

Conesus Lake

CHAPTER 1 INTRODUCTION

1.1 Purpose of this Document

The Conesus Lake Watershed Management Plan (CLWMP) is the culmination of a process that began in the 1990s, when concerned citizens, academic researchers, and local government representatives rallied around the need to restore and protect Conesus Lake. Publication of the *State of Conesus Lake: Watershed Characterization Report* in May 2002 marked a significant milestone in the process of developing a management plan for the resource. This report benchmarked existing conditions of the lake and watershed, identified pollutants that threaten water resources, and identified specific land uses and geographical areas that contribute pollutants of concern. The Conesus Lake Watershed Management Plan builds on the investigations and outreach activities associated with the Characterization Report; the Management Plan outlines a series of aggressive measures designed to bring about improvements to the quality of Conesus Lake. These actions target the pollutants and sources that pose the greatest threat to the lake's use as a public water supply and recreational asset. The purpose of the Watershed Management Plan is to serve as a consensus among the Conesus Lake Watershed municipalities and the State of New York on future actions needed to protect Conesus Lake.

Implementation of these recommended actions will require commitment at many levels: federal, state and local government, natural resource and agricultural management agencies, and watershed landowners and residents. The problems in the lake are not caused by any single action or land use; they are the cumulative results of many activities and natural conditions within the watershed boundaries. Likewise, responsibility for improvements rests with the entire community.

The Conesus Lake Watershed Management Plan is a "living document" that can grow and change as old issues are resolved and new issues are encountered. It is not a mandate but will serve as a guide to effective actions to protect and enhance the quality of the lake and watershed.

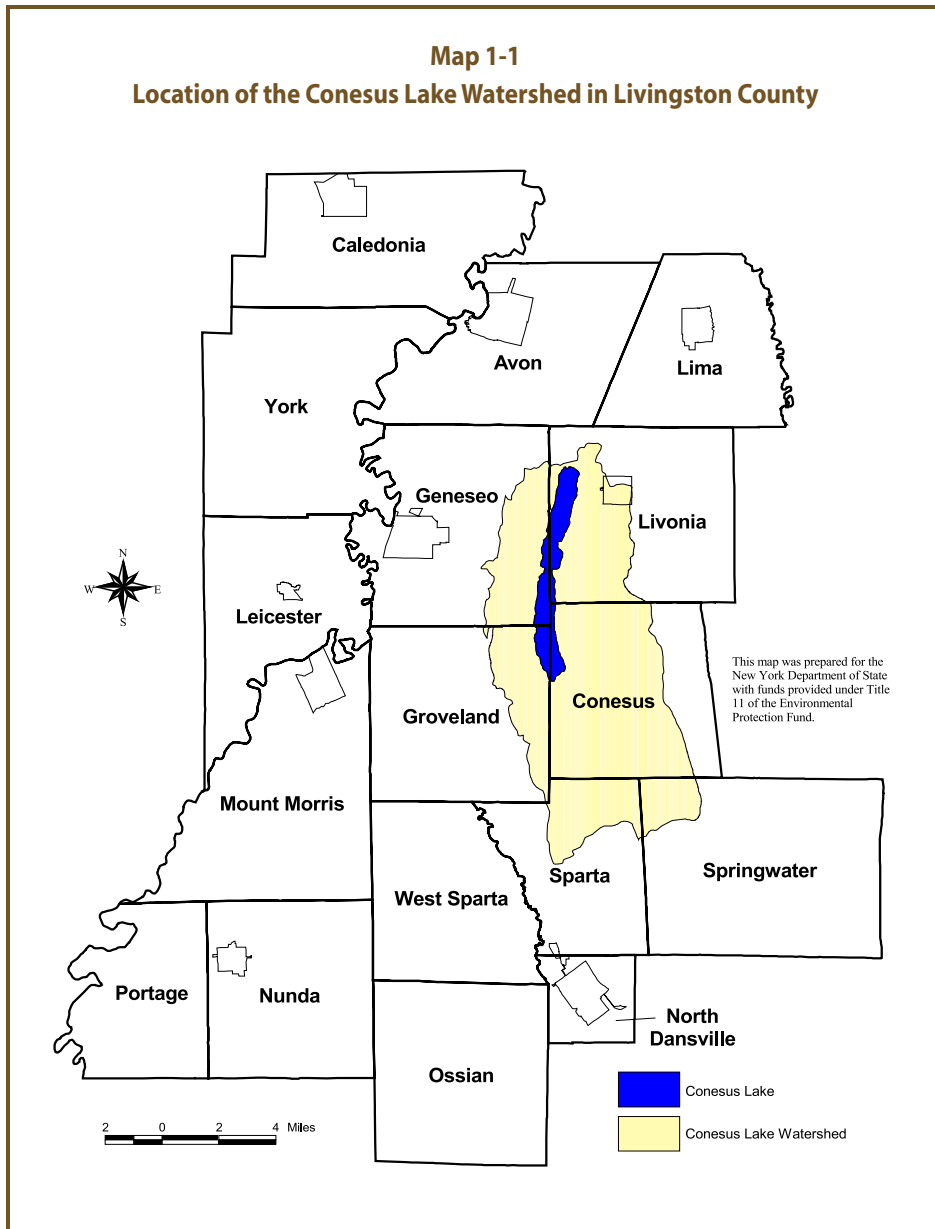
1.2 Environmental Setting

The Conesus Lake watershed encompasses 70 square miles (41,300 acres) within Livingston County. There are seven municipalities that are all or partially within the watershed: the Towns of Conesus, Geneseo, Groveland, Livonia, Springwater and Sparta, and the Village of Livonia. The watershed, which is home to approximately 10,000 people, forms part of the 2,500 square mile Genesee River Basin that drains north to Lake Ontario (Map 1-1).

A network of more than 18 streams flows into Conesus Lake. Because of the topography of the watershed, many of these streams are small and intermittent. Most of the water flowing into the lake enters from the south. The largest streams are North and South McMillan Creeks and the Conesus Inlet. Together, these three streams contribute as much as 70 % of the total gauged flow into the lake. Land use, soils, and topography in the watershed greatly influence the transport of sediment and other pollutants to Conesus Lake.

Conesus Lake is among the smallest of the New York Finger Lakes. This western-most Finger Lake is quite shallow and has an extensive region where light can penetrate to the sediment surface (termed the littoral zone). These basin features, coupled with the loading of nutrients and sediment from the watershed, affect the habitat available for rooted aquatic plants (macrophytes), algae, and the fish community. The lake's maximum depth is 66 feet. Mean depth is estimated at 38 feet. Conesus Lake holds a relatively small volume of deep water; less than six percent of the lake volume is deeper than 45 feet.

The lake is eutrophic (supporting high levels of plant and animal life) and serves as a public water supply and focal point



for recreation. A diverse and productive warm-water fish community supports angling. Changes in the food web in recent decades have contributed to a loss of water clarity (Makarewicz 2000). The species composition of the macrophyte (rooted aquatic plants or “weeds”) community has shifted; more nuisance species are present in shallower waters. Eurasian watermilfoil, zebra mussels, and the alewife are some of the most visible and disruptive species introduced into Conesus Lake. These species, among others, have caused changes in the food web and general ecology of the lake that are very difficult to control or correct. These changes concern the community because of their impacts on water quality, recreation and aesthetics, and have helped galvanize support for a comprehensive watershed management planning effort.

1.3 Description of the Planning Process

The Watershed Management Plan was developed through a collaborative process that reflects local input on priority actions and the feasibility of solutions. The plan identifies priorities and recommendations based on the input and vision of those who live and work in the watershed and of those using Conesus Lake as a public drinking water supply.

Preparation of the plan was financed through three Environmental Protection Fund-Local Waterfront Revitalization Program grants awarded to the Town of Livonia on behalf of all the watershed municipalities. The grants were matched by an equal amount of local contributions and in-kind services. The Livingston County Planning Department managed the project on behalf of the Town of Livonia and the other watershed communities. The watershed management planning process incorporated several overlapping and interrelated phases: fact-finding, public outreach, and identification of cost-effective remedial measures.

Three committees and a subcommittee guided the planning effort (Figure 1-1, Appendix 1). The Policy Committee

was the intermunicipal body responsible for major decisions. Voting members included representatives of each municipality in the watershed, the two municipalities that draw Conesus Lake water for public supply, and Livingston County. Representatives of the Livingston County Planning Department, Livingston County Department of Health, Conesus Lake Association, natural resources agencies and agricultural support agencies participated as non-voting advisory members.

The Planning Committee was responsible for the technical work and for advising on technical aspects of policy decisions. This Committee met on a monthly basis and included representatives of: Policy Committee, New York State Department of Environmental Conservation (NYSDEC), Livingston County Planning Department, Livingston County Soil and Water Conservation District, Livingston County Department of Health, Conesus Lake Association, Livingston County Water and Sewer Authority, EcoLogic LLC, Genesee/Finger Lakes Regional Planning Council, SUNY Brockport, and SUNY Geneseo. A subcommittee of the Planning Committee was formed to lead public education and outreach efforts.

The Agricultural Committee was formed following completion of the Characterization Report. Membership included active agricultural producers and county, state, and federal agricultural support agencies including the Soil and Water Conservation District, the Natural Resources Conservation Service, Cornell Cooperative Extension, Farm Services Agency and the Farm Bureau.

Four work groups (Road Systems Issues, Lake Management Issues, Sanitary Sewer/Septic Systems and Stormwater Management Issues, and Recreational Use Issues) were created to deal with specific topics (Appendix 2). These groups were charged with identifying issues of concern and possible solutions, evaluating solutions, and defining priority actions. The recommendations and priorities adopted by the work groups were presented to the Policy Committee for formal adoption as part of the Watershed Management Plan.

