supply	Stressed	Some	Nutrients* Oxygen Demand Pesticides Silt (Sediment)	On-Site Septic* Acid Rain Land Disposal Industrial Agricultural Streambank Erosion Municipal Urban Runoff Roadbank Erosion	Seneca
		Bathing	Impaired	Some			
		Fishing	Impaired	Some			
		Fish Propagation	Stressed	Good			
		Aesthetics	Impaired	Some			
		Boating*	Impaired	Some			
Cayuga Lake (Tompkins County Portion)	Medium	Water Supply	Threatened	Some	Silt (Sediment)* Nutrients	Streambank Erosion* Urban Runoff Agriculture Roadbank Erosion Construction	Tompkins
		Bathing	Stressed	Good			
		Fish Propagation	Stressed	Some			
		Aesthetics	Stressed	Some			
Little Salmon Creek	Medium	Fishing*	Threatened	Some	Nutrients* Thermal Changes Silt (Sediment) Water Level/Flow Oxygen Demand Pathogens	Agriculture* Streambank Erosion Roadbank Erosion	Cayuga
		Fish Propagation	Threatened	Some			
		Fish Survival	Threatened	Some			
		Aesthetics	Stressed	Good			

Yawger Creek	High	Fish Propagation*	Impaired	Good	Silt (Sediment)* Nutrients	Agriculture* Streambank Erosion	Cayuga
Bolter Brook Trib	Medium	Fish Propagation*	Threatened	Some	Silt (Sediment)* Metals*	Resource Extraction* Land Disposal*	Schuyler Seneca
		Fish Survival	Threatened	Some			
Black Brook	High	Fishing*	Threatened	Some	Unknown Toxicity* Nutrients	Land Disposal* Agriculture On-Site Septic	Seneca
		Aesthetics	Stressed	Some			
White Brook	High	Fishing*	Stressed	Poor	Nutrients* Oxygen Demand	Agriculture* On-Site Septic	Seneca
		Aesthetics	Stressed	Poor			
Cascadilla Creek	Low	Fish Propagation	Threatened	Some	Silt (Sediment)* Nutrients	Streambank Erosion* Urban Runoff Agriculture Roadbank Erosion Construction	Tompkins
		Aesthetics*	Stressed	Poor			
Cayuga Inlet	High	Fish Propagation*	Stressed	Some	Silt (Sediment)* Unknown Toxicity Nutrients	Agriculture* Land Disposal Roadbank Erosion Construction On-Site Septic Urban Runoff Streambank Erosion	Tompkins
Fall Creek	High	Water Supply	Threatened	Some	Silt (Sediment)* Pathogens Nutrients Thermal Changes	Streambank Erosion* On-Site Septic Agriculture Roadbank Erosion Construction	Tompkins
		Bathing	Threatened	Poor			
		Fish Propagation*	Stressed	Some			
		Fish Survival	Stressed	Some			
Six Mile Creek	High	Water Supply*	Stressed	Good	Silt (Sediment)* Aesthetics Pesticides Nutrients	Streambank Erosion* Private Storm Sewers Roadbank Erosion Industrial Agriculture On-Site Septic Municipal Urban Runoff Hydromodification	Tompkins
		Fish Propagation	Stressed	Some			

*Primary Use Impairment/Pollutant/Source
Source: NYSDEC, 1996

Oswego-Seneca-Oneida Rivers Basin is classified as a Category 1 and are scheduled for development of restoration and protection strategies in state fiscal year 2003.

1.5.4.3 New York State Source Water Assessment Program (New York State Department of Health 1999b)

Congress amended the Safe Water Drinking Water Act in 1996 and added a new program that requires states to evaluate the sources of water that are used to supply public drinking water. This new program is called the Source Water Assessment Program (SWAP). The New York State Department of Health (DOH) is implementing the program in New York State.

The Safe Drinking Water Act requires that each source of water (e.g. well, stream, lake, reservoir) used by a public water system be evaluated to identify possible contaminant threats to the source water quality. This evaluation is called a Source Water Assessment and the elements that will be completed for each source water assessment include delineation of the source water assessment area, completion of a contaminant inventory, and conducting a susceptibility analysis.

The DOH submitted a workplan as part of the Drinking Water State Revolving Fund's Intended Use Plan to the USEPA in October 1997 for initial work on the SWAP. Most of the SWAP efforts to produce assessments for public release will occur during the years 2000-2001.

1.5.5 Related Watersheds

Cayuga Lake is downstream of Keuka and Seneca Lake. Keuka Lake waters flow into Seneca Lake via the Keuka Lake Outlet. Seneca Lake waters flow into the extreme northern end of Cayuga Lake via the Seneca-Cayuga Canal. Therefore, the Keuka and Seneca Lake watersheds are considered part of the Cayuga Lake Watershed. However, because both Keuka and Seneca Lake Watersheds are undergoing a watershed management planning process with associated "state of the lake" reports, the Cayuga Lake Draft Preliminary Watershed Characterization will concentrate on just the watershed upstream of the northern end of Cayuga Lake. For information on the Keuka Lake Watershed Management Plan contact the Yates County Cornell Cooperative Extension at 315-536-5123. For information on the Seneca Lake State of the Lake Report contact the Seneca Lake Pure Waters Association at 315-789-3052.

[Source Water Assessment Program \(SWAP\)](#)

[Setting a Course for Seneca Lake, The State of the Seneca Lake Watershed](#)

[Keuka Lake Looking Ahead Watershed Management Plan](#)

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