

Oneida Lake Local Law Program

Assessment of Local Controls and Practices Affecting Water Quality and Resource Conservation in the Oneida Lake Watershed

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I. Watershed Summary

A. Introduction

The “Management Strategy for Oneida Lake and its Watershed”, completed during the fall of 2004, contains a summary of goals and objectives for the protection and restoration of surface and groundwater resources throughout the five-county watershed. The Management Strategy identifies failing on-site septic systems and erosion resulting in sedimentation problems in the lake and its tributaries as high priority issues. The strategy also identifies priority actions needed to protect and improve the water quality of Oneida Lake.

Building on the Management Strategy, and with funding from the NYS Department of State, the Central New York Regional Planning and Development Board (CNY RPDB) launched a program designed to review the capacity of local laws and current management practices throughout the watershed to control nonpoint source pollution.

The CNY RPDB assessed existing local laws and management practices for local governments within sixteen priority municipalities in the Oneida Lake watershed. Based on the findings of the assessments, the CNY RPDB then provided recommendations for improving water quality protection efforts.

This Local Law project consists of two primary phases:

PHASE I – Assessment

A preliminary assessment was initially conducted of 69 watershed municipalities to review policies and land use regulations through the availability of comprehensive plans, zoning ordinances, subdivision regulations and site plan reviews. Detailed assessments were then conducted on 16 priority municipalities (10 towns and 6 villages) that are located in Madison, Onondaga, and Oswego counties.

PHASE II – Recommendations

Based on the analysis of the local law assessment, interviews with municipal officials, input from county agencies, and guidance from the Local Law Manual developed by the Genesee Finger Lakes Regional Planning Council, the CNY RPDB developed watershed-wide and specific recommendations for the 16 priority municipalities in order to achieve greater reduction of nonpoint water pollution.

The 16 priority municipalities for this project were selected based on proximity to Oneida Lake and/or location within the Syracuse Urban Area (SUA) for Municipal Separate Stormwater Sewer Systems (MS4) Program. Table 1 contains a list of all 69 municipalities in the Oneida Lake watershed by county. Municipalities with less than 0.5 square miles of their total jurisdiction within the watershed are indicated with an asterisk (*). Table 2 contains the 16 priority municipalities.

Table 1.

MUNICIPALITIES IN THE ONEIDA LAKE WATERSHED

CORTLAND COUNTY

Town of Cuyler*
Town of Preble*
Town of Truxton

***LEWIS COUNTY**

Town of Lewis
Town of Montague
Town of Martinsburg
Town of Osceola
Town of Turin
Town of West Turin

MADISON COUNTY

City of Oneida
Town of Cazenovia
Town of DeRuyter
Town of Eaton
Town of Fenner
Town of Lenox
Town of Lincoln
Town of Madison*
Town of Nelson
Town of Smithfield
Town of Stockbridge
Town of Sullivan
Village of Canastota
Village of Cazenovia
Village of Chittenango
Village of Munnsville
Village of Wampsville

ONEIDA COUNTY

City of Rome (inner & outer dist)
City of Sherrill
Town of Annsville
Town of Augusta
Town of Ava
Town of Camden
Town of Florence

Town of Kirkland*
Town of Lee
Town of Marshall*
Town of Verona
Town of Vernon
Town of Vienna
Town of Western*
Town of Westmoreland
Village of Camden
Village of Oneida Castle
Village of Sylvan Beach
Village of Vernon

ONONDAGA COUNTY

City of Syracuse
Town of Cicero
Town of Dewitt
Town of Fabius
Town of Lafayette
Town of Manlius
Town of Onondaga
Town of Pompey
Town of Tully
Village of East Syracuse
Village of Fayetteville
Village of Manlius
Village of Minoa

OSWEGO COUNTY

Town of Amboy
Town of Albion*
Town of Constantia
Town of Hastings
Town of Orwell*
Town of Parish
Town of Redfield
Town of West Monroe
Town of Williamstown
Village of Central Square
Village of Cleveland

** Indicates municipalities that have less than a one-half square mile (0.5 mi²) of land located within the watershed boundary. Source: data prepared by the Syracuse-Onondaga County Planning Agency, April 2001.*

Table 2.

Priority Municipalities (# denotes MS4 municipalities)	
County	Priority Municipality
MADISON	Lenox (T)
	Sullivan (T) #
ONONDAGA	Cicero (T) #
	DeWitt (T) #
	East Syracuse (V) #
	Fayetteville (V) #
	LaFayette (T) #
	Manlius (T) #
	Manlius (V) #
	Minoa (V) #
	Pompey (T) #
OSWEGO	Central Square (V) #
	Constantia (T)
	West Monroe (T) #
	Hastings (T) #
	Cleveland (V)

B. Regional Setting

The Oneida Lake watershed comprises the eastern most part of the Oswego River Basin and contains 872,722 acres (approximately 1,364 square miles) of land draining parts of Lewis, Madison, Oneida, Onondaga, Oswego, and Cortland Counties (refer to Figure 1). The watershed contains portions of 69 municipalities and has a population of 262,164 based on the 2000 U.S. Census. Oneida Lake is the largest waterbody within New York State. Located at 43° 12.5' N latitude and 75° 55' W longitude, Oneida Lake is approximately 11 miles northeast of Syracuse. It is 20.9 miles long and 5.5 miles at its widest point. The average depth is 22.3 feet. Many seasonal and permanent homes are located along the 54.7 miles of shoreline.

The Oneida Lake watershed encompasses parts of the Appalachian Uplands, Tug Hill Uplands, and Lake Ontario Plain physiographic regions. The New York State Canal System traverses the Lake Plain Region as it flows east to west through the Oneida Lake watershed. Water exits the

watershed through the western end of Oneida Lake via the Oneida River where it eventually makes its way to Lake Ontario.

Surface water and groundwater flow from the upland watersheds of the basin to receiving rivers and lakes and then to the New York State Barge Canal along the western portion of the trough. In similar fashion, the uplands around Oneida Lake drain to the eastern end of the trough. The additive contribution of each stream and lake to the Barge Canal results in a bottleneck at the Three Rivers Junction (the confluences of the Seneca, Oneida, and Oswego Rivers). At this junction, 96 percent of the land area in the Oswego River Basin is represented. This is also the flattest, slowest moving stretch within the Oswego Basin. At times, the water discharged to the trough exceeds the channel capacity, resulting in flooding within Seneca, Cayuga, and Oneida Lakes, and along the Seneca and Oneida Rivers. Once the water reaches the Oswego River, downstream of Fulton, the gradient increases and the water has the potential to move more readily toward Lake Ontario (USGS 2000 and Cayuga Lake Intermunicipal Organization 2000).

II. Assessment Overview

A. Assessment Approach and Methodology

The assessment of local laws in the Oneida Lake watershed was initiated in the fall of 2005 by the CNY RPDB as Phase I of the local laws project. The CNY RPDB's methodology was based on assessments from other geographic areas throughout New York State, such as the Long Island South Shore Estuary Reserve, the Lake George watershed, and the Genesee Finger Lakes Local Law Program. A general land use regulation inventory focused on the four primary building blocks of land use control in New York State: the comprehensive plans, zoning, subdivision regulations, and site plan reviews. Results of this inventory are found in Appendix B.

Detailed assessments were then conducted on 16 priority municipalities that were selected in cooperation with the New York State Department of State (NYS DOS). The assessments were conducted using a form provided by the NYS DOS (Appendix C). The completed assessment forms for each priority municipality are found in Appendix I on the enclosed CD. The form lists 151 best management practices (BMPs), which are divided into six primary categories:

1. Development (Existing Development, New Development, and Substantial Redevelopment)
2. Forestry and Agriculture
3. Waterways and Wetlands (Modified Waterways Wetlands and Riparian Area Management and Restoration)
4. Marinas (Existing Marinas, New Marinas, and all Marinas)
5. Roads and Bridges (Existing Roads and Bridges, New Roads and Bridges, all Roads and Bridges)
6. Onsite Wastewater Treatment Systems

While no municipality could be expected to address all BMPs, the assessment process provided a means for identifying accomplishments and gaps in water quality protection efforts. The assessment forms identified strengths and gaps in a municipality's ability to effectively manage pollution, as related to local regulations, operation and maintenance practices, training, and outreach programs.

In order to assess the local laws and management practices in the priority municipalities, the CNY RPDB initially completed an assessment template form based on the review of existing local laws for each municipality. The CNY RPDB then distributed the completed form to the appropriate municipality for review, and subsequently scheduled field interviews to confirm, refute, or amend the results.

Detailed municipal summaries were developed for each priority municipality (Central Square, Cicero, Cleveland, Constantia, DeWitt, East Syracuse, Fayetteville, Hastings, LaFayette, Lenox, Manlius (T), Manlius (V), Minoa, Pompey, Sullivan, and West Monroe) with the following information: economic and environmental setting, assessment results, summary and recommendations, municipal contacts, and local laws reviewed. Recommendations for each municipality were based on assessment results. References were made to a collection of sample laws, practices, and techniques that was taken from a publication called, "Protecting Water Resources Through Local Controls and Practices: An Assessment Manual for New York Municipalities" (listed as Appendix G on the enclosed CD.) The Genesee/Finger Lakes Regional Planning Council originally published this information in June 2006.

Statistics for the municipal summaries were generated through GIS technology and information from the CNY RPDB Data Center and were incorporated into the narratives for each municipality. Population and household information was collected from the 2000 Census. Reference for several categories was made to similar information collected in 1990 in order to document historical trends. Additional statistics were collected from the municipal web sites. The CNY RPDB generated GIS maps in order to provide a geographic reference for each priority municipality in the watershed.

Meetings with municipal representatives were conducted in 2004 and again in 2006. Field interviews were held with municipal code enforcement officers, superintendents of public works or highways, engineers, elected officials and/or, for the North Shore communities, a representative of the North Shore Council of Governments. These officials were very familiar with existing local ordinances and directly involved with implementing control practices in the field. The interviews provided an efficient and direct method for confirming, refuting and collecting supporting information needed to draw meaningful conclusions regarding the current capacity of existing local laws to control non-point source water pollution. Site visits to the County Planning Departments were also made in 2006 and 2007 in order to review laws and Comprehensive Plans and to discuss local issues with County Planning staff.

Draft copies of the report narrative, assessment forms, and municipal summaries were sent to all priority municipalities in mid-February. In response to a request for feedback, three municipalities submitted comments. Hard copies of these responses are found in Appendix H. All comments were addressed and relevant updates were made to the municipal summaries.

- The Town of Manlius responded by telephone
- The Town of DeWitt responded by letter
- The Town of Cicero responded by e-mail

While conducting the assessments, it was necessary to address a series of challenges. The large number of watershed municipalities (69) was made manageable by identifying a subset of priority municipalities (16) on which to focus. Nevertheless, the wide range of development pressures, infrastructure issues, land use and socioeconomic factors throughout the individual municipalities had to be evaluated during each assessment. County level influences and the degree of detail contained in the assessment form added to the complexity of conducting the detailed assessment.

B. Municipal Land Use Tools

New York State municipalities have land use authority to address local environmental issues. The comprehensive plan, zoning, site plan review, subdivision regulations, erosion and sediment control ordinances, and special use permits can be used individually or in combination to reach local environmental protection goals. An inventory of local laws and other pertinent land use documents for each of the 16 priority municipalities, therefore, was collected (Table 3). The inventory focused on identifying the existence of zoning, subdivision and site plan review regulations. In recognition of the fact that specific county level regulations also play a role in the control of non-point source water pollution control, an inventory of county level erosion and sedimentation control laws, septic installation requirements, septic operational inspection requirements and mandatory septic pump-out programs was also developed (Table 4).

Table 3.

Summary of Local Laws Adopted by the Priority Municipalities			
Municipality	Local Laws Adopted		
Lenox	Zoning	Subdivision	Site Plan Review
Sullivan	Zoning	Subdivision	Site Plan Review
Cicero	Zoning	Subdivision	Site Plan Review
DeWitt	Zoning	Subdivision	Site Plan Review
East Syracuse	Zoning	Subdivision	Site Plan Review
LaFayette	Zoning	Subdivision	Site Plan Review
Manlius (T)	Zoning	Subdivision	Site Plan Review
Fayetteville	Zoning	Subdivision	Site Plan Review
Manlius (V)	Zoning	Subdivision	Site Plan Review
Minoa	Zoning	Subdivision	Site Plan Review
Pompey	Zoning	Subdivision	Site Plan Review
Constantia	Land Development Law	Subdivision	Site Plan Review
Cleveland	Land Development Law	Subdivision	Site Plan Review
Hastings	Zoning	Subdivision	Site Plan Review
Central Square	Zoning	Subdivision	Site Plan Review
West Monroe	Land Development Law	Subdivision	Site Plan Review

Table 4.

Summary of County Regulations in the Oneida Lake Watershed				
County	EROSION AND SEDIMENT CONTROL LAW	SEPTIC INSTALLATION REQUIREMENTS	SEPTIC OPERATIONAL INSPECTION	MANDATORY SEPTIC PUMP OUT PROGRAM
LEWIS	N	N	N	N
MADISON	N ¹	N	N	N
ONEIDA	N	N	N	N
ONONDAGA	N ²	N ³	N ³	N ³
OSWEGO	N	N ¹	N ¹	N ¹

The CNY RPDB also developed a Municipal Salt Storage and Application Survey to assess winter road maintenance practices. The survey was distributed to 69 municipal highway departments in 2006. 29 surveys (42%) were returned – one from Cortland County, two from Lewis, six from Madison, nine from Oneida, seven from Onondaga, and four from Oswego County. The survey form and results are presented in Appendix D.

Most of the municipalities applied a salt / sand mixture. The City of Oneida and Fenner also applied stone dust. In general, the municipalities did their own mixing and the salt/sand ratio was variable. Most the miles covered were paved roads and fewer pounds were applied in 2005-2006 than the previous year. 76% of the municipalities did not keep records on application rates (i.e. salt per mile). 79% stored their sand/salt material in enclosed facilities and 76% kept the material on pavement or concrete slabs. Most if the facilities were pole sheds with sides to protect the material from precipitation. The age of the facilities ranged from brand new to 50 years and the average age of the facilities was 14 years. 27% used some form of dust control in the summer such as magnesium chloride, calcium chloride, or liquid calcium.

C. Controls and Practices

Land use is primarily influenced by the physical characteristics of the terrain such as steep slopes and floodplains that can restrict the use of land.

¹ The SWCD makes inspections.

² There is a policy established by County Executive Order.

³ The County Health Department plays an active role in following up on State regulations.

Throughout New York State and in the Oneida Lake watershed, land use control is primarily accomplished at the local level of government. Regulatory management is an important tool that can also affect the overall physical development of a municipality and local government has a significant impact over growth and development. The need to effectively guide overall development patterns, to better manage and oversee construction activities, to strengthen protection of sensitive lands, and to enhance training of municipal decision makers on land-use regulations and controls are examples of recommendations common to many watershed management plans throughout New York State. A comprehensive summary of the benefits of these land use controls is found in Appendix E. This information is from the G/FLRPC publication titled, “Protecting Water Resources Through Local Controls and Practices: An Assessment Manual for New York Municipalities.”

In most instances, the broad authority to adopt regulations to control the use of land is given by the State Legislature to the individual local units of government – the towns, villages and cities. Through laws established by New York State, local governments are authorized to establish planning boards and zoning boards of appeal. Local governments also have the authority to prepare and adopt comprehensive plans, zoning, subdivision, and other regulations. In most cases, these land use tools mandate the use of best management practices.

A comprehensive assessment of local controls and practices cannot be limited to regulations dealing solely with water resources. A number of land use regulations can have significant impacts on water quality. Zoning laws, subdivision laws, and site plan review procedures, when developed and implemented with water quality in mind, can go a long way toward controlling nonpoint source pollution. Furthermore, a best management practice (BMP) does not have to be mandated by legislation to be effective. For example, the operation procedures of a municipal highway department can integrate many BMPs into everyday activities.

Municipalities have authority and primary responsibility for local roadway, bridge, and drainage maintenance. Projects throughout the Oneida Lake watershed are implemented for stormwater control methods and best management practices (such as planting vegetative cover following roadside ditch maintenance) in order to minimize pollution loading to nearby lakes and streams.

In the process of passing and enforcing local laws, it is often necessary for local governments to work cooperatively with both the federal and state levels of government, which share the responsibility for planning and management of land and water resources. Since specific land use controls are developed, adopted, and implemented at the local government level they can vary dramatically from one municipality to the next. The local law adoption process is graphically displayed in Appendix F.

Enforcement of local regulations may also be inconsistent from one municipality to the next and proper or complete implementation of mandated BMPs is not guaranteed as a result of the legislative process. Local governments and agencies frequently implement BMPs voluntarily for water resource protection rather than the enforcement penalties.

D. Programs Available to Priority Municipalities

In many instances, local jurisdictions rely on independent or public agencies to perform certain tasks across a large area, such as a watershed, county, or region. The following summary provides an overview of current programs, regulations, and guidelines within the Oneida Lake watershed that address failing on-site septic systems, erosion, and sedimentation. Highlights are as follows:

1. Programs, Regulations, and Guidelines for On-site Septic Systems

- The towns and villages surrounding Oneida Lake conduct bacterial monitoring programs to ensure that bathing beaches are not contaminated.
- Project Watershed, a non-profit organization, monitors several Oneida Lake tributaries for Coliform bacteria.
- County Health Departments test for fecal Coliform bacteria and E-coli in response to public complaints when there is a public health concern.
- County Health Departments conduct annual testing of all bathing beaches on Oneida Lake. The NY State Health Department conducts monthly tests for bacteria at Verona Beach.
- The New York State Onsite Wastewater Treatment Training Network, in cooperation with the NYS DEC, provides training courses and hands-on instruction for wastewater and onsite system professionals. Courses cover system design and inspection, installation and maintenance, and alternative treatment system technologies.
- Design and construction of systems discharging less than 1,000 gallons/day to groundwater must follow Title 10 of the New York Codes, Rules and Regulations (10NYCRR) Part 75 and Appendix 75-A.
- According to State Sanitary Codes, sites lower than the 10-year flood level and/or having slopes greater than 15% are unacceptable for on-site systems.
- According to State Sanitary Codes, there must be at least four feet of usable soil above rock, unsuitable soil and high seasonal groundwater for the installation of a conventional septic system absorption field.
- According to State Sanitary Codes, all components of the on-site system must be separated from buildings, property lines, utilities, and wells in order to maintain system performance, permit repairs, and reduce undesirable effects of under-ground sewage flow and dispersion.
- According to State Sanitary Codes, environmental review is required prior to development in areas with steep slopes, shallow soils and high water tables.

- The following agencies and organizations take a leading role in management decisions concerning on-site septic systems in the Oneida Lake watershed:

Local:

CNY Water Education Group
Project Watershed

County:

Cornell Cooperative Extension – all counties
Lewis County Health Department
Madison County Health Department
Onondaga County Health Department, Division of Environmental Health
Oneida County Dept. of Health
Oswego County Health Department, Environmental Division

New York State:

NYS Department of Environmental Conservation, Regions 6 and 7
NYS Department of Health

2. Academic Research, Programs, Regulations, and Guidelines for Erosion and Sedimentation

- Hamilton College, with assistance from the Madison County Planning Department, conducts research on sediment loading and transport in Oneida Creek and the delta in South Bay.
- County Soil and Water Conservation Districts (SWCDs) play an integral role in the control of both urban and agricultural sources of erosion and sedimentation. In the agricultural setting, SWCDs and their conservation partners USDA Natural Resources Conservation Service (NRCS) and Cornell Cooperative Extension (CCE), work with farmers to install management practices to curb erosion and runoff from cropland, pasture land and farmsteads. In urban settings, SWCDs work with local municipalities and the NYS DEC to prevent runoff from construction sites.
- The Oneida Lake Watershed Agricultural Program is addressing agricultural sources of erosion and sediment. An Agricultural Watershed Resource Specialist coordinates this regional program. She coordinates the collection of data using the NYS Agricultural Environmental Management (AEM) Program. Funding opportunities for farm planning and conservation best management practices are also explored. The Agricultural Watershed Resource Specialist, County Soil and Water Conservation Districts and the watershed Agricultural Advisory Committee are helping to shape regional activities for agricultural projects.
- A Concentrated Animal Feeding Operation (CAFO) is a farm that is required to adopt a farm plan, sometimes referred to as a Comprehensive Nutrient Management Plan (CNMP). This is done to address resource concerns on the farm including nutrient runoff and erosion and sediment control. In New York State CAFOs are regulated by the DEC under the State Pollutant Discharge Elimination System (SPDES) Permit Program.

In addition to requiring the development of SWMPs, the general permit also establishes effluent limitations, requires the implementation of best management practices, and outlines monitoring and reporting requirements.

- Under the New York State Pollutant Discharge Elimination System (SPDES) Stormwater Phase II Program, operators of small municipal separate storm sewer systems (MS4s) in urbanized areas must have a Stormwater Management Program (SWMP) fully developed and implemented by 2008.
- As part of their SWMP, MS4s must educate and involve the public, eliminate illicit discharges, enact ordinances or other regulatory measures, control construction site stormwater runoff, manage post-construction storm-water, and develop good municipal operation and maintenance procedures. Similarly, operators of construction sites disturbing one or more acres of land must develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to reduce the discharge of pollutants. SWMPs and SWPPPs are designed to protect water quality by reducing runoff and the discharge of pollutants. Pollutants of concern associated with stormwater include eroded soil, soil particles from construction and municipal operations, and phosphorus, nitrogen and other materials that can attach to the soil particles. Fifteen municipalities in the Oneida Lake watershed are regulated under the Phase II MS4 program (1 in Madison, 3 in Oswego, and 11 in Onondaga County). The Phase II construction program affects all construction activities, statewide, disturbing at least one acre of land.
- The following agencies and organizations play a major role in water resource decision-making in the Oneida Lake watershed and are specifically equipped to address erosion and sedimentation problems.

County and Regional:

Cornell Cooperative Extension
County Planning Departments
County Soil and Water Conservation Districts
Oneida Lake Watershed Agriculture Advisory Committee
Regional Planning Boards
New York Rural Water Association

New York State:

New York State Department of Agriculture and Markets
New York State Department of Environmental Conservation
New York State Soil and Water Conservation Committee
State and County Health Departments
State, County and Local Departments of Transportation

Federal:

United States Geological Survey
USDA Natural Resources Conservation Service

E. Ranking

The CNY RPDB employed the same method for ranking the degree of BMP implementation as used by the Genesee Finger Lakes Regional Planning Council (G/FLRPC) in its Assessment of Local Laws to Protect Finger Lakes Water Quality project. The following method for ranking a BMP's degree of implementation was taken directly from the G/FLRPC report.

2 – Full Implementation: If a law, it must fully address the associated BMP without question or variance. As the law is written, it should bear a clear and reasonable resemblance to the BMP as it is written in the assessment form. The defined jurisdiction of the law should be considered thoroughly. For example, BMPs mandated within mobile home parks cannot, by definition, be applied throughout a municipality and should not be given a ranking of '2' if the BMP is intended to be applied across an entire jurisdiction. For practices, the identified practice must clearly relate to the BMP. Personal conversation with relevant local officials or actual observance in the field must be made to determine whether the BMP is being fully implemented.

1 – Partial Implementation: If a law, the BMP may be considered to be “partially implemented” if it is not entirely clear in the language of the law if the action or mandate will thoroughly address the area of concern as described in the BMP assessment form. Or, the law may be written to address only a specific area or zone, such as a mobile home park or environmental protection overlay district. If a practice, the BMP may be considered to be partially implemented if it is a general practice applied across a regional or local jurisdiction without strict scrutiny or oversight. In some cases, this applies to activities undertaken by independent organizations, such as a watershed group or academic institution. **0 – Not at all:** No evidence has been found that the BMP listed in the assessment form is being implemented to any degree within the municipality or jurisdiction.

N/A Not applicable: It would not be possible for the municipality to implement the BMP and/or the BMP as it is described in the assessment form is not covered under the routine operational authority of the municipality or department in question. For example, agricultural operations are not typically found in urban settings; therefore a “n/a” can be found throughout the Forestry and Agriculture section for all cities and most villages in the case study area.

Despite the strict interpretation of the numerical ranking system employed to assess the degree of BMP implementation, it became apparent during the field interviews that first hand local perspective of what is actually happening in the field sometimes contradicted the numerical rankings.

The following summary identifies some influences that contributed to the observed differences between numerical rankings and field observations:

1. Perspectives on implementation vary widely among respondents given seemingly identical conditions.
2. Many BMPs are implemented at the federal, state, county and/or municipal level but no provision was made in the ranking form for distinguishing whether one governmental

- level might be contributing a "2" value level of effort and another having a "0" value level of effort when two or more levels of government share responsibility for implementing a single BMP. In such instances, officials were reminded of the focus on current local laws.
3. Municipal representatives recognize that a higher level of government (e.g. state or federal) often has some level of jurisdictional responsibility for specific BMP application but do not always know how well those responsibilities are being carried out and often suspect the responsibility is poorly or not implemented due to staff shortages.
 4. The ranking of BMPs in the category of Waterways and Wetlands presented additional challenges. In most instances, State and Federal agencies supercede municipalities in the area of wetlands and waterway protection. For those municipalities that address wetland and waterways in their local laws, they are largely doing all they can within the limitations of their responsibilities, thus earning a rank of "2" for particular BMPs. Should the superceding state program be poorly or inconsistently implemented, the resulting impacts to water quality are not reflected in the "2" rank. As a consequence, the CNY RPDB interpreted the Wetland and Waterways numerical values with care.

III. Assessment Summary

A. Introduction

The sixteen priority municipalities were selected based on their proximity to Oneida Lake and/or because all or a portion of the municipality lies within the Syracuse Urban Area for Municipal Separate Stormwater Sewer Systems (MS4) Program. The following information represents the assessment of local laws and practices affecting water quality in the Oneida Lake watershed. The data for the priority municipalities were gathered and uniformly entered into an assessment matrix suitable for analysis and interpretation. Individual assessment forms containing detailed information for each of the sixteen priority municipalities provide documentation of the law or practice observed and the interpreted degree of implementation.

B. Land Use Control Inventory

Under Phase I of this project, the CNY RPDB developed a basic local law inventory for 69 watershed communities. The inventory captures information on the four major land use controls: Comprehensive Plans; Zoning; Subdivision Regulation; and, Site Plan Review (Table 5). In addition to developing the full watershed inventory, the targeted land use controls were also inventoried on a county basis (Table 6).

Table 5. Land Use Control Inventory

Oneida Lake Watershed	Comprehensive Plan	Zoning	Subdivision Regulation	Site Plan Review
<i>Number of Watershed Municipalities that Possess:</i>	50 of 69	56 of 69	56 of 69	57 of 69
<i>Percentage</i>	73	81	81	83
Two municipalities were developing comprehensive plans at the time of the assessment				

Table 6. Land Use Controls by County

Lewis County	Comprehensive Plan	Zoning	Subdivision Regulation	Site Plan Review
<i>Number of Watershed Municipalities that Possess:</i>	6 of 6	6 of 6	6 of 6	6 of 6
<i>Percentage</i>	100	100	100	100
Madison County	Comprehensive Plan	Zoning	Subdivision Regulation	Site Plan Review
<i>Number of Watershed Municipalities that Possess:</i>	11 of 17	15 of 17	16 of 17	15 of 17
<i>Percentage</i>	65	88	94	88
One municipality was developing a comprehensive plan at the time of the assessment				
Oneida County	Comprehensive Plan	Zoning	Subdivision Regulation	Site Plan Review
<i>Number of Watershed Municipalities that Possess:</i>	14 of 19	18 of 19	14 of 19	17 of 19
<i>Percentage</i>	74	95	74	90
Onondaga County	Comprehensive Plan	Zoning	Subdivision Regulation	Site Plan Review
<i>Number of Watershed Municipalities that Possess:</i>	12 of 13	13 of 13	13 of 13	13 of 13
<i>Percentage</i>	92	100	100	100
One municipality was developing a comprehensive plans at the time of the assessment				
Oswego County	Comprehensive Plan	Zoning	Subdivision Regulation	Site Plan Review
<i>Number of Watershed Municipalities that Possess:</i>	7 of 11	4 of 11	7 of 11	6 of 11
<i>Percentage</i>	64	36	64	55

C. Development

Throughout the sixteen priority municipalities, all 42 development BMPs were addressed at some level with greater emphasis on new development projects. All priority municipalities have adopted a site plan review process either as a stand-alone law or as a part of another measure, such as a land development law. Subdivision regulations have also been widely adopted. A limited number of rural municipalities (West Monroe, Cleveland, and Constantia) have not yet adopted zoning regulations. Development activity in these communities has remained generally low relative to other watershed municipalities. Code enforcement is universally in use, but financial constraints limit the size of many municipal code enforcement staffs. Staffing limitations were identified as an impediment to the consistent enforcement of existing regulations and programs. Municipal public works and highway departments have the knowledge of what needs to be done, and appear to be heavily influenced by information regarding BMPs promulgated by the NYS Department of Transportation.

D. Forestry and Agriculture

Throughout the sixteen priority municipalities, all twelve forestry and agriculture BMPs were addressed at some level. Forestry BMPs were not applicable in the priority villages due to the existing level of development. Commercial forestry operations do not exist in the priority municipalities. Forestry BMPS were not applicable in priority municipalities in Onondaga County where agriculture is predominant in the rural areas.

Agriculture remains an active land use throughout Madison and Oneida Counties. The Oneida Lake Watershed Agriculture Program, based on the statewide Agricultural Environmental Management program, provides an effective vehicle for SWCDs to promote and assist local farmers with appropriate BMP implementation and has had a positive impact on water quality within the Oneida Lake watershed.

Priority municipalities that are not involved in significant forestry activities:

Village of Central Square	Town of Pompey	Town of Cicero
Town of Pompey	Town of DeWitt	Village of East Syracuse
Village of Fayetteville	Town of LaFayette	Village of Minoa
Town of Manlius	Village of Manlius	

Priority municipalities that are not involved in significant agricultural activities:

Village of Central Square	Village of Cleveland	Village of East Syracuse
Village of Fayetteville	Village of Manlius	Village of Minoa

E. Waterways and Wetlands

All sixteen waterways and wetlands BMPs were addressed at some level across the priority municipalities. All of the priority municipalities have wetlands and streams of varying importance. Municipalities rely on federal and state regulations of the U.S. Army Corps of Engineers and the NYS Department of Environmental Conservation. This is highlighted by

reported implementation of BMP 3-16: All projects should require wetlands certification. Even with the County Soil and Water Conservation Districts technical assistance for implementing these BMPs, municipal implementation involvement was found to vary widely across the 16 priority municipalities. The majority of the priority municipalities acknowledge that wetland and waterway protection is addressed in existing ordinances for new construction.

F. Marinas

Oneida Lake is used for fishing, navigation, and recreational boating. Boaters provide significant contributions to the local economy through the purchase of gas, food, cottage rentals, and other expenditures. There are 26 primary marinas and boat launch sites on Oneida Lake. Most are situated along the southern shore, with only four located along the northern shoreline. In addition to the fee-based boat launching ramps located at many marinas and parks on the lake, the NYS DEC maintains no-fee boat-launch sites at Godfrey Point, the South Shore, and Three-Mile Bay.

Across the sixteen priority municipalities, twelve of the twenty Marina BMPs were addressed to some degree. Among the reasons identified for the high level of non-BMP implementation identified by the assessment is the fact that only six of the sixteen (38%) priority municipalities are located along the shoreline of Oneida Lake. In addition, because the regulation of marinas is under the purview of federal and state agencies, municipalities do not recognize the need to become involved.

With few exceptions, the result is that Marina BMPs are not implemented at the municipal level. Municipalities rely on the Army Corps of Engineers, Sea Grant, and the NYSDEC to implement and enforce marina regulations. An excellent source of information about marina regulations can be found in a NYS DEC publication called, “Environmental Compliance, Pollution Prevention, and Self-Assessment Guide for the Marina Industry” which provides guidance to marina operators regarding the proper management of wastes that are generated at marinas and yacht clubs.

G. Roads and Bridges

The 26 Roads and Bridges BMPs were addressed to some degree in all sixteen priority municipalities. In addition to the assessment forms, road maintenance in the Oneida Lake watershed is addressed in Appendix D, which summarizes salt and sand application practices. Erosion and sedimentation are primary concerns, especially in the southern portion of the watershed where road maintenance is a costly but necessary task to ensure good lake water quality.

Road and ditch maintenance practices are very important to reduce the level of sediment entering lake tributaries. BMPs are primarily implemented by municipal DPWs. County Highway Departments and NYS Department of Transportation (NYS DOT) may also have limited responsibilities on some roads and bridges. Municipal highway superintendents are aware of proper nonpoint source pollution control measures and endeavor to apply BMPs as part of standard operating procedures. In rural areas, where local municipalities do not retain

responsibility for county or state roadway maintenance, it is sometimes more difficult to control erosion due to a poor linkage between state and county DOTs and municipal DPWs.

H. Onsite Wastewater Treatment Systems

Failing onsite wastewater treatment systems were identified as a priority issue of concern in the Oneida Lake Watershed Management Strategy. Within the sixteen priority municipalities all seven BMPs for Onsite Wastewater Treatment Systems were addressed to some degree. Because six of the sixteen municipalities (38%) are fully sewered, the rate of BMPs determined to be “Not Applicable” appears high. These municipalities are:

Village of Cleveland Village of Constantia Village of East Syracuse
Village of Fayetteville Village of Manlius Village of Minoa

BMPs are primarily implemented by NYS and County Health Departments with the assistance of municipal code enforcement officers. A potentially significant shortcoming is the lack of onsite maintenance checks to assure that systems are properly functioning. Such inspections generally occur only if a complaint is filed. Code enforcement officers frequently cited staffing limitations as a major factor impacting consistent septic inspection programs.

IV. Assessment Conclusions

A. Municipal Overview

Based on the local law assessment, all of the participating municipalities have adopted the requisite land development laws (i.e., site plan review, subdivision regulations, zoning and/or a land development law) to effectively address nonpoint source pollution. Further review of the BMP assessment forms and supplemental interview notes revealed that a combination of additional factors including response to state and federal requirements, a basic understanding of natural processes and a desire to do the right thing environmentally, coupled with a growing awareness of the link between environmental protection and economic vitality, are also supporting non-regulated BMP implementation.

B. Regional Recommendations for all Priority Municipalities

The following recommendations were compiled based on the review of BMP and local law implementation practices throughout the priority municipalities. Specific recommendations are found in the individual municipal reports.

1. Watershed-Wide And Intermunicipal Collaboration Recommendations

- Individual municipalities should collaborate with neighboring towns and villages, as shared use of equipment and other municipal resources will reduce program costs.
- Municipalities often have insufficient personnel for comprehensive inspections and enforcement. Intermunicipal planning and inspection/enforcement services should be pursued in order to maximize financial resources and provide a consistent

approach for protection and monitoring of permitted activities to ensure compliance with existing procedures, conditions and permits.

- Municipalities should have current comprehensive plans that define goals and priorities for protecting water quality. State statutes in New York also allow for the voluntary development of joint comprehensive land use plans among and between two or more municipalities to help guide development and protect natural resources. The development or update of comprehensive plans provides an opportunity for citizen participation and education while developing a shared vision for the future. Joint comprehensive land use plans are being developed around the state to enable neighboring jurisdictions to effectively meet environmental challenges. State law requires that zoning be in accordance with a comprehensive land use plan, serving as the legal tool to implement the goals and strategies outlined in the plan.

2. Development Recommendations

- Municipalities should establish routine inspection and maintenance schedules for storm drains, catchment basins, erosion protection and sediment control structures;
- Municipalities should take advantage of improved opportunities for public education for stormwater control practices available through groups such as regional planning boards, SWCDs, and local colleges;
- Municipalities should review current procedures and, if necessary, adopt improved guidelines for the storage of pesticides, petroleum products and common chemical compounds including cleaners and solvents, and adopt more environmentally responsible practices as indicated. Municipalities should refer to Stormwater Phase II municipal good housekeeping guidance provided by the NYS DEC and Regional Planning Boards;
- Municipalities should seek guidance from organizations such as Cornell Cooperative Extension (CCE) and County Planning Departments to determine how they can incorporate a larger percentage of indigenous plants in public landscaping.
- Municipalities should develop and implement inspection schedules for erosion protection and sediment control structures;
- Municipalities should work with local and county agencies such as SWCDs and CCE to take advantage of training and equipment availability;
- Municipalities should partner with their neighbors to investigate options for shared service positions, such as code enforcement officers. This would reduce personnel costs associated with enforcement. Regional Planning Boards can provide additional information and guidance;
- Municipalities should assess current programs to control nuisance species (insects, plants, and animals). When appropriate, non-toxic alternatives, such as integrated pest management, should be evaluated and adopted as municipal policy;
- Municipalities should become involved in the regional nuisance species control programs that are currently being developed by the CNY RPDB and CCE.

3. Forest Management Practice Recommendations

- Municipalities should explore options for improved regulations and enforcement of logging practices.

4. Road, Drainage Way, and Bridge Recommendations

- Municipalities should review current drainage ditch maintenance practices and promote practices that retain or establish vegetation after cleaning;
- Municipalities should improve stormwater controls along roads, highways, and bridges;
- Municipalities should establish vegetative cover following roadside ditch maintenance using hydroseeders;
- Municipalities should investigate opportunities to share maintenance equipment, including joint purchases, service contracts, or loans of hydroseeders for re-establishing vegetation, with the county SWCD and/or with neighboring municipalities;
- Municipalities should regulate new road ditches through subdivision regulations and site plan reviews;
- Municipalities should ensure that code enforcement officers are aware of drainage issues associated with new development and encourage code offices and others with site plan review responsibility to take advantage of stormwater construction training for regulated MS4s provided by NYS DEC and Regional Planning Boards.
- Drainage districts provide an effective means of ensuring long term funding for the operation and maintenance costs associated with new development. Municipalities should work with Regional Planning Boards and County Planning Departments to provide training and information to members of local planning and zoning boards;
- Municipalities should ensure that highway and public works department staff are properly trained in road management practices by taking advantage of established training programs such as the Cornell Local Roads Program and opportunities through county and state transportation departments. “Highway Superintendent Road and Water Quality Handbook, Edition II” is an excellent reference that provides additional information on these opportunities;
- Municipalities should store the sand/salt material used for winter road maintenance in enclosed facilities, keep all material on pavement or concrete slabs to prevent groundwater contamination, and provide surface drainage away from the facility;

5. Onsite Wastewater Treatment Systems Recommendations

- Municipalities should develop and implement homeowner guidelines to address defective on-site waste treatments systems;
- Municipalities should work with county health departments to establish septic maintenance (pump-out) and testing schedules;
- Municipalities should take a proactive approach to developing standard enforcement procedures and timelines for implementing corrective measures. Regional Planning Boards are a good source of information and can help facilitate this process;
- Municipalities should provide education and outreach opportunities for property owners. Programs are available through local colleges, the Onsite Training Network, Cooperative Extension, and the CNY RPDB.

6. Marina Recommendations

- Municipalities should follow BMPs summarized in DEC publication titled, “Environmental Compliance, Pollution Prevention, and Self Assessment Guide for the Marina Industry;”
- Grants are available for pump-out facilities at public and private marinas from the New York State Environmental Facilities Corporation through the Federal Clean Vessel Act. Municipalities should check with the New York State Department of State to determine what local regulations are allowed on Oneida Lake;
- Municipalities should encourage greater participation from neighboring shoreline municipalities when considering proposals for new marinas and expansion of existing facilities.

7. Education Recommendations

- Municipalities should improve training programs that cover nonpoint source pollution prevention and management practices for code inspectors, highway superintendents, contractors, and zoning and planning officials. Contact Regional Planning Boards for a schedule of nonpoint source strategy meetings and training workshops for Code Enforcement Officers;
- Municipalities should continue watershed outreach and education programs and web-based programs for property owners and municipal representatives through the NYS Department of State, the CNY RPDB, and Cornell Cooperative Extension.

8. Enforcement Recommendations

- Additional staff is needed for construction site and routine septic system inspection and enforcement responsibilities. In order to reduce costs associated with hiring additional staff, municipalities should investigate options for shared services and resources. Municipalities should also evaluate and revise their development permit fee schedule, when appropriate, to reflect the cost of municipal inspection and enforcement services.

C. Additional Findings

1. Best Management Plan (BMP) Implementation

Throughout the priority municipalities, BMPs are being implemented at the municipal level. Other levels of government are also involved, and occasionally have the primary program responsibility. Private institutions also occasionally play a role (e.g. banks may require an inspection/certification of on-site sewage disposal for a mortgage).

During the interviews with municipal officials, it became evident that the delineation of responsibility among different levels of government is not always clear, nor is the extent to which other agencies are actively engaged in BMP implementation well understood. Intergovernmental communication and coordination of implementation actions appears to be lacking or non-existent, judging from the feedback provided through the interview process.

There is no guarantee that agencies and private organizations with overlapping responsibilities are conducting their actions in a coordinated manner.

2. Interviews with County Planning Directors

As a supplement to interviews with local government representatives, interviews were conducted with the county planning directors from the five watershed counties to ascertain whether the county legislatures have adopted regulations to control erosion and sedimentation and septic systems. None of the watershed counties have such separate regulations but rather, rely on municipal enforcement of local and state regulations. County Health Departments and county Soil and Water Conservation Districts play active roles in regulatory and programmatic work that address erosion, sedimentation and septic systems primarily in response to State laws. As a result of municipally reported code enforcement staffing issues, inconsistencies appear to exist in enforcement of local and state regulations pertaining to septic inspections, tank pump out requirements and system checks to determine adequate capacity in older homes.

3. MS4 Stormwater Program

The NYS SPDES Stormwater Phase II Municipal Separate Storm Sewer System (MS4) permit program will result in improved nonpoint source pollution control. Based on U.S. Bureau of the Census data, twelve of the sixteen priority municipalities (75%) have been automatically designated as MS4s within the Syracuse Urban Area by the New York State Department of Environmental Conservation (NYSDEC). Eight of the 12 designated MS4s are only partially within the defined SUA.

Regulated MS4 communities are mandated to enact or amend local law provisions to protect against construction and post-construction site runoff as well as to prohibit illicit discharges to their stormwater conveyance systems. Regulated MS4 communities have until 2008 to develop and fully implement their Stormwater management plans. As a result, while many MS4 communities are in the process of updating their local laws, none of the priority municipalities have completed those local law permit requirements.

The MS4 local law requirements have received much attention among regulated municipalities. As a result, there is a growing awareness about associated issues and MS4 municipalities are implementing BMPs to control erosion and Stormwater runoff at greater rates than they might otherwise be.

V. Priority Municipal Summary Reports

Detailed municipal summaries for each priority municipality (Central Square, Cicero, Cleveland, Constantia, DeWitt, East Syracuse, Fayetteville, Hastings, LaFayette, Lenox, Manlius (T), Manlius (V), Minoa, Pompey, Sullivan, and West Monroe) are presented in this chapter. Each municipal summary contains information on the economic and environmental setting, assessment results, summary and recommendations, municipal contacts, and local laws. Recommendations for each municipality are based on the local law assessment process.

Throughout these summaries, reference is made to a collection of sample laws, practices, and techniques (found in Appendix G on the enclosed CD) that was taken from a publication called, "Protecting Water Resources Through Local Controls and Practices: An Assessment Manual for New York Municipalities". The Genesee/Finger Lakes Regional Planning Council originally published this information in June 2006.

Statistics for the municipal summaries were generated through GIS technology and information from the CNY RPDB Data Center and were incorporated into each narrative. Population and household information was collected from the 2000 Census. Reference for several categories was made to similar information collected in 1990 in order to document historical trends. When available, additional statistics were collected from individual municipal web sites.