

STATUS OF ACCOMPLISHMENTS AND FUTURE PRIORITIES



Lake George Watershed Conference

George E. Pataki, Governor

Christopher L. Jacobs, Secretary of State

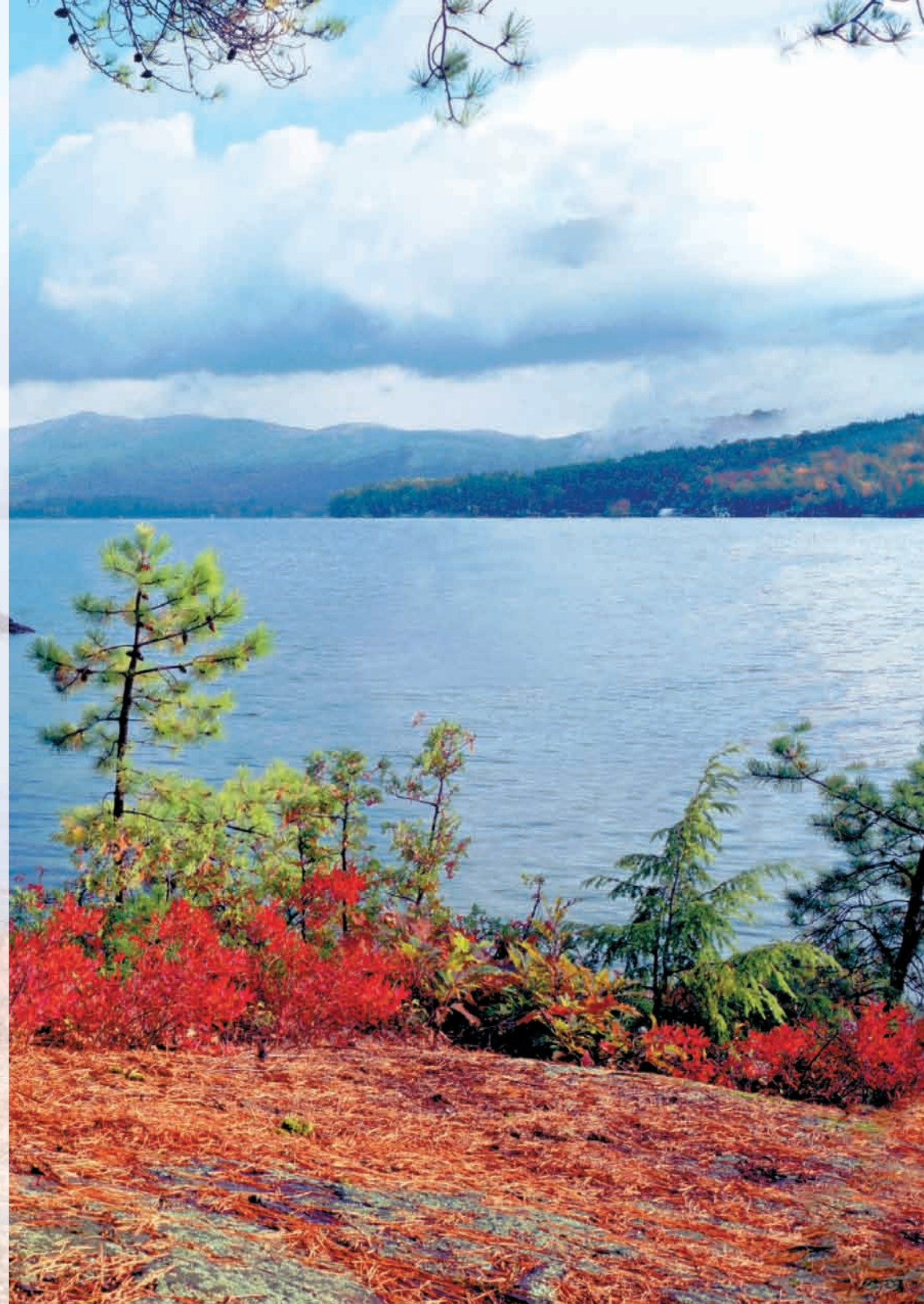
September 2006



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Memorandum of Agreement establishing the Lake George Watershed Conference



I INTRODUCTION



Governor Pataki announces Environmental Protection Fund Grants to Lake George communities.

YEAR	RECIPIENT	EPF GRANT AMOUNT
2000	Town of Bolton	\$176,000
2001	Town of Queensbury	\$325,000
2002	Town of Bolton	\$250,000
2002	Town of Hague	\$361,500
2003	Village of Lake George	\$200,000
2004	Town of Bolton	\$250,000
2005	Town of Queensbury	\$500,000

Improving water quality and preserving the natural resources of the Lake George watershed are critically important to the economic and environmental vitality of the region.

Since 1995, Governor George E. Pataki has committed over \$35 million in State grants and loans for projects which protect water quality and natural resources throughout the watershed. Much of this assistance is predicated upon local matching resources, including in-kind and volunteer services, municipal appropriations, and contributions from non-governmental organizations.

The most recent Environmental Protection Fund grants, listed on this page, were awarded by Governor Pataki through the NYS Department of State Division of Coastal Resources and the NYS Department of Environmental Conservation Division of Water. These grants have been awarded to a recipient municipality on behalf of all communities around the Lake. Much has been accomplished, but there is always more work to be done. In an effort to keep the public informed, while identifying next steps to continue progress, it is important to periodically assess what has been done and future needs.

The Lake George Watershed Conference is pleased to present this report, which details accomplishments made to advance the recommendations contained in **Lake George - Planning for the Future**, released by Governor George E. Pataki in 2001. This report also sets forth the future priorities over the next three years to protect the watershed.

The unprecedented cooperation and communication among Conference members has led to a stronger commitment to preserving and protecting Lake George. Using **Lake George - Planning for the Future** as its guide, the Conference has charted a course and is forging ahead. Its members recognize that diligence is necessary, and the journey is never ending. Future generations must continue what has begun. The health of Lake George depends on it.



II LAKE GEORGE WATERSHED CONFERENCE

View from Black Mountain

A) WHEN AND WHERE IT STARTED

The Lake George watershed, or drainage basin, occupies over 300 square miles of land and water resources, spanning portions of Warren, Washington, and Essex counties. The watershed includes approximately 100 square miles of State-owned land, primarily forest preserve, 155 square miles of privately owned land, and 45 square miles of water surface. Nine municipalities are located around the Lake, including the Towns of Bolton, Dresden, Fort Ann, Hague, Lake George, Putnam, Queensbury, and Ticonderoga; and the Village of Lake George.

With its spectacular natural resources and easy accessibility, Lake George is one of the premier vacation destinations in the Northeast, earning the designation of “Queen of the American Lakes.” This is an honor and presents challenges to address increasing recreational use and development pressures.

During the 1970’s and 80’s, scientific investigations found that Lake George was showing signs of environmental stress, such as high nutrient levels, particularly phosphorus, and sedimentation. Run-off from intensively developed areas and inadequate septic systems were identified as threats to the Lake’s water quality.

To address the issues affecting Lake water quality, *The Task Force for the Future of the Lake George Park*, chaired by the NYS Department of Environmental Conservation, was created during the early 1980’s for the purpose of preparing a plan to identify actions needed to protect the Lake. The Task Force subsequently released *The Plan for the Future of the Lake George Park* in 1987. It was considered to be a dynamic document that would be used as a plan of action, reviewed periodically, and refined as new issues arose.

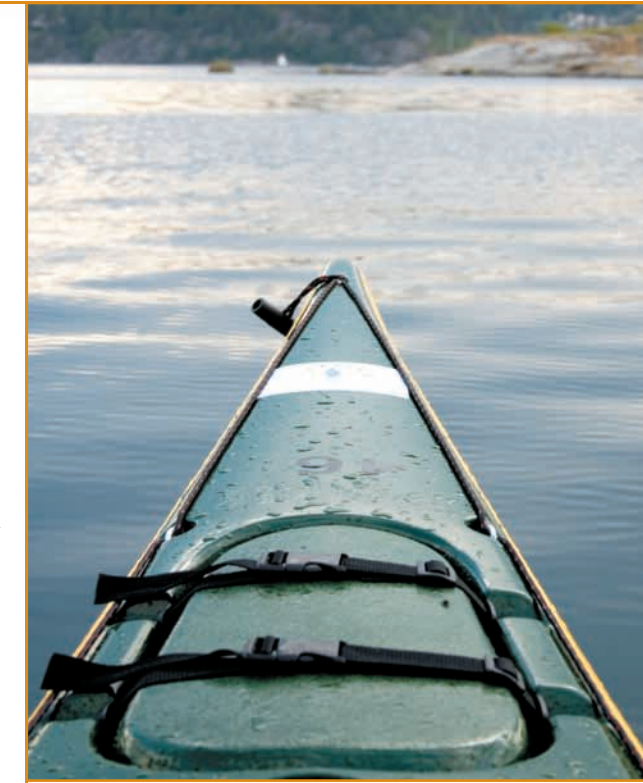
State agencies, local governments, and non-governmental organizations involved in protecting the Lake came together in the Fall of 1999 to form a working committee called **Lake George - Planning for the Future** to update the original plan.

The committee, chaired by the NYS Secretary of State, reviewed the status of recommendations contained in the earlier plan and water quality studies and research efforts undertaken over the previous 15 years. The committee also initiated a process to develop a consensus on current and future actions needed to protect the Lake that would build upon the original plan. The first Annual Water Quality Issues Forum was held to ensure a thorough understanding of water quality issues to enable the committee to collectively set priorities for the entire watershed.

In 2001, the committee completed **Lake George - Planning for the Future**. The document reflected a consensus on issues affecting Lake water quality and outlined recommendations to advance their resolution. Preparation of the plan was guided by staff of the NYS Department of State Division of Coastal Resources, and financed through a \$90,000 Environmental Protection Fund Local Waterfront Revitalization Program (EPF LWRP) grant.

The grant was matched by the municipalities around the Lake and non-governmental organizations involved in its protection.

Recommendations in the plan included capital improvement projects, best management practices to minimize or eliminate nonpoint sources of pollution, and strengthening inter-agency and inter-municipal partnerships. One recommendation, in particular, called for continuing the collaborative effort undertaken to prepare the plan to implement its recommendations. In August 2001, the committee members entered into a Memorandum of Agreement (MOA) creating the Lake George Watershed Conference. A copy of the MOA is attached as an Appendix.



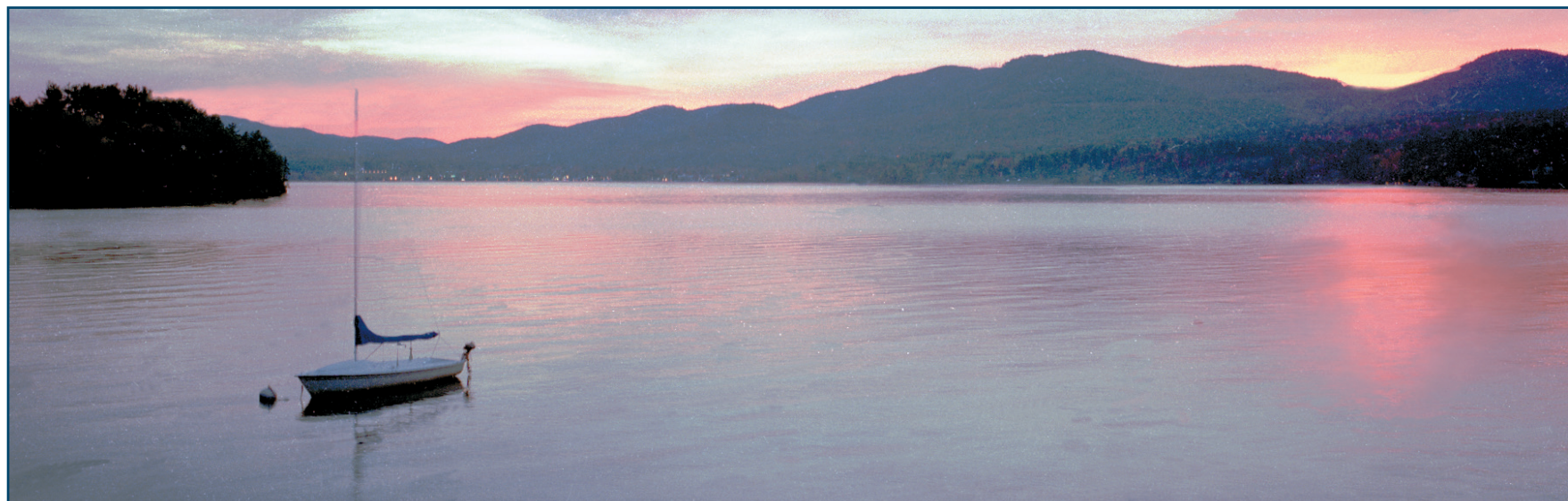
B) CONFERENCE MEMBERS

Just as many tiny water drops together can create a force of nature, bringing many individuals and organizations together creates a similar energy and strength. This wave of support has carried **Lake George - Planning for the Future** forward, and would not have been possible without a dedicated group of individuals and organizations.

Partnerships are critical. The Conference brings together State and local government, researchers, and resource protection organizations to accomplish the common goal of protecting the Lake. **Collective efforts accomplish much more than those that proceed individually.** The numerous accomplishments described in this report exemplify the benefits of such partnerships.

The Lake George Watershed Conference continues to be the catalyst behind the plan's implementation. Department of State Division of Coastal Resources staff facilitate and coordinate Conference meetings and share their technical expertise as members of the Conference.

The Division administers Environmental Protection Fund Local Waterfront Revitalization Program grants, an important source of State funding for implementation of the plan. The Department of Environmental Conservation also provides technical and financial assistance through Environmental Protection Fund Water Quality grants. In addition, each watershed municipality contributes \$7,000 annually to support Conference activities, as well as provides in-kind and volunteer services for specific projects.



View from Plumb Point

LAKE GEORGE WATERSHED CONFERENCE MEMBERS

The Lake George Watershed Conference is chaired by the New York State Secretary of State. Its members represent the nine municipalities and three counties around the Lake, five state agencies, and non-governmental organizations involved in protecting the Lake. Conference members include:

- Town of Bolton
Alexander G. Gabriels, III, Supervisor
- Town of Dresden
Robert Banks, Supervisor
- Town of Fort Ann
Gayle Hall, Supervisor
- Town of Hague
Daniel Belden, Supervisor
- Town of Lake George
Louis Tessier, Supervisor
- Town of Queensbury
Daniel G. Stec, Supervisor
- Town of Putnam
John LaPointe, Supervisor
- Town of Ticonderoga
Robert Dedrick, Supervisor
- Village of Lake George
Robert Blais, Mayor
- Warren County Soil and Water Conservation District
Edward Milner, Chairman | David Wick
- Essex County
Noel H. Merrihew, III, Chair, Board of Supervisors
- Warren County
William Thomas, Chair, Board of Supervisors | William Lamy, P.E.
- Washington County
JoAnn Drinkle, Chair, Board of Supervisors
- Washington County Soil and Water Conservation District
John Reiger, Chair | Joseph Driscoll
- NYS Department of Environmental Conservation
Denise Sheehan, Commissioner | Ron Montesi
- NYS Department of Transportation
Thomas Madison, Commissioner | Richard Ambuske
- NYS Department of State
Christopher L. Jacobs, Secretary of State, Chair | George R. Stafford | Kevin Millington
- The Darrin Fresh Water Institute
Charles Boylen, PhD, Associate Director
- The Lake George Association
John Schaninger, President | C. Walter Lender
- The Lake Champlain-Lake George Regional Planning Board
Walter Young, Director
- Cornell Cooperative Extension of Warren County
Andrew Sprague, Executive Director | Laurel Gailor
- The Lake George Park Commission
Bruce Young, Chair | Michael White
- The Adirondack Park Agency
Dr. Ross A. Whaley | John Banta
- The Fund for Lake George
Donald H. Rice, Chair | Carol Collins, PhD
- The Lake George Land Conservancy
Nancy Williams, Executive Director

III ACCOMPLISHMENTS



View from Prospect Mountain

A) HIGHLIGHTS

The Conference serves as a forum for identifying and addressing the complex issues facing the Lake. The recommendations in **Lake George - Planning for the Future** represent a blueprint for action that the Conference has embraced and kept on course. Resources have been allocated to address mutually agreed upon priorities for protecting the Lake, and much has been accomplished. Highlights of Conference members' accomplishments include the following:

Reduction of Non-Point Source Pollution

Twenty five projects to better manage stormwater runoff have been completed, eliminating and/or treating in excess of 250,000 gallons per day of runoff. These improvements have reduced total untreated stormwater flows entering the Lake by as much as 40 percent within the West Brook sub-watershed, as described in an engineering report prepared for the NYS Department of Transportation. Significant reductions in untreated stormwater runoff have also been realized in other sub-watersheds due to similar efforts.



Stormtech chambers being installed along West Brook in the Town of Lake George by Warren County Soil and Water Conservation District.

Watershed-Wide Water Quality Management Initiatives

The Albany Law School and Conference members completed an assessment of local and State government laws and regulations and best practices to protect water quality in the Lake's watershed. Specific recommendations were made for a variety of actions that Conference members can take to strengthen management of activities in the watershed to reduce nonpoint source pollution.

Nuisance Species Management and Control

The Conference established a Nuisance Species Task Force to coordinate efforts to address threats from nuisance invasive species, such as Eurasian watermilfoil and Zebra mussels. Environmental Protection Fund Local Waterfront Revitalization Program (EPF LWRP) grants were awarded to prepare a long-term Eurasian watermilfoil management plan, to prepare and distribute education materials, to expand the Lake George Park Commission's (LGPC) Eurasian watermilfoil control program, and to establish four boat wash stations around the Lake to minimize further introduction of Zebra mussels.

Wastewater Management

Warren County continues to develop sewage treatment facilities in the Towns of Hague, Bolton, and Lake George. The Towns of Ticonderoga and Putnam are jointly advancing the Black Point Road sewer collection project. When complete, this project will eliminate over 200 on-site septic systems, many of which have been cited for substandard performance or system failure.

Wetlands and Critical Watershed Areas Management and Protection

The Lake George Land Conservancy acquired 2,650 acres of environmentally sensitive lands within the watershed, thus assuring their future protection. Notable acquisitions include properties in the Towns of Bolton, Putnam, and Hague.

Education, Public Participation and Stewardship Promotion

An aggressive program of public outreach and education is the focus of the Conference's Public Participation and Education Committee. Initiatives include: the development and maintenance of a Conference interactive web site; the production and broadcast of more than 120 television shows highlighting Lake issues and programs; and, an annual public forum on water quality management and resource conservation.

Water Quality Monitoring, Analysis, and Testing

The Darrin Fresh Water Institute continued its Offshore Chemical Monitoring Program, with financial support from the Fund for Lake George. Analysis of chemical constituents and measurements for light penetration, dissolved oxygen, and temperature is conducted at 12 sites within the Lake. Biweekly samples are collected in the Spring months to analyze the rapid changes in chemical water quality occurring at this time of year. The Darrin Fresh Water Institute began the monitoring program in 1980.

Coordinated Water Quality Initiatives

The Lake George Park Commission (LGPC) provides "first response" to water quality related problems and coordinates abatement efforts with other agencies and organizations.

B) DETAILED IMPLEMENTATION STATUS

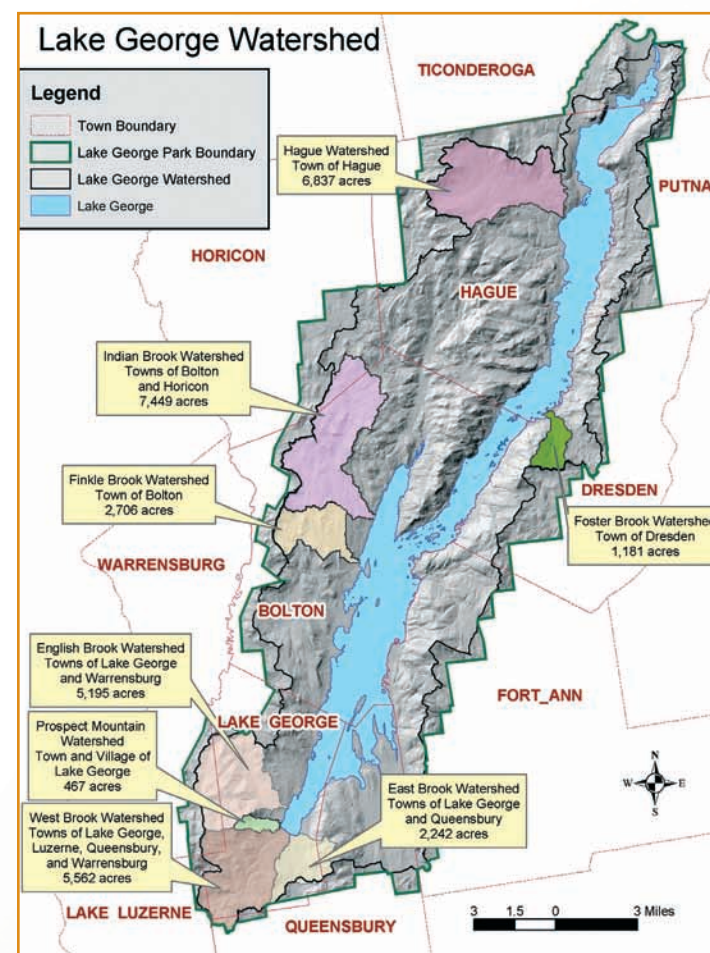
Implementation of **Lake George - Planning for the Future** involves numerous individual projects. Each project is important by itself, and even more important as a component of the comprehensive efforts being advanced through the Conference. Many of the recommendations have been implemented, and the results are becoming apparent.

1- Stream Corridor and Stormwater Management

There are approximately 115 tributary streams flowing into Lake George. Through both natural and human-induced activities, streams can become unstable, resulting in erosion and sedimentation. Stream corridor instability increases sedimentation entering the Lake, contributing to the formation of siltation deltas along the Lake shoreline.

Prior to completion of **Lake George - Planning for the Future**, the LGPC financed the preparation of stormwater management studies, which identified basic stormwater control issues in communities throughout the watershed. Building on this initial effort, the Conference places a major focus on the design and construction of stream corridor projects to better manage runoff.

Previous studies document stormwater runoff is also a significant contributor of sediments and contaminants in the Lake. These studies include decades of research and analysis by the Darrin Fresh Water Institute, the Fund for Lake George, the Lake George Association, and numerous studies commissioned by the Department of Environmental Conservation. **Lake George-Planning for the Future** recognizes that progress has been made by State and local government, homeowners, businesses, and non-governmental organizations to better manage stormwater runoff. Activities underway include strengthening development controls, introducing improved practices and procedures for road maintenance, and designing and constructing capital projects.



B) DETAILED IMPLEMENTATION STATUS

1- Stream Corridor and Stormwater Management



Stormwater collection equipment being installed along West Brook Road

Lake George - Planning for the Future recommended the following priority actions to meet the challenges presented by untreated stormwater runoff and stream corridor instability:

A) Initiate construction of the following previously designed capital projects:

Five stormwater management projects, located in the Towns of Lake George, Bolton, Hague, and the Village of Lake George, respectively.

Five stream corridor management projects located in the Towns of Queensbury, Lake George, Bolton, Hague and Dresden, respectively.

B) Re-institute water quality monitoring at significant stormwater outfalls.

To better manage stormwater runoff from developed areas and stream corridors, the following projects, described for each major tributary stream drainage basin, have been accomplished:

West Brook Drainage Basin

Location: Town of Lake George

Area: 5,444 Acres, 8.71 square miles

495 Tax Parcels, 169 single family, year-round residences

With a surface area of 5,444 acres, the West Brook drainage basin is one of the largest in the watershed. The mountainous areas characterizing this stream basin are used for logging, mining, and a variety of outdoor recreational activities, including horseback riding, snowmobiling, hiking, snowshoeing, Nordic skiing, sledding, and more.

Commercial and residential development in its upper reaches are clustered along NYS Route 9N. Nearer the Lake, more intensive urban uses predominate, such as commercial and

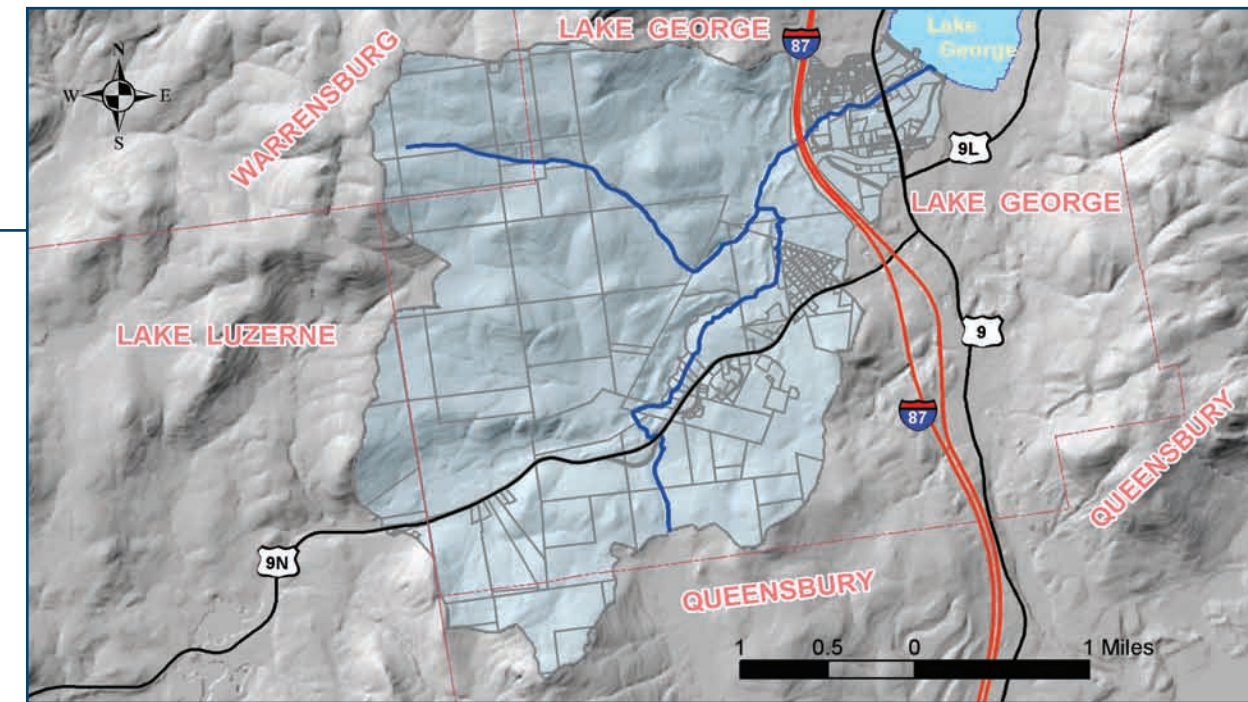
residential uses, paved streets, sidewalks, and parking lots. Most of the West Brook drainage basin lies in the Town and Village of Lake George, with some of the upper areas situated in the Town of Luzerne.

The 1980-83 urban runoff study of Lake George, conducted by the Department of Environmental Conservation, estimated the annual total sediment load to the Lake from West Brook at 270 tons. The NYS Route 9 corridor comprises the largest impervious area in this drainage basin east of Interstate 87.

The following initiatives were undertaken to improve Lake water quality within the West Brook drainage basin:

- **Eight stormwater collection and treatment projects** have been completed at commercial establishments along Route 9, north of Exit 21 of Interstate 87. These projects effectively eliminated direct discharge of untreated stormwater into the Lake. The projects, totaling \$450,000, were installed at: Super 8 Motel, Nice N Easy, The Lake George Bowl, Holiday Inn of Lake George, Holly Tree Motel, Harry's (Fast Food), Thomson's Garage, and sites along Birch Avenue. Warren County Soil and Water Conservation District managed the projects, which were financed through property owner contributions, and \$249,000 in grants from the Environmental Protection Fund.

- **A stormwater collection and treatment project** in the vicinity of Fort William Henry, along NYS Route 9, was completed by the Village of Lake George and managed by the Warren County Soil and Water Conservation District. As a result, a previously untreated discharge of stormwater was eliminated. The project involved



West Brook Drainage Basin Location Map

identified several upstream project locations to further decrease sediments entering the Lake. Since 1994, two sites, known as Gage Brook Reservoir and Ore Bed Reservoir, have been periodically cleaned of sediment as part of this initiative. These projects were completed by the Warren County Soil and Water Conservation District and the Village and Town of Lake George.

- **Plans were completed** to collect and treat 100 percent of the stormwater runoff generated from Lake George Village's municipal parking lot along Beach Road. Construction is scheduled for completion in the Fall of 2006. The project involves the design and installation of subsurface, shallow-profile infiltrators and the use of phosphorous absorbing media to remove sedimentation, grease, oils, and nutrients that are deposited on this heavily used public facility. This project, managed by the Warren County Soil and Water Conservation District, will include matching technical and financial support from the Village and Town of Lake George and the Lake George Waterkeeper. Direct financial support, in the amount of \$90,000, will be provided by grants from the EPF LWRP and the U.S. Army Corps of Engineers (through the Lake Champlain Basin Program).

installation of state-of-the-art technology, including the use of Stormceptor® (centrifugal separation) treatment units and the innovative use of subsurface flow dispersion vessels. Total project cost was approximately \$300,000. Completion of this project was financed through a \$116,000 grant from the Department of Environmental Conservation and a \$30,000 grant from the Department of State through the EPF LWRP. Local matching funds were provided by the Lake George Association (\$38,000) and in-kind services were provided by the Village of Lake George and Warren County.

- **Project designs are being prepared for improvements** to collect untreated stormwater discharges throughout the NYS Route 9 right-of-way and the West Brook drainage basin. The project components include: removal of sediments and nutrients from stormwater flows by routing them through a series of sedimentation basins; nutrient removal in a constructed wetland; rehabilitation of in-stream sedimentation ponds; acquisition of a key 1,100

acre undeveloped upland tract; and strengthening local development controls. It is anticipated that this project will collect and treat runoff from the largest single nonpoint source of sediments and associated chemical contaminants within the Lake's southern basin. The current project builds on the Fort George Stormwater Management and Wetlands Restoration Project, which proposed collection and treatment of stormwater runoff in a narrowly defined corridor around NYS Route 9. The current proposed project greatly increases the scope of the previous initiative and involves a broad representation of Conference members and community partners. This project is being developed with state-of-the-art technology to deal with a major stormwater challenge to the Lake.

- **Additional projects were advanced elsewhere** in the West Brook drainage basin to lessen the impact of stormwater runoff within the southern portion of the watershed. Long term monitoring of West Brook identified increasing sediment loads in the stream. The Lake George Association and the Warren County Soil and Water Conservation District

B) DETAILED IMPLEMENTATION STATUS

1- Stream Corridor and Stormwater Management

English Brook Drainage Basin

Location: Town of Lake George

Area: 5,195 Acres, 8.13 square miles

390 Tax Parcels, 180 single family, year-round residences

The drainage basin of English Brook encompasses 8.13 square miles, or 5,195 acres, within the Town of Lake George along the southwest portion of the Lake. The upper reaches of the basin, west of Interstate 87, are forested and are used periodically for logging. There is evidence of recreational use by motorized vehicles, such as All Terrain Vehicles, snowmobiles and mountain bikes, in the basin. East of Interstate 87, the stream borders the north side of Lake George Village and flows through a densely developed area with commercial and residential uses, paved streets, and parking lots. The stream flows approximately five miles in a general southeast direction to its mouth at Lake George.

English Brook is classified by New York State as Class AA-Special Fresh Surface Waters, indicating its best uses as a source of water supply for drinking, culinary or food processing purposes (with disinfection), and primary and secondary contact recreation and fishing. Class AA-Special Waters are also deemed suitable for fish propagation and survival.

Since 1996, English Brook has been included on the Priority Water Bodies List (PWL) by the Department of Environmental Conservation, in accordance with requirements of the federal Clean Water Act. The PWL identifies surface waters determined, through State and public input, to have their uses precluded, impaired, stressed, or threatened. Fish propagation is identified as the primary use impairment, and silt and sediment from road sand and other sources are identified as primary pollutants.



Location Map: English Brook Drainage Basin

The following initiatives are underway or have been completed within the English Brook drainage basin to protect and improve water quality:

- The Lake George Association is working with the Town of Lake George** to install stormwater collection and treatment facilities along Town roads to minimize the amount of sediment and debris entering the Lake. The sediment adds to the large delta which has formed at the shoreline. This project is being financed through a \$40,000 grant from the EPF LWRP, together with funds and in-kind services from the Lake George Association and the Town of Lake George.

- The Lake George Association**, in collaboration with the Village of Lake George and volunteers, completed the Lake Avenue Beach Stormwater Improvement Project. This project collects previously untreated stormwater runoff from a large area, including Interstate 87, NYS Routes 9 and 9N, and all of Lake Avenue. The project included the installation of a state-of-the-art treatment system to collect and treat road sediments, oil, and grease. The project also included construction of an interpretive walkway with signage and native plants. Prior to these improvements, the site was closed for public use due to high coliform counts and stormwater-induced damage. It is now



Lake Avenue Stormwater Improvement Project

actively used as a car-top boat and kayak launch site. The project was a collaborative effort of many Conference members. The total project cost was over \$400,000 and was supported by contributions of \$73,320 from the Lake George Association and a \$50,000 grant from the EPF LWRP. These financial resources were supplemented by in-kind services provided by the Saratoga-Washington-Warren-Hamilton-Essex Board of Cooperative Educational Services and other local community groups.

- The Lake George Association and the Warren County Soil and Water Conservation District** worked with the Town of Lake George to maintain and clean out Hubbell Pond as a means to reduce erosion and sedimentation entering the Lake from English Brook. To date, over \$65,000 has been contributed by the Lake George Association and the Warren County Soil and Water Conservation District, in addition to in-kind services provided by the Town's Highway Department.

- In 2004, a stream reconstruction project was undertaken** along a tributary to English Brook. The project involved the design and installation of over 350 feet of new stream channel above and below Bradley Street in the Town of Lake George. This project was undertaken by the Village and Town of Lake George and the Warren County Soil and Water Conservation District.

Prospect Mountain Brook Drainage Basin

The Prospect Mountain Brook drainage basin is small but important. With the exception of Prospect Mountain highway and park, operated by the Department of Environmental Conservation, and Interstate 87, the upper reaches of the basin are primarily forested. The lower portions are more densely developed, including motels, restaurants, apartment complexes, and single-family homes. Of the many stormwater outfalls located in the Village, two in this drainage basin have been monitored since 1980 by the Department of Environmental Conservation through a federally funded study. One is near the Shoreline Marina, in the Village of Lake George, often called the Sheriff's Dock; the other is located a mile to the north near the Marine Village Motel. The flows at both contain large amounts of sediment, debris, contaminants,

and nutrients that have degraded the shoreline and fish and wildlife habitat. A dense growth of Eurasian watermilfoil also exists along the shoreline between the two outfalls and beyond.

The following initiatives have been undertaken to improve water quality within the Prospect Mountain Brook drainage basin:

- Working together, Lake George Village and the Lake George Association** prepared an engineering study to design solutions at six specific sites in need of improved stormwater management. At the Sheriff's Dock, a Vortechics Corporation structure was installed to separate and settle sediment before the stormwater reached the Lake. This project was funded with an EPF LWRP grant and matching funds from the Lake George Association. Additional improvements, including



Prospect Mountain Brook Drainage Basin



Vortechics unit being installed

B) DETAILED IMPLEMENTATION STATUS

1- Stream Corridor and Stormwater Management



View of the Narrows looking south. The Narrows effectively separate the southern basin from the northern part of Lake George.

installation of infiltration catchments and erosion controls, were designed to address erosion near the Village public works facility. Implementation of the recommended improvements is estimated at \$1.25 million.

- **The Lake George Association completed conceptual and preliminary engineering plans** for the collection and treatment of stormwater that currently discharges into the Lake in the vicinity of the Sheriff's Dock culvert. Once completed, this project will treat huge volumes of currently untreated stormwater discharge. Engineering plans were

completed with a \$50,000 EPF LWRP grant and matched by in-kind services from the Lake George Association.

- **The Town and Village of Lake George completed stabilization improvements** along 200 feet of stream bank in the vicinity of the Villager Motel to reduce sedimentation entering the Lake. This project was managed by the Warren County Soil and Water Conservation District, and financed, in part, through a \$2,000 EPF LWRP grant.

Finkle Brook Drainage Basin

Location: Town of Bolton

Area: 2,707 Acres, 4.24 square miles

279 Tax Parcels, 138 single family, year-round residences

The Finkle Brook drainage basin encompasses approximately 2,700 acres, or four square miles, on the western side of Lake George within the Town of Bolton. While only one percent of this area is covered by impervious surfaces, roads adjacent to the stream are a source of sedimentation from winter road de-icing activities.

Development within this drainage basin consists largely of residential uses, with the highest densities concentrated in the hamlet of Bolton Landing. Approximately 65 percent of the drainage basin is forested, and the upland portions include areas designated by the Adirondack Park Agency for low intensity use. Significant stream bank erosion is occurring from natural causes in the upper portions of the basin.

Finkle Brook enters Lake George east of NYS Route 9N, where a delta has rapidly expanded over the past 10 years. As a result, residents and the Darrin Fresh Water Institute are experiencing difficulty utilizing their docks in increasingly shallow water. The accumulating sediment is also impeding upstream migration of fish, such as trout and smelt, and provides an ideal breeding ground for Eurasian watermilfoil.

The following initiatives have been undertaken to improve Lake water quality within the Finkle Brook drainage basin:

- **The stormwater improvements and stream corridor enhancements** within the Finkle Brook drainage basin represent a successful collaborative effort over several years between numerous agencies and organizations. Dry

wells, catch basins, sediment traps, and vegetative and rock lined ditches were installed to collect and properly channel stormwater flows. Erosion has been minimized by stabilizing streambanks and widening channels to allow for greater flow. The projects were spearheaded by the Lake George Association, with technical assistance from the Warren County Soil and Water Conservation District and the Towns of Bolton and Lake George. The improvements were financed through a \$100,000 EPF LWRP grant, with local match contributed by the Lake George Association, the Town of Bolton, and the Warren County Soil and Water Conservation District.

- **To reduce sedimentation from Finkle Brook**, a catchment basin in the vicinity of Woodshire Estates was rehabilitated. The project also involved pond excavation and the reinforcement of the overflow channel to decrease the sediment loading contributing to delta formation. This project was financed through a \$20,000 grant from the EPF LWRP, with local match provided by the Lake George Association, the Warren County Soil and Water Conservation District, and the Town of Bolton. Technical assistance involving project design was provided by the Lake George Waterkeeper.

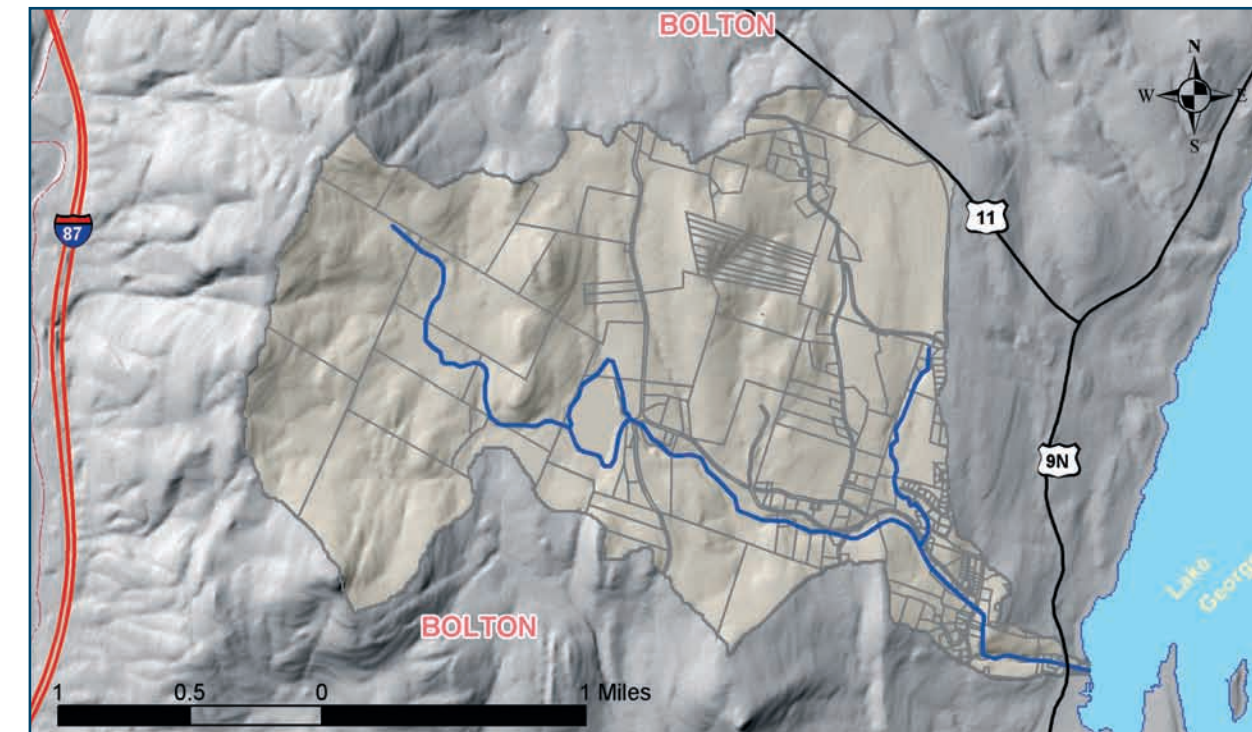
- **The Lake George Association worked with the Town of Bolton** to identify, design, and construct stormwater management improvements along the Bixby Beach access road. Construction of the improvements was financed through a \$30,000 grant from the EPF LWRP, matched by the Lake George Association and in-kind services from the Town of Bolton.

- **Several locations within Pioneer Village (Town of Bolton)** were identified for actions to improve and/or eliminate stormwater runoff problems along various roads. The Lake George Association and the Town designed and installed numerous improvements to better manage stormwater runoff and reduce sedimentation entering the Lake. This project was financed through a \$40,000 grant from the EPF LWRP, and matched by the Lake George Association.

- **The Artist Falls Pond was created many years ago when a dam was constructed west of NYS Route 9N.** Artists and picnickers frequently visited the site until sediment filled the pond. Led by the Lake George Association and the Warren County Stormwater Quality Strategy Committee, project plans were prepared for installation of an in-stream sedimentation basin intended to collect up to 70 percent of the runoff sediment generated in this drainage basin. The pond was last excavated in 2004, when over 40 cubic yards of accumulated sediments were removed. The project was managed by the Warren County Soil and Water Conservation District, together with assistance from the Town of Bolton Highway Department and the Lake George Association.



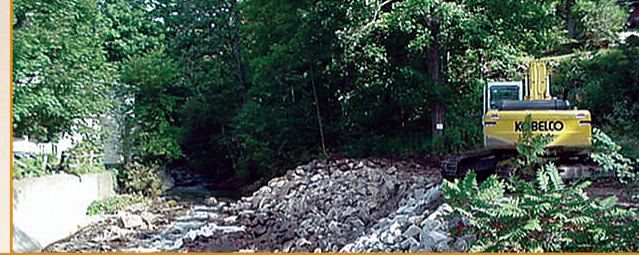
Stormwater improvements installed along roadway at Pioneer Village-Bolton



Finkle Brook Drainage Basin

B) DETAILED IMPLEMENTATION STATUS

1— Stream Corridor and Stormwater Management



Stream stabilization improvements being installed along Hague Brook ; project managed by Warren County Soil & Water District Staff, funded by NYSDEC EPF Grant.

Hague Brook Drainage Basin

Location: Town of Hague

Area: 6,837 Acres, 10.70 square miles

378 Tax Parcels, 137 single family, year-round residences

The Hague Brook drainage basin encompasses approximately 11 square miles on the western side of Lake George in the Town of Hague. Development includes low density residential uses within the upland area, with denser development concentrated along the shoreline in the hamlet of Hague. Impervious surfaces cover less than one percent of this drainage basin. The headwaters of Hague Brook originate at the summit of Boston Mountain, approximately 2,200 feet above mean sea level. Hague Brook, a five mile long stream, is one of the major tributaries of Lake George and is characterized by steep slopes, fast flowing currents, and high-volume flows following rain events.

A delta has formed at its confluence and is considered one of the largest and most rapidly expanding in the whole watershed.

The following initiatives have been undertaken to improve water quality within this drainage basin:

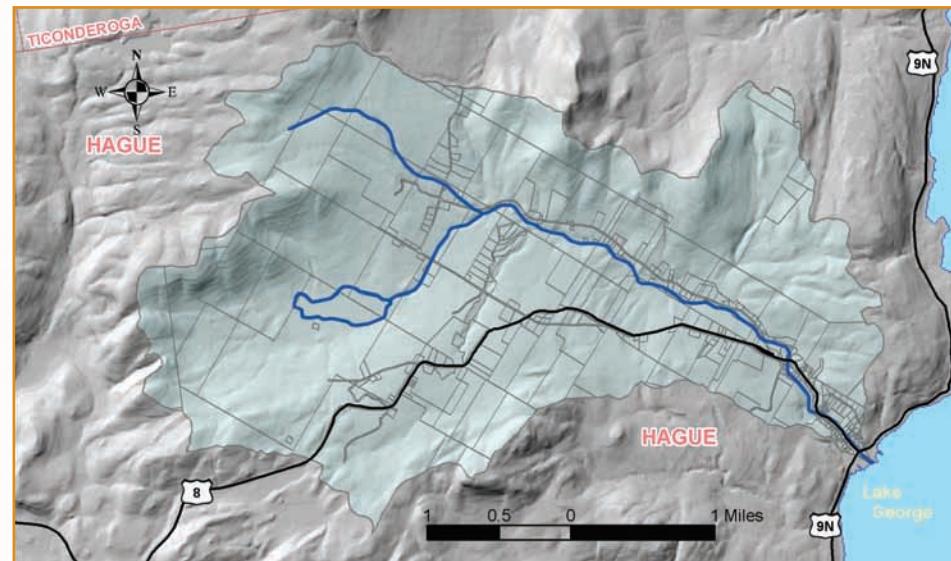
- **The growth of the ever-expanding shoreline delta** has been documented over several decades. A study commissioned by the Town and managed by the Lake George Association concluded that sedimentation within this drainage basin originated from three principal sources: (1) stream bank erosion; (2) winter de-icing and traction materials applied to local roads; and (3) soil loss from three major stream bank erosion failures. The study was financed through a \$30,000 grant from the EPF LWRP, with matching funds provided by the Lake George Association. As a result of the study, a

comprehensive stream corridor plan and detailed project designs were prepared to address these issues.

- **An integral part of the stream corridor plan was the replacement of the Route 8 bridge**, which was undertaken by the Department of Transportation. The project incorporated several erosion control techniques to manage highway runoff, including enlargement of a sediment trap, installation of a raised shoulder to direct runoff away from the creek to a re-graded area with improved filtration, scour protection improvements around the bridge, and vegetative plantings.

- **An Environmental Protection Fund Water Quality grant of \$361,500** from the Department of Environmental Conservation was awarded to the Town for implementation of several other improvements identified in the stream corridor plan. This effort exemplifies the team concept

advocated by the Conference, involving partnerships which provide engineering, soil science, stream rehabilitation, and project management expertise. Specific components of this project include: stream bank stabilization measures within Hague Commons; stream restoration and stabilization along Overbrook Road; stabilization in areas previously characterized by extreme sloughing and bank failure; repair and replacement of 500 feet of retaining wall along the stream corridor within the hamlet; and repair and replacement of bridge abutments and retaining walls to prevent further stream bank erosion and to stabilize the bridge superstructure. The project is being managed by the Warren County Soil and Water Conservation District, with assistance from the Lake George Association, the Lake George Waterkeeper, the Town's Highway Department, and the Warren County Department of Public Works.



Hague Brook Drainage Basin



Homer Point sunrise.

Foster Brook Drainage Basin

Location: Town of Dresden

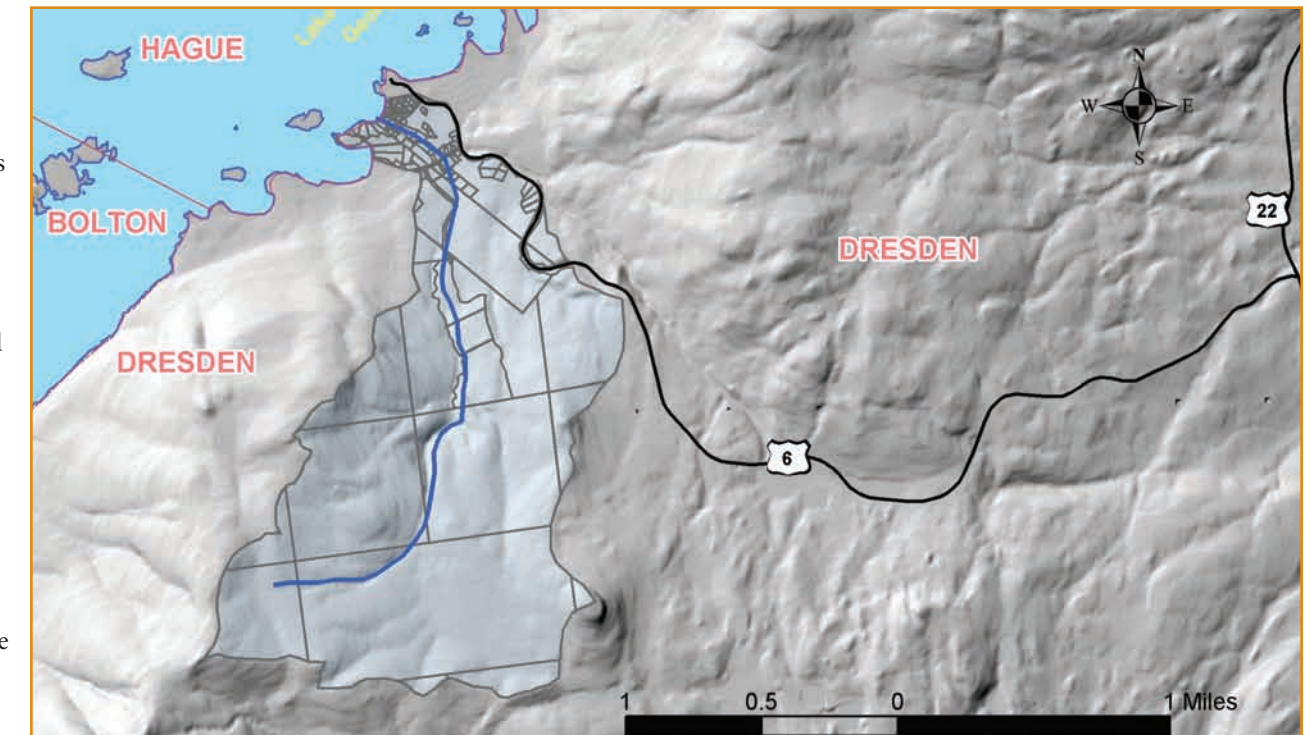
Area: 1,181 Acres, 1.63 square miles

137 Tax Parcels, 23 single family, year-round residences

The Foster Brook drainage basin encompasses 1.63 square miles on the eastern side of Lake George in the Town of Dresden. The main channel of Foster Brook is approximately two miles long, flowing in a northerly direction to Lake George. A sedimentation delta has been increasing in size for several years at its confluence. Eurasian watermilfoil adjacent to the delta and a decline in fish habitat have also been noted.

The following initiatives were undertaken to improve water quality within this drainage basin:

- **The Lake George Association, together with the Washington County Soil and Water Conservation District and the Town's Highway Department**, completed several projects to reduce sedimentation entering the Lake from this stream. These projects included the design and construction of stormwater management improvements, stream bank stabilization, and installation of in-stream sedimentation ponds and were financed with grants totaling \$117,000 from the EPF LWRP, with matching funds provided by the Lake George Association.



Foster Brook Drainage Basin

B) DETAILED IMPLEMENTATION STATUS

2- Basin-wide Water Quality Management and Resource Conservation Initiatives

Key to protecting the Lake is establishing a consensus on priority actions needed to improve water quality. The Conference identified both immediate and long-term solutions. As a result, several projects and initiatives were undertaken to benefit the entire watershed or several sub-watersheds. These initiatives span a variety of subject areas.

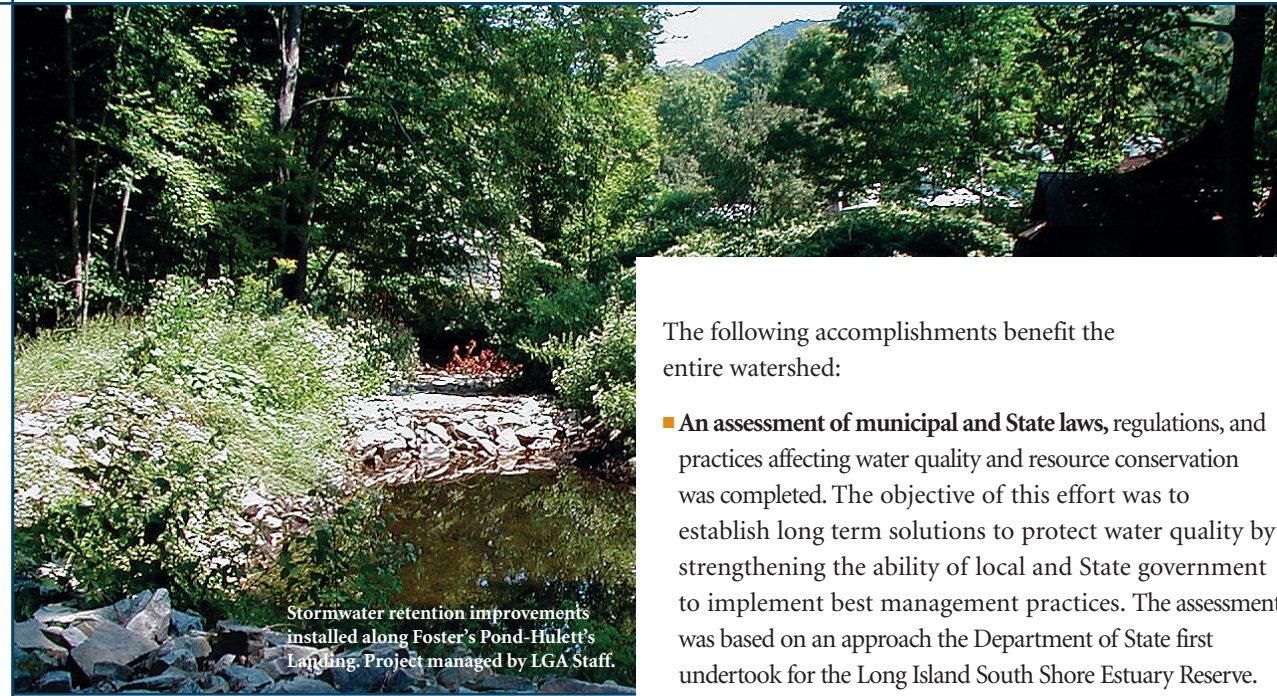
In addition to site-specific projects, **Lake George – Planning for the Future** identified the following priorities which are applicable to communities throughout the watershed:

A) Introduce and initiate the use of Best Management Practices to minimize nonpoint source pollution:

- State, county, and local highway departments to collaborate on minimizing the generation of pollution contribution by road maintenance operations;
- Provide training to municipalities on proper land use practices to minimize nonpoint source pollution;
- Explore the concept of forming septic maintenance districts as a means to improve efficiency and consistency of operation of on-site waste treatment systems; and
- Purchase conservation easements in sensitive wetlands areas.

B) Develop an interactive, Geographic Information System-based, nonpoint source pollution potential model to identify areas prone to the generation of nonpoint source pollution.

C) Provide an institutional mechanism to identify the next generation of water quality improvement projects.



D) Initiate the oversight of water quality management actions contained in the plan and devise a means of gauging success of plan implementation, including the following activities:

- Establish a baseline of water quality parameters against which to measure program effectiveness in protecting water quality;
- Re-institute water quality monitoring at significant stormwater outfalls;
- Conduct a basin-wide inventory and mapping of wetlands; and
- Prepare annual and/or seasonal nutrient budgets.

The following accomplishments benefit the entire watershed:

- **An assessment of municipal and State laws, regulations, and practices** affecting water quality and resource conservation was completed. The objective of this effort was to establish long term solutions to protect water quality by strengthening the ability of local and State government to implement best management practices. The assessment was based on an approach the Department of State first undertook for the Long Island South Shore Estuary Reserve. It examined how regulations and best management practices for controlling nonpoint sources of pollution are implemented by State and local governments within the watershed, and whether gaps and/or redundancies exist. The Albany Law School's Center for Local Government prepared the assessment and met with each municipality and involved State agency to examine the use of best management practices. This project was financed with a \$30,000 grant from the EPF LWRP.
- **A team of Geographic Information System (GIS) specialists** from Conference organizations, including the Department of State Division of Coastal Resources, constructed a GIS-based, static model of the watershed that incorporated satellite imagery, topographic information, soil information, and other data to depict the potential nonpoint source pollution all areas may



Warren County Soil & Water Conservation District deploys Hydroseeding Unit procured with EPF funds.

generate. The model was based upon a similar project undertaken by the Department of State for the Long Island South Shore Estuary Reserve, and provides a tool for better management of land use throughout the watershed by forecasting potential effects of development within the watershed. Land use planners and regulators can use the model to identify specific areas with a high potential for the generation of nonpoint pollution. The development of this management tool was financed by EPF LWRP grants totaling \$160,000. Matching funds in the amount of \$67,000 were contributed by the Lake George Association.

- **The Lake George Park Commission** initiated development of a stream corridor management plan and uplands development protection program.
- **The Fund for Lake George began a \$90,000 study** to review current regulations related to the protection of upland resources.
- **The Washington County Soil and Water Conservation District** assisted the Lake George Association, the LGPC, the Lake George Land Conservancy, as well as private landowners throughout the watershed, by developing erosion and sedimentation control plans for existing and planned development sites.
- **A program to stabilize roadside drainage swales** as part of routine maintenance of disturbed areas was initiated. The Warren County Soil and Water Conservation District serves as project manager for the scheduling and use of a state-of-the-art, mobile hydro-seeding unit. This equipment is used to quickly establish a vegetative cover on soil surfaces, particularly those recently excavated, to reduce erosion. In its first year of operation, District staff spread over 2,000 pounds of seed on 25 sites throughout the watershed. This initiative was made

possible by a \$40,000 grant from the EPF LWRP. This service is provided free of charge to all communities within the watershed as part of the ongoing campaign to reduce nonpoint source pollution. The Washington County Soil and Water Conservation District provides a similar service within Fort Ann, Putnam, and Dresden.

■ **Under the guidance of the Lake George Association**, local governments are encouraged to use a mobile hydro-vacuum unit to clean sediment catch basins throughout the watershed. The periodic cleaning of these facilities allows them to work more effectively to collect sediment that would otherwise enter the Lake. Use of this equipment is progressing rapidly, as municipalities incorporate it into their annual maintenance programs. Purchase of this equipment was financed through a \$55,000 grant from the EPF LWRP, with matching funds provided by the Lake George Association.

■ **A Conference task force is examining the potential effect of salt and sand** used for winter road maintenance on Lake water quality. All municipal highway departments and the Department of Transportation are participating in the project. The project is being financed through a grant from the EPF LWRP, with local match from all the watershed municipalities.

■ **A Final Generic Environmental Impact Statement** examining the potential impacts of removing seven major siltation deltas around the Lake was completed. The next step is to prepare detailed plans for removal of these deltas. The Lake George Park Commission served as lead agency and guided the environmental review process required under the State Environmental Quality Review Act (SEQRA). Preparation of the Environmental Impact Statement was financed through a \$50,000 grant from the EPF LWRP, and \$150,000 from the Lake George Association.

■ **Using a \$15,000 EPF LWRP grant**, an inventory of all stormwater improvements along the NYS Route 9 corridor, extending from the northern border of the Town of Lake George to the northern border of Bolton, was completed. The results of this inventory are available through the Geographic Information

System maintained by Conference members. An engineering assessment of these facilities will be used by municipal highway departments to improve maintenance practices.

■ **Both the Town of Bolton and Village of Lake George are completing Local Waterfront Revitalization Programs (LWRPs)** in partnership with the Department of State Division of Coastal Resources through \$30,000 in EPF LWRP grants. The LWRPs will serve as comprehensive management programs for each municipality's waterfront resources, addressing a variety of issues, such as appropriate shoreline uses, public access, and protection of resources. In addition, the Town of Bolton was awarded a \$50,000 EPF LWRP grant to re-write its zoning ordinance.

■ **The Department of Transportation engaged in the following activities to protect and preserve lake water quality:** cleaning and maintenance of sediment traps and basins to improve their ability to catch sedimentation from stormwater runoff; working in partnership with Soil and Water Conservation Districts on hydroseeding to re-establish proper vegetative growth as part of highway maintenance and improvement projects; partnering with the Adirondack Park Invasive Plant Program (APIPP) to remove Japanese Knotweed adjacent to Hague Brook as part of a bridge replacement project, as well as providing training on management and control of invasive plant species; and sponsoring an annual "Snow University" to train municipal highway maintenance staff in the use of best management practices to protect water resources.

B) DETAILED IMPLEMENTATION STATUS

3- Nuisance Species Management and Control



Zebra Mussel Colony

The control of non-native species throughout the watershed is a major concern, particularly Eurasian watermilfoil and adult Zebra mussels.

Colonies of Zebra mussels were first detected in December of 2000 adjacent to the Lake George Village shoreline. Since that time, over 20,000 mussels have been removed. To proliferate and grow to adult mussels, the Zebra mussel larvae require minimum levels of calcium. Although the calcium levels in the Lake are less than normally required, there is concern that the mussels will adapt to the Lake's environment. **Lake George - Planning for the Future** recommended the following priority actions to prevent, control and manage the infestation of invasive species:

Combat invasive species by taking action to:

- A) **Develop an enforceable invasive species control program;**
- B) **Expand the current Eurasian watermilfoil control program; and**
- C) **Develop an effective Zebra mussel control program.**

The following describes accomplishments related to nuisance species management:

- **In response to the non-native invasive species problem,** a Conference task force was established to coordinate resources and efforts for managing these threats to the Lake. Two EPF LWRP grants totaling \$45,000 were awarded to prepare a five-year Eurasian watermilfoil management plan and establish Zebra mussel boat wash stations to address the challenges presented by these two invasive species.
- **The Lake George Park Commission** continues to administer a comprehensive program of physical management and control of Eurasian watermilfoil beds in the Lake. The program involves hand and mechanical harvesting, and the use of benthic mats. Annual contributions totaling over \$200,000 from the Fund for Lake George support the program. To support this program, the LGPC obtains necessary permits; develops and administers program plans and contracts; evaluates the work; maintains and transports equipment; maintains records; and interacts with the public. The Darrin Fresh Water Institute continues to provide management and analytical services for this program. Most recently, a \$45,000 grant from the EPF-LWRP was awarded to expand this program.

The table to the right summarizes the continuing management efforts led by the Lake George Park Commission to control and manage the spread of Eurasian watermilfoil. *Data Source: Annual Report on Milfoil Management Activities, published by the Lake George Park Commission*

- **Hand and mechanical harvesting have proven to be cost-effective means** to prevent the expansion of Eurasian watermilfoil colonies into unmanageable beds. A Eurasian watermilfoil bed is defined as an area where Eurasian watermilfoil comprises at least 100 meters along the shoreline to the maximum depth of submersed rooted plants. These locations are mapped and re-checked each year by the Commission. As of 2003, 115 of the 146 (79%) identified sites were cleared of all Eurasian watermilfoil. To date, 22 sites exist with dense Eurasian watermilfoil beds, down from a high of 34 in 1999.
- **The Lake George Park Commission** served as lead agency in a comprehensive environmental review of the aquatic herbicide SONAR® (fluridone), as an additional control tool in the battle against Eurasian watermilfoil. The Lake George Association managed preparation of the draft and final environmental impact statements with financial support from an EPF LWRP grant.
- **Upon discovery of the Zebra mussel colony,** the Conference immediately established a task force to address the infestation. The colony of mussels adjacent to Lake George Village was subsequently eradicated through hand harvesting by volunteers from Bateaux Below, LLC and the Darrin Fresh Water Institute. Control of this and other invasive species will require continued diligence and attention. A \$30,000 EPF LWRP grant has been awarded to establish four boat wash stations around the Lake which will also provide public information on invasive species. The four wash stations will be sited at locations that maximize proximity to boat launch traffic and will be available to the public at no charge.

DENSITY OF MILFOIL GROWTH STATUS

YEAR	TOTAL MILFOIL SITES	BED	MODERATE	SCATTERED	NEW	CLEARED
1985	3	3	0	0	3	0
1986	22	9	0	13	19	0
1987	43	8	0	29	21	6
1988	55	8	0	35	12	12
1989	66	12	6	23	11	25
1990	76	13	8	19	10	36
1991	91	11	7	27	15	46
1992	97	16	4	40	6	37
1993	106	21	13	10	9	62
1994	N/A	N/A	N/A	N/A	N/A	N/A
1995	111	26	13	5	1	68
1996	118	25	11	9	7	73
1997	123	28	11	13	5	72
1998	127	31	7	6	4	83
1999	134	34	7	4	7	91
2000	136	28	8	3	2	94
2001	141	24	11	4	5	103
2002	144	23	7	4	3	110
2003	146	22	6	3	2	115
2004	148	20	8	2	2	112
2005	149	18	10	2	1	115

- **The Darrin Fresh Water Institute conducts bi-weekly water monitoring** throughout the Zebra mussel spawning season (June to October). In addition to monitoring the initial site of infestation adjacent to the Village of Lake George, sampling is undertaken at eleven other sites. Such diligence is showing results. No veligers (the pre-adult, larvae stage of Zebra mussels) were found in samples collected at any site during the 2003 and 2004 seasons.

- **A comprehensive effort has begun to educate residents,** property owners, businesses, and visitors about methods to detect and prevent further introduction of invasive species. As part of this effort, the LGPC established a program known as the "Cooperating Commercial Establishment", which enlists area businesses to serve as educational outlets in the fight to prevent the further introduction of invasive species into the watershed. This program has resulted in the inspection of over 3,500 watercraft annually.

B) DETAILED IMPLEMENTATION STATUS

4- Wastewater Management

Inadequate and failing on-site wastewater systems have long been identified as a source of nutrient loading and pollution affecting the Lake. As a result, Conference members have devoted substantial efforts to address this problem.

Currently, the Village of Lake George and the Towns of Bolton, Hague, and Ticonderoga operate municipal wastewater collection and treatment systems. The Town of Dresden maintains a community septic system for the Hulett's Landing area. A primary source of nutrients entering the Lake, however, continues to be inadequate or improperly maintained on-site wastewater systems.

To continue the advances made to manage wastewater treatment and disposal, **Lake George - Planning for the Future** recommended the following actions:

- A) **Develop and initiate a program of incentives for commercial establishments with substandard or marginal on-site individual systems to upgrade and/or modify systems to meet current standards of design and operation.**
- B) **Initiate development of wastewater regulations and commence the promulgation process to adopt such regulations as required under Environmental Conservation Law.**
- C) **Update the inventory of Private/Commercial/Institutional On-site Treatment Systems. Develop a schedule to inspect all such systems to ensure compliance with discharge regulations and/or State Pollutant Discharge Elimination System permit conditions.**



Mark Noga of SUNY Delhi speaks at LGA on the subject of Onsite Wastewater Treatment

D) **Develop education and training for local planning boards and enforcement officials to raise the level of understanding of the local authority and responsibility for individual waste treatment siting and operations monitoring.**

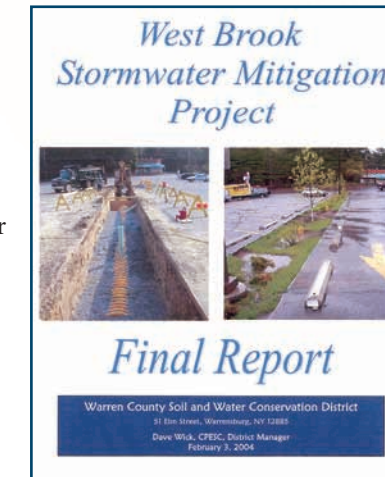
E) **Initiate a review of areas in the watershed not currently served by public waste collection and treatment facilities to confirm applicability of current management plans, as well as those other areas that should be considered for the use of alternate technologies and/or management practices.**

The following accomplishments implement recommendations related to wastewater management:

- **A \$30,000 EPF LWRP grant** was provided to the Towns of Ticonderoga and Putnam to address marginal or failing on-site wastewater treatment systems. The funds were used to prepare plans and an environmental impact assessment needed for the Black Point Road Sewer Extension District. The Conference Project Manager provides ongoing technical assistance. The efforts have resulted in the creation of sewer improvement districts in both towns.
- **The Town of Ticonderoga extended its municipal sewer system** along a three-quarter mile length of Baldwin Road to address pollution caused by numerous failing septic systems. As a result, a significant source of water pollution affecting the northern portion of the Lake has been eliminated. The project was financed by a \$20,000 EPF-LWRP grant for the preparation of project plans, and \$200,000 from the Town for installation of the sewer improvements.
- **The LGPC recently oversaw completion of a study** that examined the effectiveness of conventional on-site wastewater treatment systems as a means to remove chemical nutrients from the waste stream. A nutrient budget was compiled that estimated the sources and characteristics of nutrients entering the Lake. This investigation and analysis was financed with a \$50,000 grant from The Fund for Lake George, \$17,000 from the LGPC, and was managed by LGPC staff.

- **Using matching EPF LWRP funds**, the Conference organized and conducted a full day of training for building inspectors, installers, and designers of on-site wastewater treatment systems. The training focused on proper design, installation, and operation of conventional and alternative treatment systems.
- **The LGPC continues to provide on-call sample collection** and water quality analysis when notified of potential bacteriological contamination caused by the improper treatment of domestic wastewater.

- **The Warren County Department of Public Works** continues to oversee completion of public sewage collection and treatment projects within the Towns of Hague, Bolton, Lake George, and Queensbury. These projects are proceeding with federal and State grants totaling over \$30 million, with local match provided by the municipalities.
- **The Lake George Waterkeeper** provided technical assistance to the Town of Queensbury on the use of the alternative on-site wastewater disposal systems.



The Lake George Park Commission Study

View of Sweet Briar Island



B) DETAILED IMPLEMENTATION STATUS

5— Wetlands and Critical Watershed Areas Management and Protection



View of Lake George Steamboat traveling north from the village.



Lake George wetlands.

Wetlands perform an important function as “nature’s filter” for the Lake, removing impurities that would otherwise enter it. Conserving wetlands and open space not only protects them from future development, but minimizes further impacts on the Lake, protects drinking water, and bird nesting areas and other wildlife habitat.

Conference members, particularly the Lake George Land Conservancy (LGLC), have taken several actions to protect and preserve key open space and wetland areas around the Lake.

The LGLC continues to add to its total inventory of critical lands through programs to identify and purchase conservation easements within the watershed. Between January and November of 2003, the LGLC protected 2,650 acres of ecologically important lands. The acquired properties carried a fair market value of over \$2,283,000. The LGLC’s price to acquire them was \$1,368,000, resulting in a savings of over \$915,000. Specific properties acquired during this period, and forever protected, include:

- **The Thomas Mountain Preserve** encompasses 1,073 acres located in Bolton Landing. This parcel directly protects the watershed of Edgecomb Pond, the public water supply for the Town of Bolton. It also protects a major portion of the Finkle Brook watershed.
- **The Gull Bay Preserve**, located in the Town of Putnam, includes 472 acres of woodland hillside property above the Lake, which includes one of the largest Great Blue Heron nesting areas in New York State.
- **Hague Uplands**, located in the Town of Hague, is a forested upland tract which plays a significant role in the protection of the Lake. A 250 acre conservation easement was granted to the LGLC.

- **Butternut Brook Preserve**, a five acre parcel, includes a critical wetland area that serves as an important filter for impurities of waters eventually flowing into the Lake.
- **The Cat Mountain** property includes over 800 contiguous acres located in Bolton Landing. In conjunction with the adjacent 1,073 acre Thomas Mountain parcel, the combined Cat and Thomas Mountains Preserve contains nearly seven miles of trails and directly protects the watershed of Edgecomb Pond, the drinking water source for the Town of Bolton. It also protects a major portion of the Finkle Brook watershed.
- **The Adams/Lavin** parcel is adjacent to the Roger’s Rock property in the Town of Ticonderoga. It is 62 acres in size, with nearly 300 feet of shoreline, and was donated to the LGLC by Thomas Adams and Judith Lavin and their families. The property includes the Little Slide and contains an old graphite mine and important wildlife habitat.

- **The Hague Charitable Foundation** donated a 1.9 acre parcel with nearly 315 feet of shoreline to the LGLC. Located in the Town of Hague, the LGLC hopes to work collaboratively with the Town and its residents to develop an educational, working exhibit of indigenous flowers and shrubs.
- **The Northwest Bay Preserve** has been transferred to New York State for inclusion in the Adirondack Park’s forever wild lands. The 1,307 acre parcel in the Town of Bolton is adjacent to thousands of acres of Adirondack Forest Preserve lands and includes Pole Hill Pond, a pristine, spring-fed pond that drains into Northwest Bay.



The preservation of critical upland areas will preclude sediment deposits—like this one at English Brook—from occurring.

- **Loines Preserve**, a 42 acre parcel with 4,150 feet of shoreline in the Town of Bolton, was transferred to the LGLC from the Eastern New York Chapter of The Nature Conservancy. The property is adjacent to the 1,307 acre Northwest Bay Preserve, protected by the LGLC and recently transferred to New York State. The property is habitat for the endangered timber rattlesnake.
- **Wallace Parcel**, an 11.9 acre property in the Town of Queensbury. The LGLC has been gifted a conservation easement by property owners James Wallace and Amelie Wallace Porter. The parcel includes wetlands, forested areas, and a brook that flows to Lake George.

This program of land acquisition is supported by the LGLC’s internal generation of financial resources, as well as direct support and collaboration by the Fund for Lake George and other benefactors.

In addition, the Adirondack Park Agency and the Department of Environmental Conservation continue to jointly identify and map wetlands, as well as advance protection programs. The LGLC continues to pursue an expanding program of identification and mapping of nuisance terrestrial species in wetland areas. The LGLC then harvests nuisance species as a means of minimizing their impact on critical wetland areas.

B) DETAILED IMPLEMENTATION STATUS

6- Education, Public Participation and Stewardship Promotion



Stewart Brook, Huletts Landing.

The next generation of stewards is already in training, as students, residents, and visitors to the Lake are educated on their role in preserving and protecting natural resources. By fostering a feeling of ownership and responsibility for the Lake, as well as ways to actively participate in its protection, the Conference believes the Lake's future will be in good hands.

Lake George - Planning for the Future recommended the following actions to promote stewardship:

A) Establish the Lake George Watershed Conference as a medium for increased communication and cooperation among watershed constituencies.

B) Conduct an Annual Water Quality Management and Natural Resources Issues Forum in the interest of reviewing plan implementation progress and the fostering of public participation.

Education, participation, and stewardship is about communicating a need and enlisting the help of the public. An informed and involved public is crucial for implementation of **Lake George - Planning for the Future**. Activities undertaken to implement plan recommendations include:

- **The Conference's Education and Public Participation Committee** was created to enhance education and public involvement to increase stewardship of the Lake.

- **Using \$7,500 in grants from the EPF LWRP**, the Public Participation and Education Committee developed and produced an educational television talk show, entitled "Eye on Lake George" broadcast from Glens Falls on WNCE, TV-8. The Committee produced and aired more than 120 episodes of this educational and informative series on how to protect and preserve water quality and natural resources through prudent stewardship activities.

- **The Lake George Association continues to produce** and conduct its award-winning educational program, "Floating Classroom", in all local public middle schools in the watershed. This program is supplemented in the field by numerous stream studies and stream corridor clean-up days. In the most recent program year, over 1,300 students participated in the "Floating Classroom" program, learning about the Lake, its delicate natural balance, and the need for individuals to seek out opportunities to serve as personal stewards of this great resource. The annual program costs incurred by the Lake George Association to operate this program total approximately \$35,000, and has been financed, in part, with grants from the EPF LWRP. This effort is on-going, since new information is added as science and technology advance, and as people's informational needs and priorities change.

- **The Lake George Association** continues to produce "Our Lake Book", a publication which provides information about the Lake's ecology and lake-friendly tips for property owners, as well as safe-boating practices. A new article, "Birds in the Basin", was published in 2004. Articles on planting natural buffers to stabilize shorelines

and plant species native to the Adirondacks were previously completed. Costs to date for this publication have been \$63,000, and included \$35,000 provided by private grants to the Lake George Association and \$28,000 in grants from the EPF LWRP.

- **The Lake George Association also conducts the "Lake Saver Program"**. This program offers direct outreach to homeowners, including home visits and recommendations related to onsite runoff and planting for shoreline stabilization. Recently, the program was expanded to include the "Lake Liaison" networking effort, designed to foster the exchange of information with neighborhood and community organizations. Other outreach projects undertaken by the Lake George Association include working with members of the Lake George Fishing Alliance, organizers of the Southern Adirondack Lake Management Conference, the Conference's Annual Forum, the "Eye on Lake George" series broadcast on WNCE TV-8, storm drain filter demonstrations, and more. Over the past ten years, costs for these "Lake Saver" Programs have totaled over \$164,000, with \$145,000 provided by private grants and contributions to the Lake George Association, and \$19,000 from EPF LWRP grants.

- **The Conference conducts an annual waterfest** to educate the public on stewardship of local water resources. Principal organizers of this event include the Lake Champlain-Lake George Regional Planning Board, Cornell Cooperative Extension of Warren County, the Warren and Washington County Soil and Water Conservation Districts, and the Lake George Association.

- **Cornell Cooperative Extension of Warren County** organizes and produces an annual program, entitled "Environmental Education Field Days". The program gives area 6th grade students the chance to learn about soils, forest management, water quality, "Leave No Trace Camping", and resource conservation measures. During the 2003-04 school year alone, 495 sixth grade students and teachers from Warren County school districts participated in these Environmental Field Days and received instruction from: NYS Forest Rangers; Warren County Soil and Water Conservation District; Cornell Cooperative Extension; Department of Environmental Conservation Fish and Wildlife Technicians; Up Yonda Farms; Environmental Education Naturalists; the National Audubon Society; and the Adirondack Mountain Club.

- **Cornell Cooperative Extension of Warren County** provides educational programs to community groups and local governments on topics of importance to Lake water quality management, including: ground water and surface water contamination sources; best management practices regarding stormwater control and on-site waste treatment and disposal; sediment and erosion control; and landscaping and gardening to enhance water quality. Throughout the 2004 program year, water quality education was provided to more than 720 individuals.



Invertebrate study of Lake George tributaries conducted by LGA staff and community volunteers.

- **With grants provided through the EPF LWRP**, the Conference designed and maintains an interactive web site that covers all aspects of activities conducted by Conference members. The web site, www.lakegeorge2000.org, also provides active links to the member organizations.

- **The Conference holds an annual award program** that recognizes outstanding accomplishments in stewardship of water quality and resources. Awards are made in each of four categories: individual, commercial-private sector, municipal, and institutional.

- **A monthly public meeting of the Conference**, or its committees, is conducted to advance the stewardship goals and objectives of the Conference.

- **The Conference conducted two Annual Forums on Water Quality Management and Resource Conservation**, open to the public, which evaluated activities and programs advanced to protect and preserve the Lake. Issues of importance to all members are presented and discussed at the Forums.

- **The Department of Transportation** provides annual training to municipal public work forces on appropriate road de-icing and winter maintenance practices. Over

time, these efforts will have a significant impact on improving Lake water quality.

- **Pamphlets describing the goals, objectives, and programs** of the Conference were prepared and distributed to a large number of organizations and individuals.

- **In 2004, the New England Interstate Water Pollution Control Commission** held their annual meeting in Lake George Village. Conference members provided tours of the numerous water quality improvement projects undertaken throughout the watershed.

- **In 2003 and 2004**, Conference members organized and hosted two workshops for local contractors, engineering professionals, and regional code enforcement officers on "Erosion and Sediment Control-Best Management Practices."

- **The Lake George Waterkeeper** introduced the Leaf Pack Program to local students and teachers as a means to investigate the connection between stream health and that of the overall ecosystem. This program was supported by a \$5,000 grant from the Froehlich Foundation.

B) DETAILED IMPLEMENTATION STATUS

7– Water Quality Monitoring, Analysis and Testing

Much can be learned about the health of the Lake George watershed by going beneath the Lake’s surface to sample, monitor, and analyze the water. The data can then be used to track changes over time and create appropriate programs to address water quality issues.

Lake George – Planning for the Future identified the following recommendations to monitor water quality throughout the watershed:

- A) **Establish a baseline of water quality parameters against which to measure program effectiveness in protecting water quality.**
- B) **Re-institute water quality monitoring at significant stormwater outfalls.**
- C) **Conduct a basin-wide inventory and mapping of wetlands.**
- D) **Prepare annual/seasonal nutrient budgets.**

The following accomplishments implement these recommendations:

- **With financial support and sponsorship by the Fund for Lake George**, the Darrin Fresh Water Institute continues to conduct a water quality monitoring and assessment program. This program, now in its third decade, provides an unparalleled database, recording an array of water quality indices throughout the watershed. The efforts continue to identify and document sources of pollution and trends in water quality which allows the scientific community to document the trophic status of the Lake. Since 1985, the Darrin Fresh Water Institute, the LGPC, and the Fund for Lake George have worked in



Water quality testing



Looking northward towards “the Narrows”.

partnership to undertake a fecal coliform monitoring program.

- **With financial support from the Fund for Lake George and the Lake George Association**, the Department of Environmental Conservation continues to conduct a long standing in-stream water quality monitoring program. This important program provides ongoing documentation of the quality and quantity of stormwater runoff in selected tributaries to the Lake and impacts on water quality.
- **With financial support from the Fund for Lake George**, the LGPC oversaw the preparation of a Lake nutrient budget, creating and documenting long term levels of nutrients and trends to better forecast future water quality impacts.
- **Financially supported by the Fund for Lake George**, the Darrin Fresh Water Institute continues its Offshore Chemical Monitoring Program, begun in 1980. Collection of data on chemical constituents and measurements for light penetration, dissolved oxygen, and temperature are made at 12 sites throughout the Lake (eight mid-lake sites and four shallow water locations). Biweekly sample collections are made during the Spring

to characterize the rapid changes in chemical water quality occurring at that time of year. Summer and Fall sampling is undertaken on a monthly basis, as well as one under-the-ice sampling in February or March. The results of this sampling and analysis program are published yearly by the Darrin Fresh Water Institute. The chemical parameters analyzed are in the following table:

ANALYSES CONDUCTED FOR THE OFFSHORE CHEMICAL MONITORING PROGRAM

Ph	Molybdate Reactive Phosphorus
Specific Conductance	Total Soluble Phosphorus
Alkalinity (selected samples)	Total Phosphorus
Nitrate	Soluble Silica
Ammonia	Chlorophyll a
Total Nitrogen	Pheophytin
Chloride	Sodium
Sulfate	Calcium
	Magnesium

- **The Darrin Fresh Water Institute** also conducts an annual program of coliform monitoring, which focuses on several locations that have shown chronically high levels of coliform bacteria in the past. Monitoring is also conducted along the shoreline and in upland portions of the watershed by the LGPC to locate and remediate specific sources of bacterial pollution. In 2003, 153 samples were collected from 64 sites located throughout the watershed. Six sites were found to contain fecal coliform levels above the average level New York State considers acceptable for contact recreation (swimming and wading); four sites exceeded limits for contact recreation. None of these samples were from bathing beaches. Notable sites included the Veterans Park Beach Culvert, Lake Avenue Beach South Culvert, and King James Spring.

- **In 1997, the Fund for Lake George**, in conjunction with the Darrin Fresh Water Institute, established a water testing station at Northwest Bay Brook to characterize conditions within a relatively undeveloped sub-watershed. Northwest Bay Brook is the largest stream draining to Lake George and provides a substantial portion (8.4 billion gallons annually) of the total water input to the Lake. Less than five percent of this drainage basin

is developed. Because the area is undeveloped, results from Northwest Bay Brook are of critical importance in establishing pre-development levels of runoff that developed areas should try to meet.

- **In 2004, the Darrin Fresh Water Institute**, in conjunction with the Department of Environmental Conservation, the U.S. Geological Survey, and Middlebury College, initiated a preliminary investigation of Lake hydrodynamics. The purpose of this program was to design, implement, and analyze a set of continuous thermal observations in order to understand the hydrodynamics operating in the northern sector of the Lake. The work performed complements research funded by the Marine Research Corporation, located in Middlebury, Vermont.

B) DETAILED IMPLEMENTATION STATUS

7- Water Quality Monitoring and Analysis and Testing

■ **In early July 2003**, a large turbidity plume was observed at the far north end of the Lake in the area to the north of Black Point. The plume gradually dissipated during July and August. At first, a bloom of blue-green algae (cyanobacteria) was suspected of causing the plume, but detailed sampling by the Darrin Fresh Water Institute led to the conclusion that the loss of water clarity was a result of runoff containing inorganic clay. The soils in this portion of the watershed are high in clay content. The Darrin Fresh Water Institute and its partners - the Marine Research Corporation, Department of Environmental Conservation, and the U.S. Geological Survey - monitored the hydrology of the north end of the Lake during 2004 to better understand the conditions which contributed to this plume, and which may contribute to subsequent occurrences.



View from Plumb Point.

■ **As part of the Darrin Fresh Water Institute's ongoing commitment** to fully understand and document the ecosystem dynamics of Lake George, two graduate student research projects were initiated. The projects, funded by the Froehlich Foundation, are focused on understanding the physical and chemical changes Eurasian watermilfoil has on native littoral zones. One project will examine specific conditions that enhance both bed expansion and spread of Eurasian watermilfoil within the littoral zones. The second project will determine how Eurasian watermilfoil alters the chemistry of a littoral zone, and whether such changes lead to alterations in littoral food web structure or induce Eurasian watermilfoil bed expansion. Both projects are expected to provide scientific results that can be used to understand and mitigate the future impacts of Eurasian watermilfoil on the Lake's littoral zone resources.

■ **Research undertaken by the Darrin Fresh Water Institute** has disclosed an astonishing diversity of small phytoplankton in the Lake, including thousands of microscopic organisms that are key to the Lake's ecosystem. The first step in preserving this microscopic biodiversity is securing baseline information regarding the occurrence and abundance of these organisms at different locations in the Lake. This research has shed new light on the composition of freshwater systems, revealing astonishing eukaryotic diversity and finding previously unknown eukaryotes in the Lake.



Buttermilk Falls, north of Log Bay on the Eastern Shore

■ **In June 2004**, a solar powered autonomous underwater vehicle (SAUV), was launched to undertake a scientific mission in Lake George. The SAUV, one of the first to be built, was funded by the National Science Foundation. The goal of the mission was to collect real-time data regarding physical and chemical water properties around Dome Island. The SAUV is able to collect vast amounts of data that is incorporated into a 3-D visualization, which will be used to better understand Lake processes. Researchers at the Darrin Fresh Water Institute, Rensselaer Polytechnic Institute, and the Autonomous Undersea Systems Institute are participating in this project. The SAUV can operate to a depth of 500 meters. It is navigated by Geographic Positioning System equipment and can be deployed for weeks to months. In addition to gathering critical water quality information, the Lake George mission served as a testing ground for this advanced instrumentation prior to its launch in the Hudson River as part of the State's "Rivernet" project.

B) DETAILED IMPLEMENTATION STATUS

8- Coordinated Water Quality Initiatives

For water quality related problems, the LGPC provides "first response" activities and coordinates with municipal and State agencies to abate water quality impacts. The LGPC:

- **Investigates each high bacteria sample** identified under the Darrin Fresh Water Institute's water quality sampling program;
- **Operates a pollution hot-line** and investigates calls about suspected water quality problems;
- **Issues water quality advisories** and warnings to alert the public about threats to water quality;
- **Investigates erosion and sedimentation problems** and initiates corrective action;
- **Provides engineering assistance** to local governments on stormwater related issues; and
- **Reviews stormwater permit applications** and initiates enforcement actions for violations of the LGPC's Stormwater Management Program.



Installation of sedimentation vegetation by WCSWCD along Hague Brook

C) SUMMARY



Aerial view of Lake George, looking south

This Report provides a comprehensive status on progress made since **Lake George - Planning for the Future** was completed in 2001. The Conference is committed to continuing its journey and will provide future updates on its progress.

As the numerous accomplishments show, the Conference has come a long way in implementing plan recommendations. Much remains to be done to protect the Lake. The Conference has identified future priorities based on the accomplishments described in this report and new challenges confronting the Lake. By regularly evaluating what's been done and what remains to be done, the productive partnerships fostered by the Conference will effectively address the complex issues facing the Lake.

IV

FUTURE PRIORITIES

The identification of priorities to guide Lake George Watershed Conference activities over the next three years began with evaluating the status of the recommendations set forth in **Lake George - Planning for the Future**. Recommendations that have been implemented, and those which have not, were identified. A series of four facilitated meetings were held to discuss current and emerging issues affecting Lake water quality. The discussions were organized around topic areas contained in **Lake George - Planning for the Future**, and considered those recommendations yet to be fully implemented. The discussions were also guided by papers which articulated challenges and possible solutions. The Conference identified short term priorities for the next three years, organized around the following categories:

- A) STORMWATER MANAGEMENT
- B) STREAM CORRIDOR MANAGEMENT
- C) ROAD CORRIDOR MANAGEMENT
- D) LAND USE AND DEVELOPMENT
- E) EDUCATION
- F) INVASIVE SPECIES
- G) IMPACTS OF RECREATION
- H) WASTEWATER TREATMENT
- I) WETLANDS PROTECTION



Dawn from the Southern Basin looking north

The priority actions described below will serve to guide the collective direction of the Conference in protecting and improving the Lake's water quality over the next three year period. Such actions are described for each category, together with an estimated cost and the Conference member organization(s) anticipated to undertake or oversee the action.

A) STORMWATER MANAGEMENT

Improved management of stormwater runoff is one of the most important concerns affecting water quality. Stormwater runoff can result in streambank erosion and sedimentation entering the Lake, and can also transport other pollutants into the Lake. Contaminants contained in stormwater originating from developed areas are of particular concern, often containing phosphorous, nitrogen, bacteria, and heavy metals. Effective stormwater management also involves actions to reduce or eliminate the impacts of runoff through stronger local and State controls and enforcement measures.

Priorities

1. Increase monitoring of construction sites to ensure compliance with approved stormwater control plans, as well as maintenance of existing stormwater facilities.

Estimated cost:

Year 1	\$ 80,000
Year 2	\$ 90,000
Year 3	\$ 80,000
Total	\$250,000

Lead agencies: Municipalities; Lake George Park Commission; Department of Environmental Conservation; Soil and Water Conservation Districts.

2. Maintain a network of stormwater monitoring stations.

Estimated cost:

Year 1	\$ 42,000
Year 2	\$ 42,000
Year 3	\$ 41,000
Total	\$125,000

Lead agencies: Department of Environmental Conservation; Darrin Fresh Water Institute.

3. Establish an incentive program for private property owners to undertake stormwater management improvements.

Estimated cost:

Year 1	\$100,000
Year 2	\$200,000
Year 3	\$200,000
Total	\$500,000

Lead agency: Lake George Association

4. Prepare and implement final project plans for the West Brook Stormwater Management Project which includes: the removal of sediments and nutrients from West Brook stormwater flows by routing them through a series of sedimentation basins, followed by nutrient removal in a constructed wetland at the site of the former Gaslight Village; rehabilitation of in-stream sedimentation ponds; acquisition of a key 1,400 acre undeveloped upland tract; and strengthening local development controls. The project complements work previously completed to better manage runoff along the NYS Route 9 corridor and will serve as the final component for an initiative to treat runoff from what has been identified as the largest single nonpoint source of sediments and associated chemical contaminants within the Lake's southern basin.

Estimated cost:

Year 1	\$ 6,500,000
Year 2	\$ 2,750,000
Year 3	\$ 2,750,000
Total	\$12,000,000

Lead agencies: Village and Town of Lake George

5. Identify specific stormwater management projects annually, and advance such projects from design to construction.

Estimated cost:

Year 1	\$ 1,200,000
Year 2	\$ 1,200,000
Year 3	\$ 1,100,000
Total	\$3,500,000

Lead agencies: Municipalities; Soil and Water Conservation Districts; Lake George Association.

B) STREAM CORRIDOR MANAGEMENT

Approximately 115 tributary streams flow into the Lake. These streams represent a major source of sedimentation and nonpoint pollution. The Conference has been methodically progressing the design and construction of stream corridor projects to effectively manage runoff. Actions include the reduction or elimination of the impacts of runoff through stronger local and State controls and enforcement measures.

Priorities

1. Identify specific stream corridor projects annually, and advance such projects from design to construction.

Estimated cost:

Year 1	\$500,000
Year 2	\$500,000
Year 3	\$500,000
Total	\$1,500,000

Lead agencies: Municipalities; Soil and Water Conservation Districts; Lake George Association.

2. Develop a stream corridor management plan that includes:

- a. Identification and prioritization of stream corridors requiring remediation and/or protective measures.
- b. Concepts of natural stream design in the development of recommendations for stream corridor protection.
- c. Assistance to municipalities to incorporate stream corridor protection initiatives in land development/land use regulations.
- d. Education of the timber/silvaculture industry as to the benefits and importance of proper stream corridor protection.

Estimated cost:

Year 1	\$75,000
Year 2	\$75,000
Total	\$150,000

Lead agency: LGPC

C) ROAD CORRIDOR MANAGEMENT

Runoff from roadways is a major source of both chemical and sediment loadings to the Lake, involving grease, oils, and winter road de-icing materials.

Priorities

1. Incorporate best management practices for protecting water quality in highway maintenance activities, particularly the use of environmentally sensitive alternatives to traditional road salts for winter road de-icing.

Estimated cost:

Year 1	\$200,000
Year 2	\$200,000
Year 3	\$250,000
Total	\$650,000

Lead agencies: Department of Transportation; municipalities; and counties.

2. Initiate a program for the periodic inspection and maintenance of roadway stormwater collection and treatment facilities.

Estimated cost:

Year 1	\$80,000
Year 2	\$90,000
Year 3	\$80,000
Total	\$250,000

Lead agencies: Department of Transportation; municipalities.



View from Diamond Point north.

D) LAND USE AND DEVELOPMENT

Development pressures throughout the watershed have increased significantly over the years, which impact water quality. Establishing growth management plans and strengthening development controls and their enforcement are key to the long-term protection of Lake water quality.

Priorities

1. Implement recommendations contained in **Strengthening Local and State Development Controls and Practices to Protect Lake George Water Quality**, prepared by Albany Law School’s Center for Local Government for the Conference to strengthen the ability of municipalities and the State to implement best management practices for protecting water quality. Key recommendations involve the following:
 - a. *Revision of development controls and practices for individual municipalities and State agencies.*
 - b. *Improved enforcement of existing municipal and State development controls.*
 - c. *Ensure thorough and consistent reviews of proposed development plans by municipalities and State agencies, including consideration of the physical characteristics and constraints of the land, and potential impacts on water quality.*

- d. *Provision of planning services, on a circuit rider basis, to assist watershed municipalities in strengthening development controls, in reviewing development proposals, and assuring enforcement of approved project plans and existing development controls.*
- e. *Provision of training and support for local officials in the areas of planning and growth management.*
- f. *Implement tree clearance and stream corridor protection regulations.*

Estimated cost:

Year 1	\$250,000
Year 2	\$250,000
Year 3	\$250,000
Total	\$750,000

Lead agencies: Municipalities; Lake George Park Commission; Department of Environmental Conservation; Adirondack Park Agency; Department of State

2. Encourage use of the Geographic Information System nonpoint pollution potential model by municipalities and State agencies in the review of development proposals.

Estimated cost:

Year 1	\$75,000
Year 2	\$50,000
Total	\$125,000

Lead agencies: Department of State; Lake George Association; LGPC; The Fund for Lake George; Darrin Fresh Water Institute; Lake George Basin Conservancy

E) EDUCATION

There is a continual need for education and outreach efforts that continue to foster public ownership and responsibility for stewardship of the Lake.

Priorities

1. Continue the Conference’s public participation and education activities. As part of this effort, identify opportunities for the expansion and more effective delivery of such outreach efforts.

Estimated cost:

Year 1	\$25,000
Year 2	\$25,000
Year 3	\$25,000
Total	\$75,000

Lead agency: Public Participation Committee

2. Educate residents on best management practices for reducing runoff from private properties.

Estimated cost:

Year 1	\$25,000
Year 2	\$25,000
Year 3	\$25,000
Total	\$75,000

Lead agencies: Cornell Cooperative Extension; Lake George Association.

Removal of accumulated sediments in Town of Hague



F) INVASIVE SPECIES

Invasive species, including Eurasian watermilfoil, Zebra mussels, as well as numerous lesser known aquatic and terrestrial species, continue to affect and threaten the Lake. Addressing these threats involves proactive means to prevent their introduction and conditions that allow their proliferation, together with effective practices and programs to control established infestations.

Priorities

1. Prepare and implement an invasive species control plan for the Lake, which includes the following:
 - a. *Identification of terrestrial and aquatic invasive species, including location and extent of infestation;*
 - b. *Mechanisms for detection of infestations, as well as rapid response to such discoveries;*
 - c. *Continuous program of monitoring and analysis;*
 - d. *Restoration of native species and habitat that have been adversely affected by invasive species;*
 - e. *Continued program of public education and outreach;*
 - f. *Evaluation and support of the existing invasive species control programs; and*
 - g. *Identification of resources needed for plan implementation.*

Estimated cost:

Year 1	\$100,000
Year 2	\$125,000
Total	\$225,000

Lead agencies: Lake George Park Commission; Department of Environmental Conservation; Darrin Fresh Water Institute; The Fund for Lake George; Lake George Association; and Adirondack Park Agency.

2. Expand the Lake George Park Commission’s Eurasian watermilfoil management program.

Estimated cost:

Year 1	\$35,000
Year 2	\$40,000
Total	\$75,000

Lead agency: Lake George Park Commission

3. Establish and promote the use of public boat wash facilities at locations around the Lake.

Estimated cost:

Year 1	\$30,000
Year 2	\$30,000
Year 3	\$30,000
Total	\$90,000

Lead agency: Nuisance Species Task Force Members

4. Initiate a program to address the impact of terrestrial invasive species which focuses on road maintenance activities.

Estimated cost:

Year 1	\$25,000
Year 2	\$25,000
Year 3	\$25,000
Total	\$75,000

Lead agencies: Lake George Land Conservancy; Department of Transportation; Department of Environmental Conservation.



View from Homer Point

G) IMPACTS OF RECREATION

Lake George is a heavily used recreational resource. Land and water-based recreation activities can adversely impact Lake water quality, and approaches to managing these activities need to be identified.

Priority

1. Complete the study on water based recreation underway by the Lake George Park Commission.

Estimated cost:

Year 1	\$25,000
Total	\$25,000

Lead agency: Lake George Park Commission

H) WASTEWATER TREATMENT

Wastewater treatment has long been a challenge to Lake water quality. Increased development throughout the watershed, together with failing or improperly maintained on-site wastewater systems are particular threats to Lake water quality.

Priorities

1. Develop and maintain an inventory of all Private/ Commercial/ Institutional wastewater treatment systems within the watershed.

Estimated cost:

Year 1	\$37,500
Year 2	\$37,500
Total	\$75,000

Lead agencies: Department of Environmental Conservation; Department of Health; Lake George Park Commission.

2. Implement wastewater treatment and disposal regulations for the watershed.

Estimated cost:

Year 1	\$50,000
Year 2	\$200,000
Total	\$250,000

Lead agencies: Lake George Park Commission; Department of Health.

3. Identify watershed areas in need of public sewage service, including an analysis of the growth inducing impacts of such infrastructure.

Estimated cost:

Year 1	\$75,000
Year 2	\$75,000
Total	\$150,000

Lead agency: Department of Environmental Conservation

4. Establish a program for the inspection and periodic maintenance of on-site wastewater treatment systems.

Estimated cost:

Year 1	\$75,000
Year 2	\$150,000
Total	\$225,000

Lead agencies: Lake George Park Commission; Municipalities

5. Establish an incentive program to promote voluntary upgrade of on-site wastewater treatment systems.

Estimated cost:

Year 1 -	\$ 500,000
Year 2 -	\$1,000,000
Year 2 -	\$1,000,000
Total -	\$2,500,000

Lead agencies: Lake George Park Commission; Department of Environmental Conservation

I) WETLANDS PROTECTION

Wetlands play a critical role in protecting water quality by filtering pollutants that would otherwise enter the Lake. Their protection is key.

Priorities

1. Update the inventory and mapping of wetlands throughout the watershed, as the basis for a comprehensive wetlands management program.

Estimated cost:

Year 1	\$50,000
Year 2	\$100,000
Year 3	\$100,000
Total	\$250,000

Lead agencies: Adirondack Park Agency; Department of Environmental Conservation; Lake George Park Commission

2. Initiate preparation of a watershed wetlands management and protection plan.

Estimated cost:

Year 1	\$45,000
Year 2	\$45,000
Total	\$90,000

Lead agency: Lake George Park Commission

3. Develop nutrient budgets for wetlands within the watershed to understand their value in filtering pollutants which would otherwise enter the Lake.

Estimated cost:

Year 2	\$50,000
Total	\$50,000

Lead agencies: Darrin Fresh Water Institute; The Fund for Lake George

4. Identify trends and changes of wetlands within the watershed, including their size and environmental health.

Estimated cost:

Year 2	\$25,000
Year 3	\$50,000
Total	\$75,000

Lead agencies: Darrin Fresh Water Institute; The Fund for Lake George; Lake George Land Conservancy

CONCLUSIONS

Conference members agree that implementation of the priority projects over the next three years will effectively address the complex issues affecting the Lake. The following table summarizes the three year estimated costs for implementation of the priority projects. Current programs and funding streams will be used to fund activities.

PRIORITY ACTION SUBJECT AREA	SUMMARY BUDGET PROJECTION (M\$)			
	Year 1	Year 2	Year 3	Totals
A. Stormwater Management & Control	7.922	4.282	4.171	16.3750
B. Stream Corridor Management	0.5750	0.5750	0.5000	1.6500
C. Road Corridor Management	0.28	0.29	0.33	0.9000
D. Land Use & Development	0.325	0.3	0.25	0.8750
E. Education	0.05	0.05	0.05	0.1500
F. Invasive Species	0.19	0.22	0.055	0.4650
G. Impacts of Recreation	0.025			0.0250
H. Wastewater Treatment & Disposal Systems	0.7375	1.4625	1.000	3.2000
I. Wetlands Management & Protection	0.0950	0.2200	0.1500	.4650
Grand Totals(M\$)	10.1995	7.3995	6.506	24.1050

APPENDIX

MEMORANDUM OF AGREEMENT

Establishing the Lake George Watershed Conference

■ **This agreement, dated August 21, 2001 is between local governments** within the Lake George watershed, New York State agencies, and other cooperating parties with an interest in protection of the Lake George watershed, located in the counties of Warren, Essex, and Washington, New York.

WHEREAS, maintaining and enhancing the water quality of Lake George is essential for the economic well-being, environmental and public health, recreational opportunities, and quality of life for the local governments, residents, and visitors of the Lake George watershed;

WHEREAS, numerous cooperating parties, including the local governments around Lake George (“the lake”), various New York State agencies, and various not-for-profit organizations share the responsibilities, interests, and benefits of protecting the lake, which is a regional resource affected by the actions of these parties;

WHEREAS, the PARTIES to this agreement participated in the development of a long-term water quality protection plan for the lake, entitled “Lake George: Planning for the Future”;

WHEREAS, one of the recommendations of “Lake George: Planning for the Future” is to focus on developing effective solutions on a watershed-wide basis through establishment of an appropriate institutional mechanism;



LGA stream study utilizing LGA Staff and community volunteers

WHEREAS, the PARTIES hereto are desirous of continuing to work together on a cooperative basis in order to maintain communication among the PARTIES, establish a forum where Lake George watershed issues may be addressed, enhance intermunicipal and public-private efforts to manage water quality issues in the Lake George watershed, and begin to develop the ability to measure the success of, and provide oversight over, water quality management actions affecting Lake George.

NOW, THEREFORE, BE IT RESOLVED:

THAT the parties hereto agree to create and participate in the Lake George Watershed Conference (“the Conference”);

THAT the Conference shall be comprised of one designated representative of each signatory party and chaired by the New York State Secretary of State, or his/her designee;

THAT each party may, at its pleasure, change its representative to the Conference from time to time;

THAT the Conference will:

- **Advance activities to implement the water quality protection plan** for the lake, entitled “Lake George: Planning for the Future”;
- **Periodically establish, review, and update priority actions** for protecting the lake;
- **Identify funding priorities** for consideration by members when applying for grants and other financial assistance;
- **Periodically review activities** undertaken to protect the lake;
- **Facilitate coordination of member’s efforts**, sharing of information, and increased education of and among Conference members, to improve the quality of the Lake;
- **Approve an annual work plan and budget** for the Conference;


■ **Convene an annual forum for the purpose of reviewing past accomplishments** and discussing actions needed to further protection of the lake;


■ **Establish sub-committees, as needed;**


■ **Adopt bylaws and procedures** for the conduct of its business, as necessary.


THE PARTIES signing this AGREEMENT represent that they have been duly authorized to enter into this AGREEMENT, pursuant to their respective lawful authorities.


New York State Secretary of State



Commissioner, New York State Department of Environmental Conservation



Commissioner, New York State Department of Transportation



Chairman, Warren County Board of Supervisors

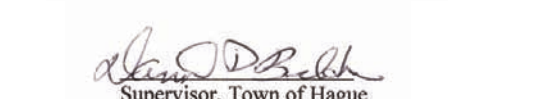

Chairman, Essex County Board of Supervisors



Chairman, Warren County Soil and Water Conservation District


Chairman, Washington County Soil and Water Conservation District


Executive Director, Cornell Cooperative Extension of Warren County


Supervisor, Town of Fort Ann


Supervisor, Town of Hague



Supervisor, Town of Lake George


MEMORANDUM OF AGREEMENT (CONT.)

Establishing the Lake George Watershed Conference


Mayor, Village of Lake George



Supervisor, Town of Putnam



Supervisor, Town of Queensbury



Supervisor, Town of Bolton




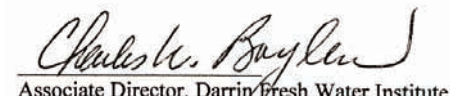
View of Paradise Bay


Supervisor, Town of Ticonderoga


Supervisor, Town of Dresden


Chairman, Adirondack Park Agency


Chairman, Lake George Park Commission


Associate Director, Darrin Fresh Water Institute


President, Lake George Association


Executive Director, Lake George Land Conservancy


Chairman, The Fund for Lake George



LAKE GEORGE
WATERSHED
CONFERENCE

Protection · Preservation · Participation

Lake George Watershed Conference
Lake George Village
Old Post Road
Lake George, NY 12845
www.lakegeorge2000.org

This report was prepared for the New York State Department of State with funds provided under Title 11 of the Environmental Protection Fund.

MISSION STATEMENT:

The mission of the Lake George Watershed Conference is to: provide a forum for the exchange of ideas; facilitate the coordination of acts and resources of member communities and institutions; and, to increase education of the general public on the challenges affecting the lake's water quality; all efforts collectively focused on protection, preservation, and stewardship of the lake's natural resources.

Deer's Leap from Juanita Island.





LAKE GEORGE
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