

### **III. Assessment Results: General Overview**

#### Introduction

The following charts and descriptive data are the result of a year-long compilation and assessment of laws and practices that affect water quality within the Canandaigua, Cayuga and Conesus Lake watersheds. As explained in Chapter 2, data was gathered and entered into an assessment matrix in spreadsheet format in a uniform manner throughout this process. By doing so, data can be combined and grouped for ease of analysis and interpretation.

Unabridged assessment forms that contain detailed information for each municipality are intended to accompany this report.<sup>1</sup> Each assessment form explicitly documents the type of law or practice that was observed to meet the criteria of the BMP, as well as the interpreted degree of implementation.

Chapter 3 of this report presents a summary of information gathered across the Canandaigua, Cayuga and Conesus Lake watersheds. More detailed analyses at the watershed level are provided in Chapter 4.

Information relative to land use control laws, land and watershed area, and other pertinent details have also been included in the Appendices.

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<sup>1</sup> Visit <http://www.gflrpc.org> for information on how you can obtain a copy of these assessment forms.



## Basic Land Use Control Inventory

<b>Canandaigua</b>	<b>Comprehensive Plan</b>	<b>Zoning</b>	<b>Subdivision Regulation</b>
<i>Number of Watershed Municipalities that Possess:</i>	9 of 11*	10 of 11	9 of 11
<i>Percentage</i>	82%	91%	82%
<i>Average age (in years) of existing documents</i>	10.4	24	20.3
* one additional municipality is in the process of completing a comprehensive plan			

<b>Cayuga</b>	<b>Comprehensive Plan</b>	<b>Zoning</b>	<b>Subdivision Regulation</b>
<i>Number of Watershed Municipalities that Possess:</i>	13 of 38*	25 of 38	23 of 38
<i>Percentage</i>	34%	66%	61%
<i>Average age (in years) of existing documents</i>	11.1	18.5	17.7
* four additional municipalities are in the process of completing a comprehensive plan			

<b>Conesus</b>	<b>Comprehensive Plan</b>	<b>Zoning</b>	<b>Subdivision Regulation</b>
<i>Number of Watershed Municipalities that Possess:</i>	4 of 7*	6 of 7	6 of 7
<i>Percentage</i>	57%	86%	86%
<i>Average age (in years) of existing documents</i>	8.5	20.8	18.8
* one additional municipality is in the process of completing a comprehensive plan			

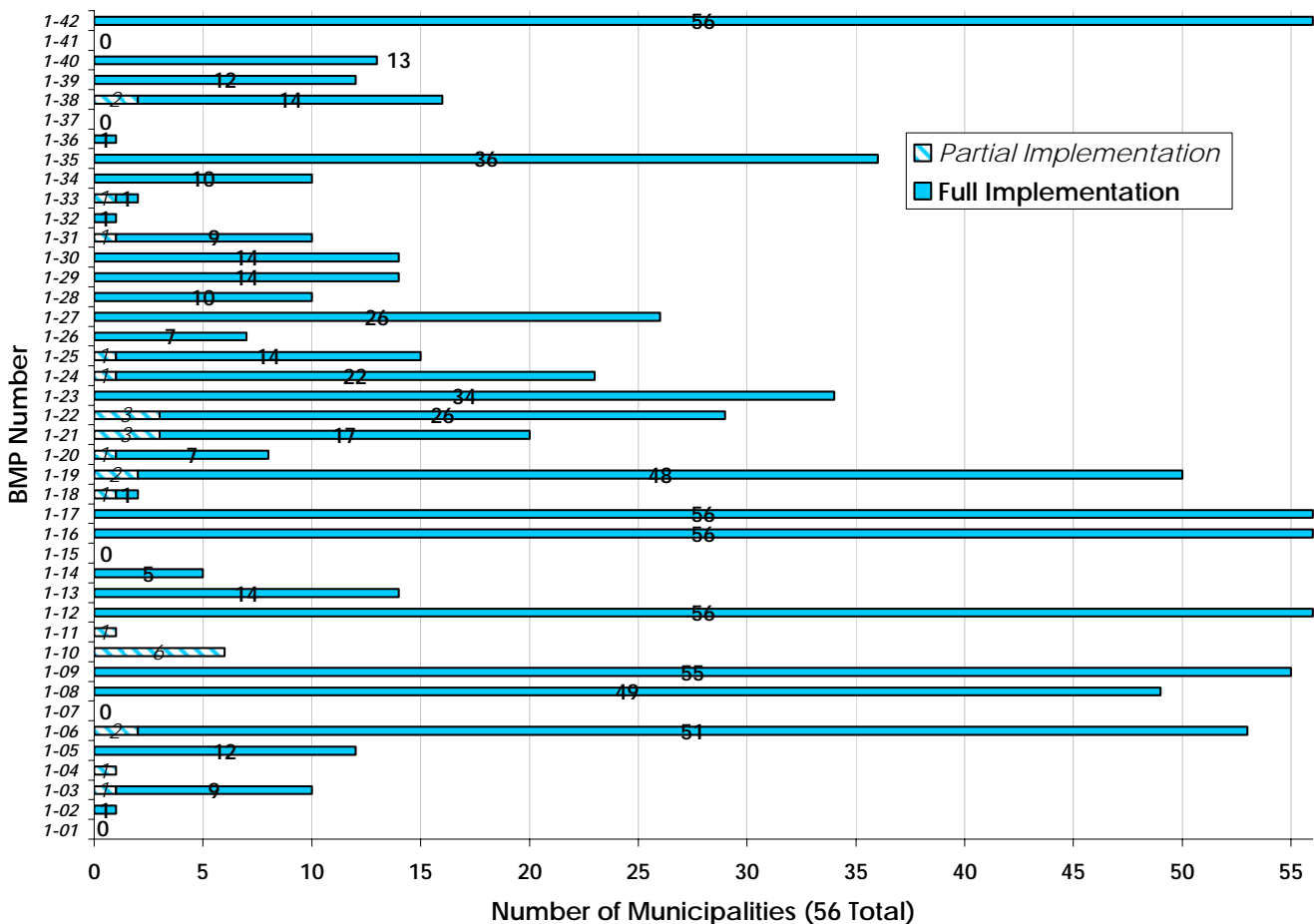


## Overview: Development

Across the three watersheds, 36 of the 42 *Development* BMPs were found to be addressed to some degree. Those BMPs that were not found to be addressed include:

- **1-01:** Identify retrofit opportunities
- **1-07:** Institute turf management practices on golf courses, parks and recreation areas
- **1-15:** Discourage feeding of waterfowl
- **1-37:** Develop priority list for BMPs – use of vegetative low areas for retention/infiltration
- **1-41:** For redevelopment, employ regulations that provide for technologically advanced (on and off) site wastewater treatment systems to optimize efficiencies and address “challenging” sites.

### Development: Canandaigua, Cayuga, and Conesus Watersheds Combined





## Overview: Forestry and Agriculture

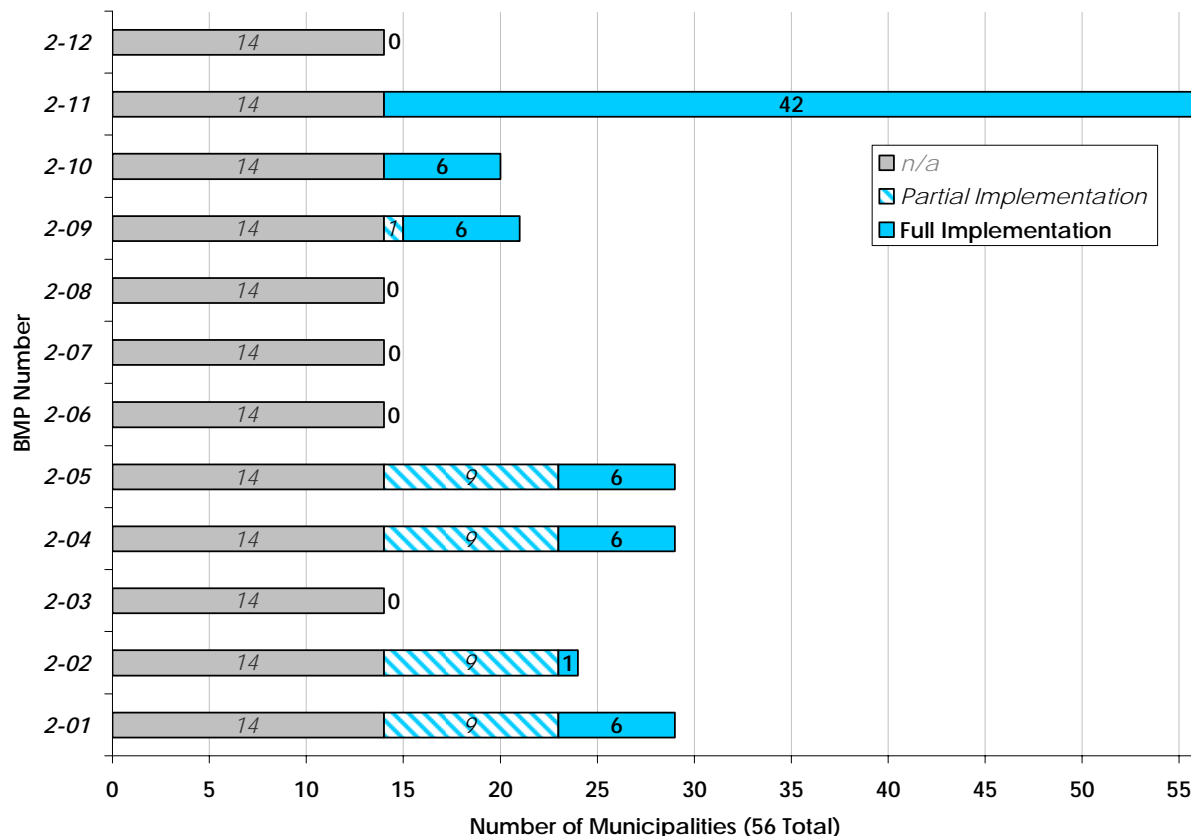
Across the three watersheds, 7 of 12 BMPs in *Forestry and Agriculture* were found to be addressed to some degree. Those BMPs that were not found to be addressed include:

- **2-03:** Seasonal preferences for logging operations
- **2-06:** Limit grades of access roads
- **2-07:** Require stabilization of roads/drives to forestry site
- **2-08:** Employ natural topography and contour for design of road network
- **2-12:** Require farms seeking agricultural value assessment to participate in AEM

Furthermore, 14 municipalities across the three watersheds were determined not to be capable of supporting significant forestry or agricultural activities. These include:

- Village of Aurora
- City of Canandaigua
- Village of Cayuga
- Village of Cayuga Heights
- Village of Freeville
- Village of Interlaken
- City of Ithaca
- Village of Lansing
- Village of Livonia
- Village of Naples
- Village of Rushville
- Village of Trumansburg
- Town of Ulysses
- Village of Union Springs

### Forestry/Agriculture: Canandaigua, Cayuga, and Conesus Watersheds Combined



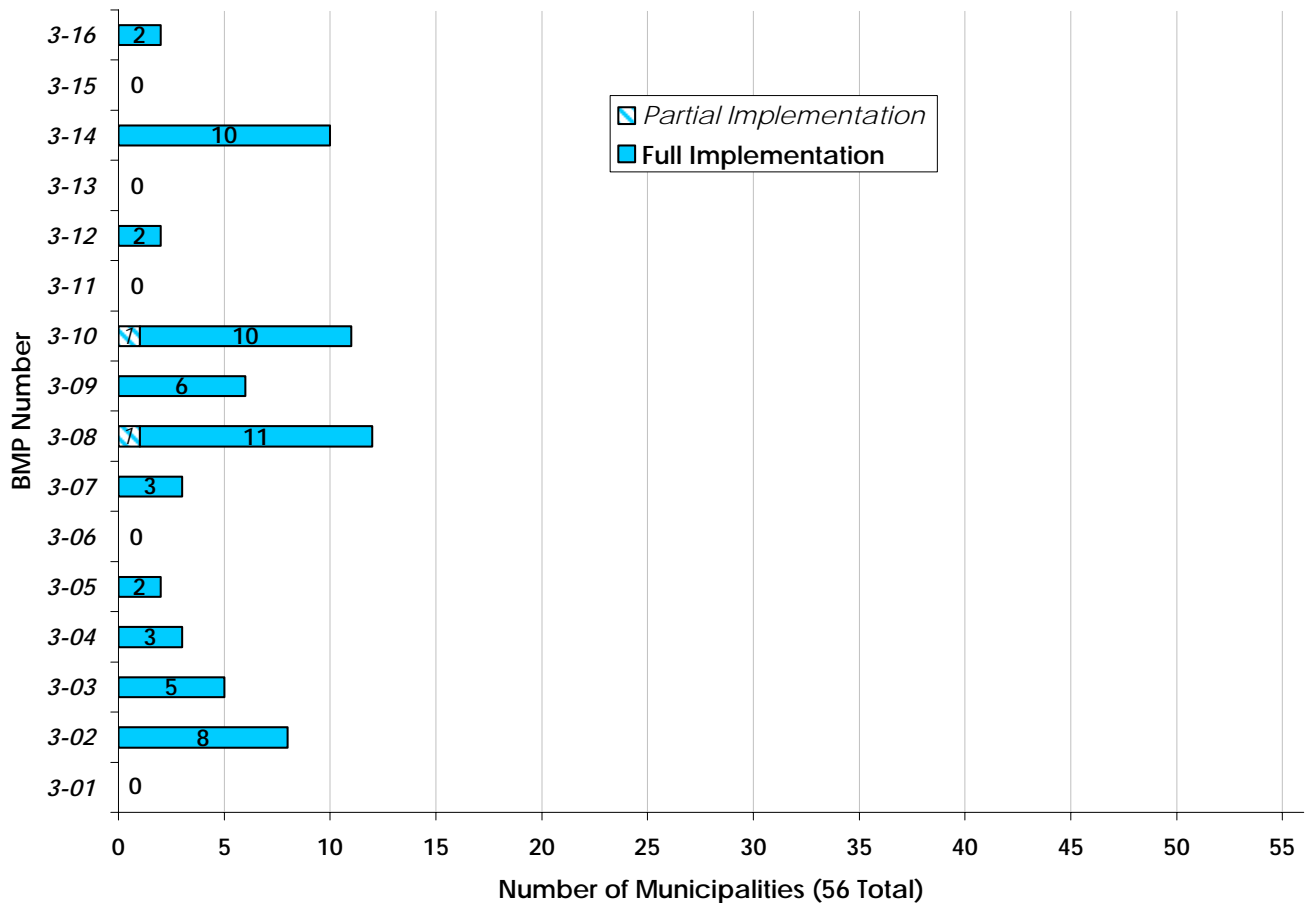


## Overview: Waterways and Wetlands

Across the three watersheds, 11 of 16 BMPs in *Waterways and Wetlands* were found to be addressed to some degree. Those BMPs that were not found to be addressed include:

- **3-01:** Develop an operation and maintenance program for existing modified streams that includes identification of opportunities and actions to restore habitat and the physical and chemical characteristics of these streams
- **3-06:** Design and construct shore erosion control facilities, in accordance and erosion and sediment control plan, in areas where marsh creation and soil bioengineering are ineffective or where existing protection methods are being flanked or are failing
- **3-11:** Consider wetlands and riparian areas and their non-point source (nps) control potential on a watershed scale
- **3-13:** Conduct permitting, licensing, certification and non-regulatory nps pollution activities in a manner that protects wetland functions
- **3-15:** Use appropriate pretreatment practices such as vegetated systems or detention or retention basins to prevent adverse impacts to wetland functions that affect nps pollution abatement from hydrologic changes, sedimentation, or contaminants

### *Waterways and Wetlands: Canandaigua, Cayuga, and Conesus Watersheds Combined*





## Overview: Marinas

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There were no significant findings regarding BMP use in marinas across the case study area. The low number of BMP implementation can be attributed to a number of reasons:

- There are 24 municipalities across the case study area without significant waterfront space or are not likely to have the opportunity to locate a new marina.
- There were only 4 marinas found that are administered by local municipalities. (See *Appendix E* for a comprehensive list of marinas across the three watersheds).
- Among those municipalities that have docking and mooring laws – which were few – it was found that those laws typically focus on spatial relationships (placement and configuration of berthing and mooring facilities) as opposed to environmental BMP implementation.
- The majority of public marinas across the case-study area were found to be administered by state agencies (NYSDEC, Office of Parks, Recreation and Historic Preservation), which are exempt from most local laws. The research and investigation of on-the-ground BMPs practiced among private marinas and state-managed marinas fell outside of the scope of this analysis.

The following BMPs were discovered through either site visitation or personal interviews to locally-administered marinas:

- **4-03:** Provide proper disposal/recycling facilities to marina patrons, preferably covered receptacles (2 municipalities were found to be implementing to a limited extent)
- **4-09:** Target outreach programs about proper disposal at marina patrons through the use of signs, mailings, and other means (2 municipalities were found to be implementing this BMP to a limited extent)
- **4-20:** Establish and enforce no-wake zones to decrease turbidity and reduce erosion potential from boat wakes (2 municipalities were found to be implementing this BMP to its fullest extent)
- **4-23:** Monitor water quality during construction to protect ambient water quality to the maximum practicable extent (1 municipality was found to be implementing this BMP to its fullest extent)
- **4-24:** Develop a marina siting policy to discourage development in areas containing important habitat designated by local, State, or federal agencies (1 municipality was found to be implementing this BMP to its fullest extent)
- **4-30:** Use properly designed and constructed engineering practices that minimize shoreline disturbance in areas where soil bioengineering and plants are ineffective (1 municipality was found to be implementing this BMP to its fullest extent)
- **4-31:** Use appropriate shore erosion control methods, such as returns or return walls, in areas where existing protection methods are being flanked or are failing (1 municipality was found to be implementing this BMP to its fullest extent)

[The chart for *Marinas* has been omitted due to a lack of significant data to illustrate.]



## Overview: Roads and Bridges

Across the three watersheds, 25 of 26 BMPs in *Roads and Bridges* were found to be addressed to some degree. The BMP that was not found to be addressed was:

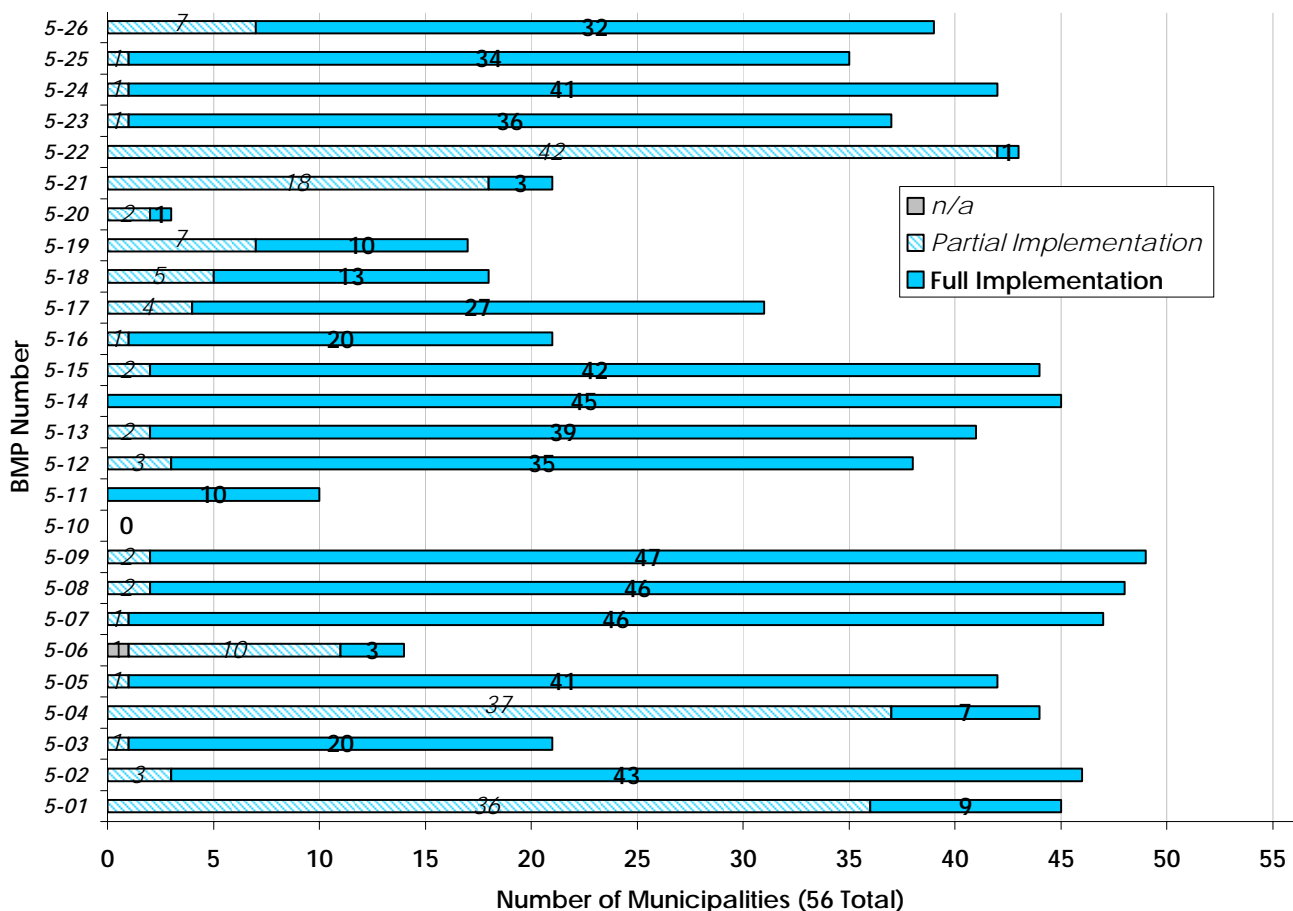
- 5-10: Retain additional runoff sites

The description for BMP 5-10 was somewhat vague, making it difficult to find specific applications of this BMP.

A high level of detail was provided by local highway superintendents regarding BMP implementation. Most of the individuals that were contacted were very forthcoming and displayed a great depth of knowledge regarding erosion and sediment control, environmental mitigation and BMP implementation in general. Furthermore, individuals within the field of highway management are typically afforded many opportunities to receive training regarding new technologies and practices and are able to consult with others in their field regarding innovative approaches to environmental protection.

Twelve of fifty-six highway or department of public works superintendents could not be reached for comment.

### Roads and Bridges: Canandaigua, Cayuga, and Conesus Watersheds Combined





## Overview: Onsite Wastewater Treatment Systems (OWTS)

Across the three watersheds, 5 of 7 BMPs in *Onsite Wastewater Treatment Systems* were found to be addressed to some degree. Those BMPs that were not found to be addressed were:

- **6-03:** Promulgate plumbing codes that require practices that are compatible with OWTS
- **6-07:** Set goals for effluent limits (nitrogen, phosphorous, BOD, etc)

As seen below, all municipalities were registered as fully-implementing BMP 6-04: Target outreach programs at homeowners, contractors and developers. In recent years, a wide variety of organizations have taken up the cause of informing the public of the importance of maintaining septic systems as well as the negative impacts that failing septic systems can have on local water quality.

*Onsite Wastewater Treatment Systems: Canandaigua, Cayuga, and Conesus Watersheds Combined*

