

**Part 2:**

**Lake Como**

**Watershed Management Plan**

**September 2007**

# Lake Como Watershed Management Plan

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## **Aquatic Vegetation Management**

### **Goal:**

Prevent the introduction of exotic and invasive aquatic plant species and properly manage the aquatic vegetation that is present in Lake Como.

### **Issues:**

- Excessive aquatic vegetation growth can complicate or restrict certain uses of the lake.
- A plant and user perception survey suggests that plant communities in Lake Como are dominated by exotic invasive plants such as Eurasian watermilfoil and curly leafed pondweed and native plants such as large leafed pondweed that can become a nuisance.
- Other exotic and invasive aquatic plant species such as water chestnut and fanwort have not spread into Lake Como, but are a threat.
- Excessive nutrients can lead to excessive vegetation growth.
- Different control methods have different benefits and concerns.

### **Suggested Actions:**

#### **1. Education:**

- a. Utilize the materials from the Weeds Watch Out! (W2O!) Program to inform lake users and homeowners about the spread and characteristics of invasive aquatic species, how to prevent the spread of invasive aquatic species, and teach volunteers to identify aquatic plant species and map them.
- b. Educate the public on how to reduce nutrient loading to the lake utilizing materials from the P-Project.
- c. Display information/bulletins on invasive aquatic plant species at the Summer Hill Town Hall and Lake Como Inn/Store.
- d. Learn about life cycles to recommend harvesting times for harvesting efforts.

#### **2. Assessment:**

- a. Extend the Weeds Watch Out! (W2O!) Program to Lake Como.
- b. Inventory and map aquatic vegetation in Lake Como, compare to historical data and determine management needs. Publish findings as an educational tool.

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- c. Conduct annual surveys to monitor aquatic plant species in Lake Como.
- d. Create a map to document the extent of aquatic plant growth based on annual plant surveys and sightings from lake users.
- e. Examine alternative methods for aquatic vegetation control besides harvesting.
- f. Research history of past controls and their success on aquatic vegetation.
- g. Sample sediments to pinpoint high phosphorus sediment areas.

### **3. Funding:**

- a. Continue to utilize the funding from the Finger Lakes Lake Ontario Watershed Protection Alliance (FOLLOWPA) program to continue the Citizens Statewide Lake Assessment Program (CSLAP).
- b. Search for funding to inventory and map aquatic vegetation in Lake Como, compare to historic data and determine management needs.
- c. Search for funding for education including expanding the Weeds Watch Out! (W2O!) Program and P-Project to Lake Como.
- d. Search for funding to take sediment samples to pinpoint high phosphorus sediment areas.
- e. Search for funding for the Lake Como Association to purchase equipment for aquatic vegetation management.

### **4. Regulation:**

- a. Propose and support state legislation to strictly enforce restrictions on the sale of invasive plant species especially website, plant nurseries and aquatic stores.

### **5. Miscellaneous:**

- a. Continue mechanical harvesting of Lake Como.
- b. Examine dredging and explore funding opportunities to dredge high nutrient areas of Lake Como.
- c. Examine chemical and other treatment options for aquatic vegetation management.

## **Lake Level**

### **Goal:**

Determine and attempt to maintain a preferred lake level that protects Lake Como and its shoreline.

### **Issues:**

- High and low water levels can impact fisheries, wildlife habitat, aquatic vegetation growth, navigation, and recreation as well as lakeshore residences including their shorelines and septic tanks.
- Beavers, especially in the Lake Como Outlet, have caused lake level issues.

### **Suggested Actions:**

#### **1. Education:**

- a. Educate realtors, builders, homeowners, architects and code enforcement officers on building code requirements or techniques specifically designed to protect structures in flood prone areas.
- b. Educate watershed residents on what to expect in regards to lake level and the effect it has on septic systems, aquatic weed growth, etc.

#### **2. Assessment:**

- a. Survey lakeshore residents on what the preferred lake level would be.
- b. Conduct a hydrologic study of Lake Como.
- c. Research obtaining an official lake level gauge for Lake Como.
- d. Study the effect of lake level on wildlife, revenue, silt deposition, aquatic vegetation, erosion, loss of beachfront, and effect of wave action.

#### **3. Funding:**

- a. Search for funding to conduct education on lake level and flooding issues.
- b. Search for funding for the hydrologic study.
- c. Search for funding to install an official lake gauge.

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- d. Search for funding to study the effect of lake level on wildlife, revenue, silt deposition, aquatic vegetation, erosion, loss of beachfront and effect of wave action.

### **4. Miscellaneous:**

- a. Examine dredging and explore funding opportunities to dredges areas in Lake Como.
- b. Continue to work with the Finger Lakes Land Trust and the New York State Department of Environmental Conservation on beaver control projects.

## **Waterborne Bacteria**

### **Goal:**

Reduce waterborne bacteria levels in Lake Como in order to protect human health.

### **Issues:**

- Waterborne bacteria can have potential health effects on humans.
- Geese, wildlife and domestic animals can affect bacteria levels in Lake Como.
- Loose dogs and improper disposal of pet waste can impact water quality.

### **Suggested Actions:**

#### **1. Education:**

- a. Educate people how to reduce geese population on the lake and their property.
- b. Educate residents on the need to properly dispose of pet waste.
- c. Provide educational materials through Cayuga County Cornell Cooperative Extension and the Cayuga County Health Department.

#### **2. Assessment:**

- a. Conduct coliform testing of Lake Como.
- b. Implement a continuous monitoring program of Lake Como.

#### **3. Funding:**

- a. Explore funding for coliform testing.
- b. Explore funding to conduct a continuous monitoring program of Lake Como.

#### **4. Miscellaneous:**

- a. Provide incentives and programs for farmers and landowners to install, maintain, and manage buffers adjacent to lakeshore and other sensitive areas.

## **Septic Systems**

### **Goal:**

Protect public health and reduce nutrients and pathogen impacts of septic systems on surface and groundwater.

### **Issues:**

- Inadequate and malfunctioning septic systems have the potential to introduce nutrients and pathogens to ground and surface waters.
- Shoreline residences can present special challenges to the proper operation of septic systems due to soils, slopes and small lot sizes.
- Conversion of homes from seasonal to year round without upgrading septic systems can lead to system failure.

### **Suggested Actions:**

#### **1. Education:**

- a. Promote regular maintenance of septic tanks.
- b. Distribute educational literature that provides examples of good septic system and holding tank use and maintenance practices as well as other issues such as water conservation to homeowners and at Lake Como Association meetings.
- c. Distribute a septic maintenance log sheet for homeowners.
- d. Provide educational workshops on septic systems for residents.

#### **2. Assessment:**

- a. Perform a community dye test for residents using septic systems.
- b. Explore DNA testing to determine coliform sources.

#### **3. Funding:**

- a. Explore federal or state assistance to replace or upgrade septic systems of people with limited incomes.
- b. Explore what grants and loans are available for water and waste disposal systems for rural communities.

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- c. Seek funding to conduct dye testing.
- d. Research funding options for the construction of alternative wastewater systems in high priority areas.
- e. Seek funding to conduct DNA testing to determine coliform sources.

## **Boating/Jet Skis/Wave Runners**

### **Goal:**

Reduce boat and personal watercraft impacts on Lake Como.

### **Issues:**

- Boating and the use of personal watercraft are popular past times, but there are a number of safety, environmental and quality of life issues that are of concern such as excessive speed and noise, lack of boating courtesy, water quality impacts and importing of exotic species.

### **Suggested Actions:**

#### **1. Education:**

- a. Develop a coordinated appreciation/education program on boating that could include information such as perceived problems of boaters, speed limit and boating setbacks, safe and proper fuel storage of boats including what to do with a spill, boating safety and invasive species.
- b. Distribute New York State Boaters Guide to lakeshore owners and guests at the Lake Como Inn/Store.
- c. Develop and place a sign at the Lake Como Inn/Store with information from the New York State Boater Guide.

#### **2. Assessment:**

- a. Explore options and public opinion of motorized watercraft.
- b. Research the impact of excessive wave action.
- c. Study speed and noise of boats on Lake Como.

#### **3. Funding:**

- a. Search for funding to conduct education for boaters.
- b. Search for funding to conduct research on boating.

#### **4. Regulation:**

- a. Identify enforcement authority around the lake.

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- b. Work with law enforcement to increase enforcement of existing navigation laws locally.
- c. Work with law enforcement agencies and local government to develop an effective strategy to enforce boating regulations.
- d. Examine a nighttime speed limit.

## **Stormwater and Soil Erosion Management**

### **Goal:**

Reduce the potential impacts of soil erosion and stormwater on Lake Como and its watershed.

### **Issues:**

- As water flows over the land it can erode soil as well as pick up pollutants such as litter, sediment, nutrients, pesticides and pathogens and deliver it to Lake Como.
- These pollutants can cause problems with the quality of the water in Lake Como and may cause human health impacts, floating debris, excess aquatic weed growth and other issues.
- Construction, roadways, agriculture and residential neighborhoods can all be sources of soil erosion and stormwater.

### **Suggested Actions:**

#### **1. Education:**

- a. Provide education and training of local officials on erosion control and stormwater management including the Phase II Stormwater Rules and Regulations, the benefits of adopting a local law on stormwater erosion and erosion control that guides the local community through the process in order to protect, maintain, and enhance water quality in the Lake Como Watershed; and best management practices to protect water quality.
- b. Educate homeowners and residents through workshops and literature on how to reduce the amount of nutrients that enter Lake Como. Topics could include proper lawn maintenance, pet waste, yard waste management, erosion, landscaping, and shoreline erosion.
- c. Educate residents utilizing materials from the P-Project Program.

#### **2. Assessment:**

- a. Assess the streams entering Lake Como and restore severely eroded streambank segments.
- b. Conduct an assessment of shoreline erosion and related problems.
- c. Continue monitoring Lake Como through the Citizens Statewide Lake Assessment Program (CSLAP). Examine expanding this monitoring program.

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- d. Conduct testing on sediments to pinpoint high phosphorus sediment areas.
- e. Research project to dredge mucky sediment areas to remove phosphorus source.
- f. Monitor streams above and below farms.
- g. Determine the impact of deicing materials including sand and salt on Lake Como.

### **3. Funding:**

- a. Identify funding sources for comprehensive streambank restoration and management programs.
- b. Search for funding for education on nutrients.
- c. Search for funding to expand the P-Project to Lake Como.
- d. Search for funding to continue and possibly expand the monitoring of Lake Como.
- e. Search for funding to test sediment samples to pinpoint high phosphorus sediment areas.
- f. Encourage farmer participation in state and federal programs that relate to water quality and issues in the Lake Como Watershed and pursue forms of assistance such as continued federal and state grants and cost share programs.

### **4. Regulation:**

- a. Encourage the enforcement of near-shore boating speed limits to reduce shoreline erosion.

### **5. Miscellaneous:**

- a. Hydroseed and mulch roadside ditches and swales to reduce delivery of sediment and other pollutants from roadways.
- b. Encourage use of structural controls of sediments on steep roads, roadbanks and in high flow areas.
- c. Encourage use of and provide information on structural measures to control sediments and other pollutants from stormwater runoff.
- d. Encourage use of and provide information on best management practices to reduce roadbank erosion.

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- e. Encourage use of filter strips or maintenance of vegetative filter strips to protect stream corridor and shorelines.
- f. Provide assistance to design and implement preventative measures for shoreline erosion.
- g. Provide incentives and programs for farmers and landowners to install, maintain and manage buffers adjacent to lakeshore and sensitive areas.
- h. Encourage use of Agricultural Environmental Management (AEM) plans for farms in the Lake Como Watershed. Identify best management practices (BMPs) from AEM plans, look for assistance to implement these BMPs and measure the effectiveness of these BMPs.
- i. Encourage use of whole farm plans.
- j. Towns could encourage alternative agricultural uses of land such as rotational grazing, organic farming, etc.
- k. Provide signs for lake friendly farms or watershed friendly farms.

## **Fisheries**

### **Goal:**

Maintain a healthy and diverse fishery in Lake Como.

### **Issue:**

- It is important to maintain a healthy and diverse fishery in Lake Como for recreation, biodiversity and quality of life.

### **Suggested Actions:**

#### **1. Education:**

- a. Educate the public on fisheries on such topics as viral hemorrhagic septicemia (VHS) and effects of invasive species on native fish populations.

#### **2. Assessment:**

- a. Determine water quality, including phosphorus level, dissolved oxygen and chlorophyll  $\alpha$  in Lake Como and the effect it has on aquatic vegetation and fish.

#### **3. Miscellaneous:**

- a. Request that the New York State Department of Environmental Conservation contact the Lake Como Association before any stocking is conducted to discuss why stocking is being conducted and get their input.
- b. Promote watershed management strategies that will strengthen fish population.
- c. Continue aquatic plant management strategies to reduce impact on fish.

## **Invasive Species**

### **Goal:**

Contain or reduce current populations of invasive species and prevent the introduction of new invasive species in the watershed.

### **Issues:**

- Invasive species have been found in Lake Como and its watershed.
- Many invasive species such as zebra mussels, quagga mussels and water chestnut threaten Lake Como and its watershed.
- Invasive species can have an economic, ecologic and aesthetic impact on Lake Como and its watershed.

### **Suggested Actions:**

#### **1. Education:**

- a. Continue educational programs to prevent the spread of invasive species into Lake Como and its watershed.
- b. Utilize the materials from the Weeds Watch Out! (W2O!) Program to inform lake users and homeowners about the spread and characteristics of invasive aquatic species, how to prevent the spread of invasive aquatic species, and teach volunteers to identify aquatic plant species and map them.
- c. Display information/bulletins on invasive species at the Summer Hill Town Hall and Lake Como Inn/Store.
- d. Start a watch card program by creating and distributing cards focused on potential invaders to make people aware before infestations occur.

#### **2. Assessment:**

- a. Initiate a regular inventory and monitoring program for exotic, introduced and invasive species in the lake and watershed.
- b. Extend the Weeds Watch Out! (W2O!) Program to Lake Como.

#### **3. Funding:**

- a. Search for funding to conduct inventory, monitoring and control programs for invasive exotic species.

- b. Search for funding to conduct education on invasive exotic species.

**4. Regulation:**

- a. Propose and support state legislation to strictly enforce restrictions on the sale of invasive plant species especially website, plant nurseries and aquatic stores.

**5. Miscellaneous:**

- a. Utilize expertise to monitor and control invasive species before they become established.
- b. With Cayuga County Water Quality Management Agency (WQMA) or other agency, develop watchlist and list of infestations of nearby water bodies so boat, jet ski, canoe, etc. owners know what to look for.

## **Public Access**

### **Goal:**

To encourage public access while minimizing its environmental impact within Lake Como watershed.

### **Issues:**

- There is limited public access because all of the shoreline around the lake is privately owned.
- Protect the lake from the negative impacts of public access such as introduction of invasive exotic species.

### **Suggested Actions:**

#### **1. Education:**

- a. Encourage low impact use such as hiking, canoeing and fishing instead of motorized use.
- b. Develop and continue education to prevent spread of invasive exotic species from public access points into Lake Como.

#### **2. Funding:**

- a. Search for funding to conduct education on the spread of invasive exotic species into Lake Como.

## **Monitoring**

### **Goal:**

Continue and expand monitoring of Lake Como.

### **Issues:**

- Reliable long term information on water quality, problem areas, and use impairment is needed to manage Lake Como and its surrounding watershed.
- Data can be used to gain insight into the present condition of Lake Como compared to historic data, and can be used to determine whether water quality conditions are improving, degrading, or stable.
- Data can also serve as a baseline for comparing future trends and examining the effect of changing land and lake use patterns and watershed activities.
- Data from monitoring can identify or confirm areas of concern within the watershed and set priorities for implementing best management practices (BMPs).

### **Suggested Actions:**

#### **1. Assessment:**

- a. Continue monitoring Lake Como through the Citizens Statewide Lake Assessment Program (CSLAP). Examine expanding this monitoring program.
- b. Conduct other water quality testing including coliform testing, etc.
- c. Conduct testing on sediment samples to pinpoint high phosphorus sediment areas.
- d. Conduct water testing of tributaries and outlet.
- e. Conduct water testing of spring quality.

#### **2. Funding:**

- a. Continue to utilize the funding from the Finger Lakes Lake Ontario Watershed Protection Alliance (FL LOWPA) program to continue the Citizens Statewide Lake Assessment Program (CSLAP).
- b. Seek funding for other water quality testing.
- c. Search for funding to test sediment samples to pinpoint high phosphorus sediment areas.