

Lake Champlain



Phosphorus Reduction Plan New York

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EXECUTIVE SUMMARY

Elevated phosphorus concentrations result in impacts and threats to public bathing, other recreational uses (swimming, fishing, boating) and aesthetics in Lake Champlain. To address these concerns, in 2002 the US Environmental Protection Agency (USEPA) approved [The Lake Champlain Phosphorus Total Maximum Daily Load \(TMDL\)](#) developed jointly by Vermont and New York. The TMDL established individual waste load allocations for each wastewater treatment facility in Vermont and New York and defined nonpoint source phosphorus load allocations for agricultural, developed, and forested land in each sub-watershed of the Lake. While there has been significant effort to address phosphorous sources in the New York portion of the Lake Champlain watershed, phosphorous levels in most areas continue to exceed water quality standards.

Using the adaptive management approach for watershed implementation programs, the New York State Department of Environmental Conservation (the Department) is working with local partners to identify and address key phosphorus reduction goals and objectives specific to NY through the development of a *Watershed Implementation Plan (WIP)*. The WIP will identify measures to be taken to reduce pollution levels in order to reach the “pollution budget” specified in the TMDL. Through the development of the WIP, the Department seeks a process that will provide a measure of quality control, ensure the most cost effective practices are implemented as soon as possible, and allow routine reevaluation of the adequacy of implementation efforts in achieving water quality standards. As a first step in this effort, the Department offers this Lake Champlain Phosphorus Reduction Plan as a status report for the NY program and a pathway for future development of the full WIP. This report identifies a number of phosphorous reduction opportunities that can be pursued in the short term as the overall WIP is being developed. Sound adaptive management, strong citizen participation and community education are all essential to the success of these initiatives.

LAKE CHAMPLAIN

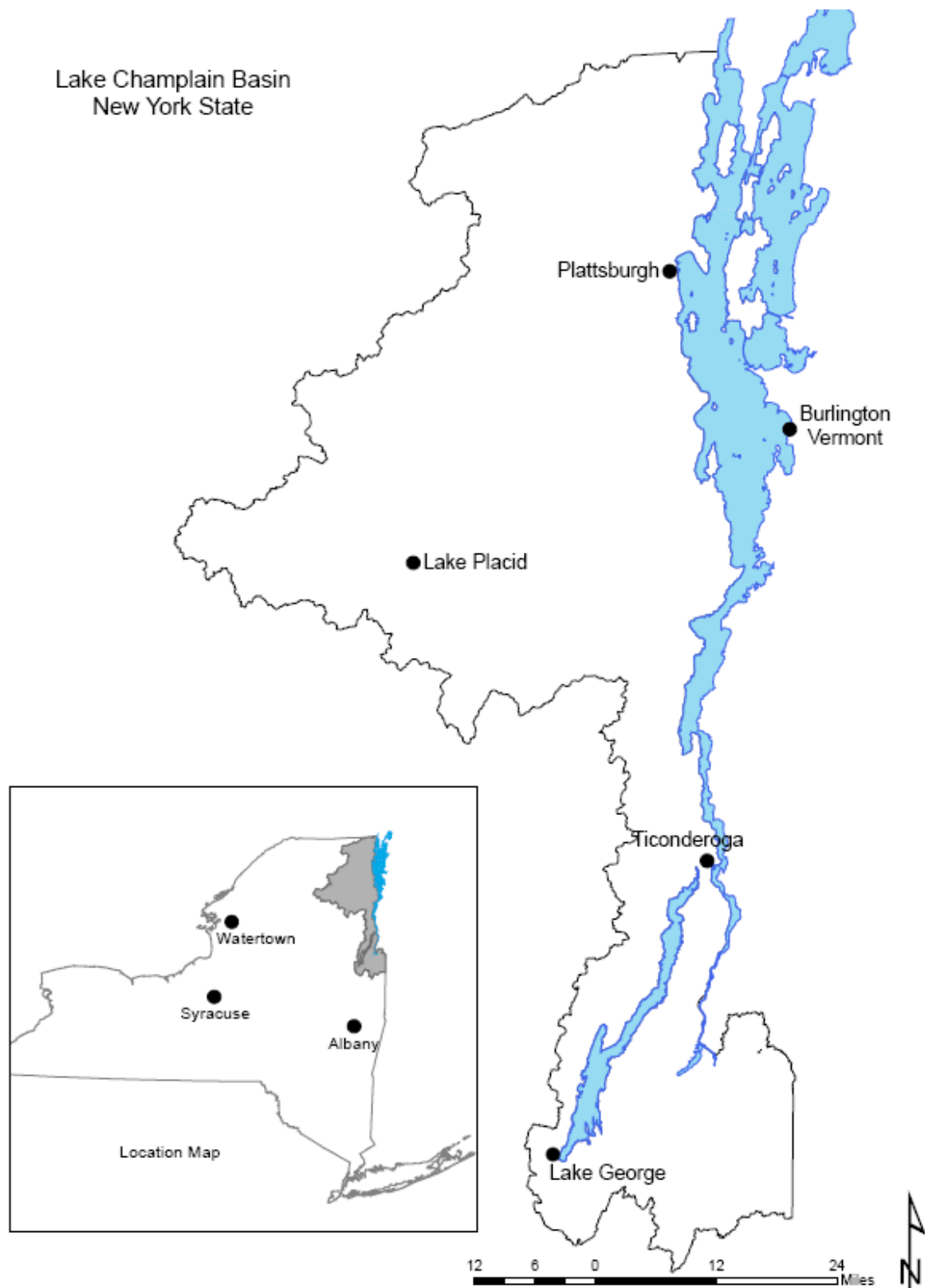
Background

Lake Champlain is one of the largest lakes in North America and is shared by the States of Vermont and New York and the Province of Quebec (Figure 1). The New York portion of the Lake Champlain watershed contains numerous smaller lakes including Lake George, Lake Placid, Upper Saranac Lake, Chazy Lake, Silver Lake, and Kushaqua Lake.

Lake Champlain is 120 miles long, with a surface area of 435 square miles and a maximum depth of 400 feet. The 8,234 square mile Lake Champlain Watershed spans from the High Peaks of the Adirondacks in northern New York to the Green Mountains of Vermont and north into the Richelieu Valley of Quebec. This equates to nearly half the land area of Vermont, as well as a significant portion of northeastern New York and southern Quebec.

The New York portion of the Watershed is a little over 3,000 square miles. The long, narrow and deep lake has its outlet at its northern end where it flows through the Richelieu River into Quebec and empties into the Saint Lawrence River. The watershed's natural diversity includes significant freshwater wetlands, complex aquatic ecosystems, world class fisheries and abundant wildlife habitat. These waterways are also vital corridors and migration routes for animals including large mammals, fish and water birds. Many rare and endangered species of plants and animals also find habitat in the conservation areas and working lands of the Lake and its Basin.

FIGURE 1 – Lake Champlain



The Lake Champlain Basin Program (LCBP) is a program to restore and protect [Lake Champlain](#) and its surrounding watershed or drainage basin for future generations.

Lake Champlain was designated a resource of national significance by the 1990 Lake Champlain Special Designation Act (Public Law 101-596) which was signed into law on November 5, 1990. The Act's goal was to bring together people with diverse interests in the Lake to create a comprehensive pollution prevention, control, and restoration plan for protecting the future of the Lake Champlain Basin. In 2002, the Act was reauthorized as the Daniel Patrick Moynihan Lake Champlain Basin Program Act of 2002.

The Lake Champlain Basin Program (LCBP) works in partnership with government agencies from New York, Vermont, and Québec, private organizations, local communities, and individuals to coordinate and fund efforts that benefit the Lake Champlain Basin's water quality, fisheries, wetlands, wildlife, recreation, and cultural resources. The LCBP is administered jointly by several agencies: [US Environmental Protection Agency \(Region 1 and Region 2\)](#), [New York State Department of Environmental Conservation](#), [Vermont Agency of Natural Resources](#), [Québec Ministry of Sustainable Development, Environment, Fauna and Parks](#), and [New England Interstate Water Pollution Control Commission](#). The roles of partner agencies and the process for coordination of the Lake Champlain Steering Committee are governed by the following memoranda of agreement:

- Memorandum of Understanding on Environmental Cooperation on the Management of Lake Champlain among the Gouvernement du Québec, the State of New York and the State of Vermont.
- [Memorandum of Understanding](#) between the Federal Partners for Cooperation and Coordination to Implement *Opportunities for Action* (1996 version)

[Opportunities for Action: An Evolving Plan for the Lake Champlain Basin](#) (OFA) is the pollution prevention, control, and restoration plan that guides LCBP's efforts. It was first endorsed in 1996 by the governors of New York and Vermont and the regional administrators of the USEPA. The 1996 Plan called for periodic updates, and new

versions of the plan were signed in 2003 and 2010. A letter of endorsement was provided for both updates by the Premier of Québec.

The Plan identifies eight specific goals that help achieve the LCBP Steering Committee's vision for the Lake Champlain Basin. These goals aim to protect and restore the ecological and cultural resources of the Basin while maintaining a vital regional economy.

- Promote a better understanding and appreciation of Lake Champlain Basin resources and threats as well as personal responsibility that leads to behavioral changes and actions to reduce pollution.
- Reduce phosphorus inputs to Lake Champlain to promote a healthy and diverse ecosystem and provide for sustainable human use and enjoyment of the Lake
- Reduce contaminants that pose a risk to public health and the Lake Champlain ecosystem.
- Maintain a resilient and diverse community of fish, wildlife, and plants in the Lake Champlain Basin.
- Prevent the introduction, limit the spread, and control the impact of non-native aquatic invasive species in order to preserve the integrity of the Lake Champlain ecosystem.
- Identify potential changes in climate and develop appropriate adaptation strategies to minimize adverse impacts on Lake Champlain's ecosystem and natural, heritage, and socioeconomic resources
- Build on existing knowledge; make new discoveries of the history, culture, and special resources of the Champlain Valley National Heritage Partnership; and make this information accessible to all.
- Promote healthy and diverse economic activity and sustainable development principles within the Lake Champlain Basin while improving water quality and conserving the natural and cultural heritage resources on which the regional economy is based.

The Lake Champlain Steering Committee considers these eight goals to be vital in addressing the long-term health of the Lake Champlain Basin and recommends that agencies and organizations strive to maintain them as highest priorities in managing and enhancing the resources of the Basin. Priority objectives, actions, and tasks have been designated for each of these goals and are presented in the plan.

As co-chair of the LCBP Steering Committee, the Department is a key partner in implementation efforts of the LCBP, and particularly with efforts to reduce phosphorus inputs to Lake Champlain. Phosphorus is globally recognized as the primary limiting nutrient in freshwater lakes responsible for eutrophication. Excess phosphorus loading to Lake Champlain is the root cause of the most significant water quality problems in the Lake, and affects the overall water quality through increased growth rates of photosynthetic plant life and subsequent reduction of dissolved oxygen. Phosphorus is also thought to play a key role in [harmful algal blooms \(HAB\)](#). These elevated phosphorus concentrations result in impacts and threats to public bathing, other recreational uses (swimming, fishing, boating) and aesthetics in Lake Champlain.

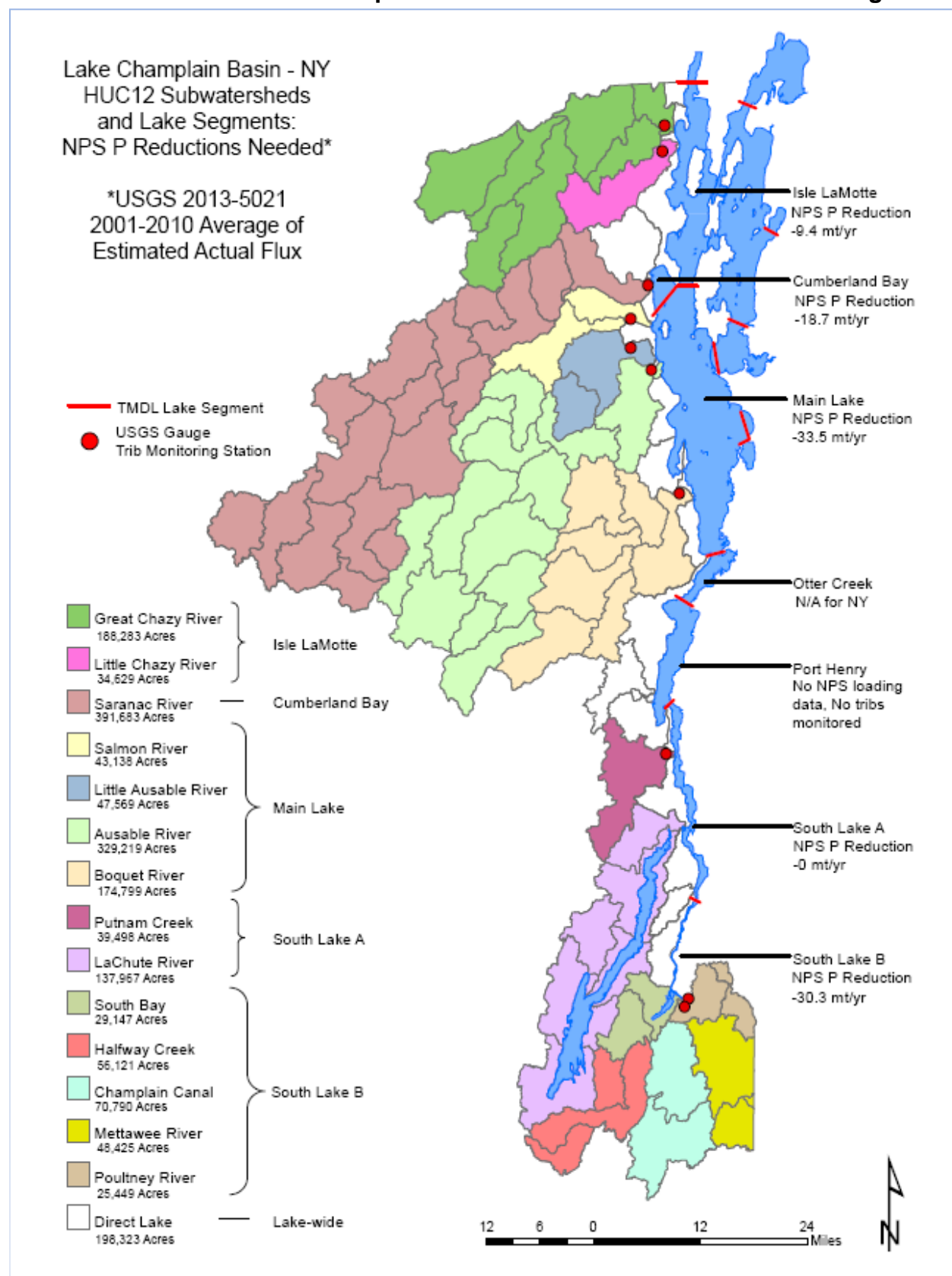
ADDRESSING PHOSPHORUS IN LAKE CHAMPLAIN

In 1997, the Lake was divided into 13 segments (figure 2) by Vermont Department of Environmental Conservation (VTDEC) and NYSDEC for modeling and phosphorus management purposes. The segments, along with the principal contributing drainage areas, are:

1. South Lake A – NY and VT
2. South Lake B – NY and VT
3. Port Henry – NY
4. Otter Creek – VT
5. Main Lake – NY and VT
6. Shelburne Bay – VT
7. Burlington Bay –VT
8. Cumberland Bay – NY
9. Mallets Bay – VT
10. North East Arm – VT
11. St. Albans Bay – VT
12. Missisquoi Bay – VT and Quebec
13. Isle LaMotte – NY and VT

Total phosphorus levels and sources vary considerably among the 13 Lake segments making a “one size fits all” approach to reduce phosphorus inappropriate. An adaptive management approach is needed because as phosphorous goals are set and attained, water quality goals will be achieved, public health protected, drinking water supplies conserved, aquatic communities enhanced and the natural system of the Lake improved. As such, there is a need to continuously review goals and approaches to reach the desired outcome of reduced phosphorus in the most appropriate ways

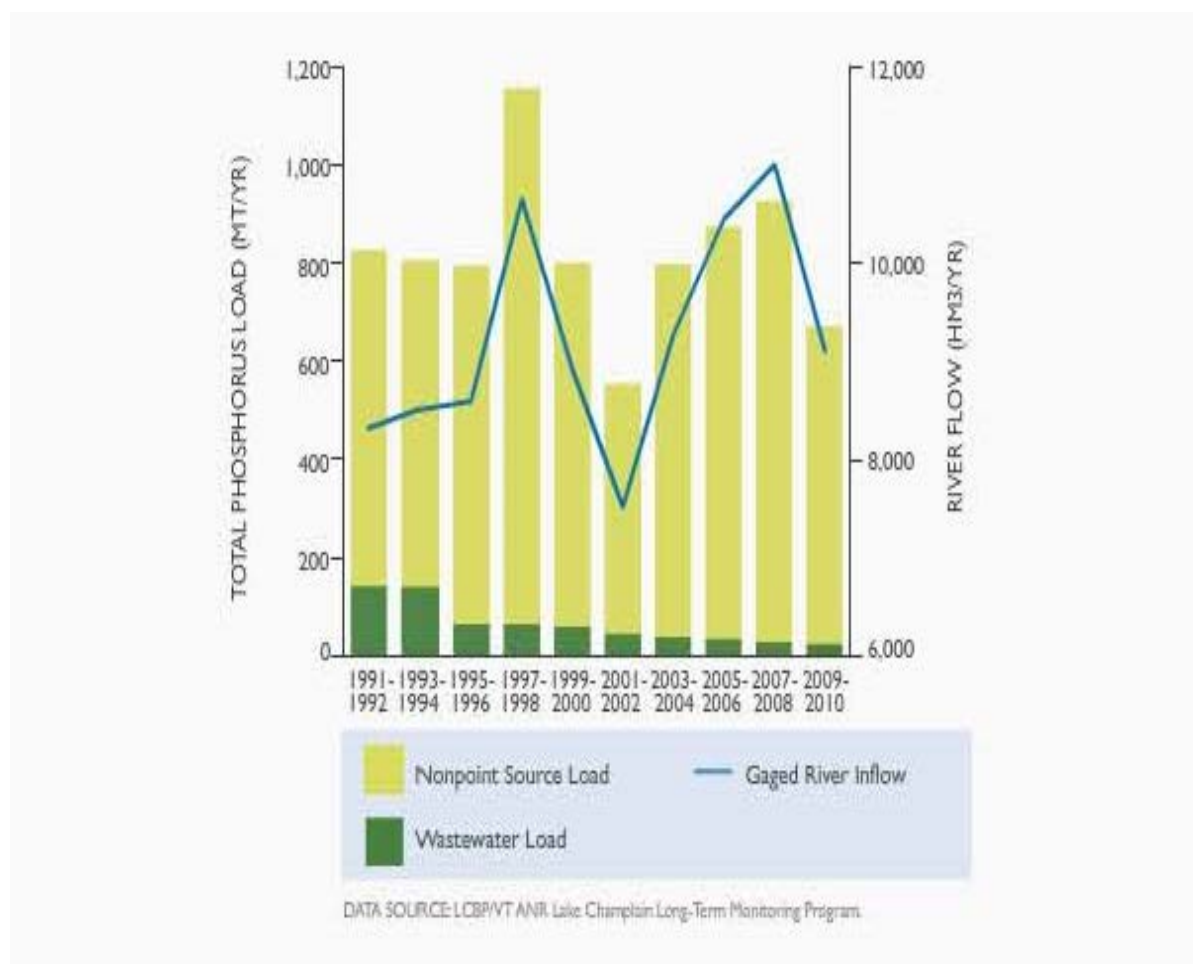
FIGURE 2 – Lake Champlain Subwatersheds and Lake Segments



Much progress has been made in recent years to reduce phosphorus levels, but to achieve the desired water quality criteria in the Lake, further reductions are needed. Phosphorus levels in most areas have been stable or increasing slightly since 2007. In 2010, the average in-lake phosphorus concentrations exceeded established targets at nine of the thirteen lake segments. The historic floods of 2011 caused a spike in phosphorus concentrations in many parts of the Lake to the highest levels observed since 1990. ([State of the Lake and ecosystems indicator report 2012](#))

As demonstrated in figure 3, wastewater load defined as point source (PS) pollution accounts for about 5 percent of the total NY and VT load reaching Lake Champlain, while nonpoint source pollution (NPS) accounts for approximately 95 percent of the total phosphorus load (Smeltzer et al. 2009).

Figure 3 – Lake Champlain Load and Flow



Point Source pollution includes discharges from municipal wastewater treatment plants and industrial facilities. Nonpoint source pollution is associated with discharges of stormwater carrying pollutants from across the full landscape of the Lake's watershed. Nonpoint Source pollution is a result of failure to manage and/or treat storm water runoff from existing or new areas of developed land (residential, commercial, and industrial); soil erosion, runoff and sedimentation through poor management of cropland and pasture, loss of forests, wetlands, development encroachment on stream banks and shorelines, road construction and maintenance practices.



Point Source phosphorus loads are regulated in permits issued by the Department and have been systematically reduced through a successful sustained State Pollutant Discharge Elimination System (SPDES) regulatory program. Phosphorus loads from wastewater treatment plants around the Basin have been reduced by nearly 80 percent since 1990.

While Phosphorus loads from wastewater treatment plants contributed approximately 25 percent of the total Basin-wide load in 1990-1991; in 2007-2008, that number was estimated at only 5 percent. Point sources are meeting their TMDL phosphorus loading requirements. Point source loading for 2012 is shown in Table 2 in Appendix 1.

In contrast, nonpoint source pollution is addressed through a series of regulatory and voluntary initiatives and programs. In New York, developed lands contribute about 54 percent of the phosphorus runoff, agricultural lands contributed about 28 percent, and forested lands contributed 18 percent. These proportions, however, vary greatly among the various sub-watersheds. New York State's summary of contributing nonpoint source load percentages by land classification, and load reductions as presented in the 2002 TMDL are shown in TABLE 1, below.

Research in the Lake Champlain Basin shows that, acre for acre, developed land contributes up to four times more nonpoint source phosphorus than average agricultural lands and seven times more than forests (Troy et al. 2007). However, far more acres of Basin land are in agriculture and forests than in urban settlements; therefore substantial reductions in nonpoint phosphorus runoff are required in both agricultural and developed lands in order to meet our targets for a clean Lake Champlain.

Date last update: 6/17/2014

TABLE 1 - New York NPS Phosphorus Loading

Lake Segment	Sub Watershed	Segment Drainage Area (hectares)	2002 TMDL			Source of Loads			USGS Report 2013-5021	
			2002 TMDL NPS Allocation (mt/yr)	1991 Measured NPS Load (mt/yr)	NPS Reduction Needed (mt/yr)	Forest Lands Load (%)	Agriculture Lands Load (%)	Developed Lands Load (%)	2001-2010 Ave NPS Est Actual flux (mt/yr)	Projected NPS Reductions (mt/yr)
Isle LaMotte		90,209	18.9	20.9	2.0	4.1	79.6	16.3	28.3	9.4
	Great Chazy	76,195							22.5	
	Little Chazy	14,014							5.8	
Cumberland Bay		158,509	8.1	8.8	0.7	22.0	13.6	64.5	26.8	18.7
	Saranac River	158,509							26.8	
Main Lake		240,677	29.5	31.8	2.3	28.2	3.9	67.9	63.0	33.5
	Salmon River	17,457							2.2	
	Little Ausable River	19,251							3.4	
	Ausable River	133,230							33.8	
	Boquet River	70,739							23.6	
South Lake A		71,818	3.3	3.5	0.2	19.5	12.4	68.1	2.1	-1.2
	Putnam Creek	15,984							2.1	
	LaChute River	55,833							not gaged	
South Lake B		93,050	22.0	24.3	2.3	4.6	63.7	31.7	52.3	30.3
	South Bay	11,795							not gaged	
	Halfway Creek	22,711							not gaged	
	Champlain Canal	28,648							not gaged	
	Poultney River	10,299							26.8	
	Mettawee River	19,597							25.5	
Direct Lake		80,259	2.5	2.7	0.2	13.2	39.4	47.0	no data	
	Port Henry/Otter Creek		2.5						not gaged	
	Lakewide	80,259							not gaged	
	Totals	734,521	84.3	92.0	7.7	18.4	27.6	54.0	172.6	90.8

Major efforts have been undertaken in the last two decades to restore and maintain good water-quality conditions in Lake Champlain and throughout the Basin. Despite increased land use conversion for development within the Basin, tributary phosphorus loads and flow-weighted mean inflow concentrations to most regions of the Lake were stable or decreasing from 1991 to 2008 (Smeltzer et al. 2009).

This trend is further articulated in a recent study by the US Geological Survey (USGS) using weighted regressions to estimate daily concentration and flux histories based on discharge, season, and trend. The study showed mixed trend directions seen for phosphorus and nitrogen in Lake Champlain tributaries. For many of the tributaries to the Lake, researchers demonstrated a full reversal in nitrogen trends and either a similar reversal for phosphorus or at least a reduction in the magnitude of the upward trend. Importantly, this study utilized flow normalized data which clearly illustrates that phosphorus concentrations have decreased since 1999 in fifteen of eighteen tributaries studied, suggesting that a positive response to watershed management efforts may be underway. (Medalie and Hirsch 2010).

This positive response is the result of the efforts of many Federal, State and Local partners.

The Champlain Watershed Improvement Coalition of New York, Inc. (CWICNY) was formed by the five New York counties within the basin after they recognized the need for more water quality improvement initiatives on the New York side of Lake Champlain. With representatives from the five county Soil and Water Conservation Districts, the five county Water Quality Coordinating Committees, and the Lake Champlain/Lake George Regional Planning Board, CWICNY goes beyond political boundaries and incorporates public sector/private citizen partnerships to complete projects good for the watershed as a whole. The objective of CWICNY, its member organizations, and its cooperating partners is to reduce phosphorus loading to Lake Champlain through the implementation of numerous projects and practices throughout the New York side of the Lake Champlain watershed. CWICNY's efforts will have a long-term positive impact upon the water quality and ecology of the lake and its many tributaries.

In 2007, CWICNY received 1 of 12 national EPA Targeted Watershed funding awards. Specifically directed at Lake Champlain, this funding, was to reduce non point sources of pollution. Titled the Lake Champlain Phosphorus Reduction Project, a total of \$900,000 was provided for CWICNY and its partner organizations to continue its mission in New York. The main objective of the Targeted Watershed - Lake Champlain Phosphorus Reduction Project aligns directly with the goals of CWICNY and priorities of the Lake Champlain Basin Program's plan *Opportunities for Action*: to protect Lake Champlain and its basin waters from the impacts of land use changes generating phosphorus runoff. More recently, CWICNY has obtained a NYS Department of State (DOS) grant to continue its good work in the nonpoint source sector. CWICNY will be preparing a subwatershed non point source assessment plan, seeking to identify, at the HUC12 level, opportunities for nonpoint source reduction implementation projects. This plan will help to target limited resources to achieve the greatest reductions as efficiently as possible. The LCBP provides funding support to various implementation efforts throughout the Basin:

- NY Basin Program Coordinator – Coordinates and collaborates with all Department program areas including Water, Fisheries, Wildlife, Lands & Forests, and Operations, as well as with external partners and agencies on issues of mutual or program specific importance within the framework of the LCBP and the management plan *Opportunities for Action*.
- Long-Term Water Quality and Biological Monitoring Project – Provides for lake and tributary monitoring to detect environmental change, monitor for invasive species, and assess progress toward phosphorus reduction goals.
- NY Agronomist – Works with farms of all sizes in providing technical assistance toward implementing practices that reduce phosphorus loading while helping to sustain farm viability
- Grants to local partner organizations intended to work toward the goals and objectives of OFA. Approximately 100 local implementation grants totaling nearly \$1M have been awarded to NY organizations working on water quality related issues.

In addition, the Department's Water Quality Improvement Project (WQIP) program makes funding available for municipalities, soil and water conservation districts and non-profit organizations. The WQIP program is a competitive, reimbursement grant program funded primarily by the Environmental Protection Fund (EPF) and NY Works II for projects that reduce polluted runoff, improve water quality and restore habitat in New York's waterbodies. Since 1995, the WQIP program has awarded over 15 million dollars in grant funding to projects in the Lake Champlain watershed, contributing to a total project effort of approximately 49 million dollars. (Appendix 1 - Table 3)

NYSDEC core programs

New York State Concentrated Animal Feeding Operation Program

There are 7 large CAFO's and 18 medium CAFO's in the Lake Champlain Watershed. Following the first CAFO general permit issuance in New York in 1999, CAFO operators are required to obtain and comply with state wastewater discharge permits. Today, more than 10 years later, New York has one of the most robust CAFO permitting programs in the nation, covering 150 large- and over 450 medium-sized CAFO farms statewide. New York State's CAFO program is clear, actively implemented and enforced, of state-wide applicability, practical and scientifically supported. New York recognizes the need for farm-specific, technical evaluations by qualified professionals, in the form of Certified Planners and Professional Engineers, to ensure that the farm understands and implements the latest developments in land grant university guidelines, United States Department of Agriculture Natural Resources Conservation Services (USDA-NRCS) technical standards and State regulatory requirements.



NYS Division of Water Compliance and Enforcement Program

The Department protects New York's water resources through various regulations, policies, and partnerships. The agency's Division of Water, Bureau of Water Compliance (BWC), with support from the Office of General Counsel and the Division of Law Enforcement, manages the compliance and enforcement elements of the State Pollution Discharge Elimination System (SPDES) Permit Program and enforcement against those discharging to the waters of the state without a permit or beyond the authority of their permit.

Municipal Separate Storm Sewer Systems (MS4)

According to the federal law commonly known as Stormwater Phase II, permits are required for stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas and those additionally designated by the Department. Owners or operators of such MS4s must be authorized in accordance with the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems. There are five (5) MS4s in the Basin; they are Glens Falls City (portion); Town of Queensbury; Town of Lake George; Village of Lake George and the Town of Kingsbury (portion).

Construction Stormwater Program

Prior to commencing construction activity, the owner or operator of a construction project that will involve soil disturbance of one or more acres must obtain coverage under the State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. The [SPDES General Permit for Stormwater Discharges from Construction Activity - GP-0-10-001](#) was issued in January 2010, and was effective on January 29, 2010. New York State Department of Environmental Conservation requirements for construction activities are included in the aforementioned permit. Some exceptions to the requirements exist for agricultural projects, certain silvicultural projects and routine maintenance activities.

In order to gain coverage under the SPDES General Permit for stormwater discharges from construction activity, an owner or operator must develop a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the requirements in the General Permit for stormwater discharges from construction activity, submit a completed [Notice of Intent](#) (NOI) to the Department, and if a project is subject to MS4 regulation must submit a signed [SWPPP Acceptance Form](#) along with their NOI.

New York State Department of State

New York's Department of State, Office of Planning and Development, administers the New York State Coastal Management Program, which provides technical and financial assistance for the preparation and implementation of the Local Waterfront Revitalization Programs, Intermunicipal Watershed Management Plans, and other strategies to advance community and waterfront revitalization.

The Department of State's provides municipalities with professional expertise and funding to develop and implement watershed management plans to protect and restore water quality and related resources. Intermunicipal Watershed Management Plans focus on identifying connections between land use and water quality to reach consensus on actions to protect water resources while facilitating economic development and guiding growth to the most appropriate locations. Department staff with backgrounds in the natural sciences and local and regional planning work closely with interested communities across the State. These plans enable communities to:

- Establish a mechanism for long-term watershed management, often through the creation of an intermunicipal watershed organization;
- Describe and understand existing water quality and watershed conditions, current impairments and anticipated threats to water quality, and recognize the key problems and opportunities in the watershed;
- Identify and describe priority actions needed to address water quality impairments or threats;
- Create an implementation strategy identifying stakeholder roles and the financial and institutional resources needed to undertake these priorities;
- Develop a means to measure success, track implementation, and monitor performance; and
- Network with other communities, agencies and organizations with experience in the successful preparation and implementation of watershed management plans.

The Department of State, in cooperation with the Department of Environmental Conservation and with input from the Department of Agricultural and Markets, prepared the Watershed Plans: Protecting and Restoring Water Quality guidebook that provides communities with a step-by-step process for developing watershed management plans. More information about the Department of State's work related to watershed and water resources management can be found at the [Program Summary](http://www.dos.ny.gov/opd/programs/waterResourcesMgmt/progsummary.html) link. (<http://www.dos.ny.gov/opd/programs/waterResourcesMgmt/progsummary.html>)

New York State Department of Agriculture and Markets

Agricultural Environmental Management Program

The New York State Agricultural Environmental Management (AEM) Program works to support farmers in their efforts to protect water quality and conserve natural resources, while enhancing farm viability. New York's AEM Program has aided farmers in protecting water quality by providing a framework to assess environmental stewardship and coordinating technical and financial assistance from the Federal, State, and local levels to address priority water quality issues on the farm. The driving principle of AEM's success is a farm specific focus, coordinated through locally developed watershed based strategic plans and an educational component to elicit landowner confidence.

AEM's on-farm framework is designed to be highly interactive and utilizes resource professionals and peers working with the farmer throughout the process. This framework and associated process increases farmer awareness of the impact farm activities have on the environment and by design; it encourages farmer participation and seeks behavioral change, which are important overall goals of the program.

AEM utilizes the NRCS Planning Process that is enhanced through a five-tiered framework:

- Tier 1 - Resource professional(s) collect farm contact information
- Tier 2 - Resource professional utilizes pertinent worksheets to conduct an on farm environmental assessment
- Tier 3 - Priority farms develop a conservation plan with assistance from a team of resource professionals
- Tier 4 - Priority BMPs in priority conservation plans are implemented
- Tier 5 - Conservation plans and implemented BMPs are evaluated to ensure effectiveness

The forthcoming *Watershed Implementation Plan (WIP)* will endeavor to identify total number of farms in the basin as well as determine numbers and sizes of farms in each of the five tiers while remaining respectful of individual farmers' privacy. The combined efforts of the aforementioned initiatives have been realized through improved water quality in the Lake and its' Basin. But there is still much to be done.

Strategy for reducing phosphorus loads

There is much uncertainty and complexity of relevant processes and stressors within the Lake and its' watershed. To set and make reductions in the phosphorus load delivered to the Lake from point and nonpoint sources such as wastewater discharges, barnyards, agricultural fields, unstable river channels, urban centers, residential areas, back roads, and other areas, an ***adaptive implementation approach*** is needed.

Throughout the development of the Watershed Implementation Plan (WIP), a balance of load reductions among the agriculture, wastewater and stormwater sectors will be determined. The reductions in agricultural loads are important because these loads represent a significant proportion of the total load and offer opportunities for achieving substantial reductions through cost effective solutions. When compared to traditional reductions in wastewater or stormwater loads, agricultural reductions are generally more cost effective than either wastewater or stormwater reduction practices. Recognizing that phosphorus reductions will need to come from all land sectors, we will seek to identify opportunities in wastewater treatment facilities and the developed landscape to implement cost effective technologies and practices to further reduce phosphorus loadings. A suite of low tech green infrastructure practices for both new projects and as retrofits to existing developed lands may offer additional opportunities for phosphorus reductions, and may be more cost effective than traditional implementation practices and retrofits. Additionally, such practices may improve community resilience against severe weather events and associated flooding.

The forthcoming WIP will enable routine revisiting, reevaluation and modification of implementation actions. By outlining a clear and flexible process that holds partnerships accountable for meeting the water quality goals of the Lake, improvements in the landscape and water quality will be achieved.

The WIP will identify measures that, when implemented, will reduce pollution levels in order to reach the "pollution budget" specified in the TMDL. In doing so, a measure of quality control will be provided, ensuring the most cost effective practices are implemented as soon as possible. The WIP will incorporate routine reevaluation of the adequacy of implementation efforts in achieving the water quality standards.

Lake Champlain watershed partners have developed their own sub watershed management plans. The Ausable River Association has summarized and synthesized the current and past watershed studies in the development of the watershed management document that makes recommendations for improving water quality within the Ausable River and its watershed, titled [Ausable River Watershed Management Strategy Essex and Clinton Counties, New York](#). The Boquet River Association currently has a Department of State grant to compile and analyze data and existing land and water use controls, provide watershed outreach and education, develop water quality improvement and restoration recommendations and prepare a comprehensive watershed management plan. This will be a precursor to seeking implementation funds.

Implementation efforts will employ one or more of the following policy tools:

1. **Financial incentives** - linking funding eligibility to specific actions or using subsidies to control pollution and reduce impacts
2. **Technical assistance** - sharing information regarding the water quality impacts of current or planned actions, and suggesting techniques to reduce impacts.
3. **Targeting** – target financial incentives and technical assistance at the most cost effective measures where reductions are most needed.

To reduce phosphorus loading to the lake to the extent required the Department must explore a full suite of reduction measures and identify opportunities across the entire landscape for implementation efforts. To that end, the Department plans to support existing projects as summarized in Table 3, as well as additional opportunities yet to be identified. Various initiatives being pursued or considered include but are not limited to the following types of projects:

- 1) Establish a line item in the EPF for the Lake Champlain Basin to support critical implementation efforts.
- 2) Development and sustainable support for conservation coalitions.
- 3) Implementation of Best Management Practices identified in the Lake Champlain Nonpoint Source Pollution Sub -Watershed Assessment.

- 4) Continue ongoing engineering and technical assistance to farmers in the Basin through the Agricultural Engineering Assistance Program. This will enable farms to meet engineering eligibility requirements and parameters necessary for application and implementation primarily for EQIP, but also for all other available cost share programs. The preparation of required engineering design will improve utilization of available cost-share programs by small farms, and provide farmers the opportunity to access and leverage available NRCS funding to implement pollution prevention BMPs (structural and non-structural).
- 5) Maintain ongoing technical assistance through to farmers through the Agronomy and Conservation Assistance Program to improve adoption of pollution prevention BMPs (structural and non-structural) and improved utilization of available cost-share programs by small farms. Demonstrate under-utilized practices that improve soil health and improve crop yields while reducing soil and nutrient losses.
- 6) Provide technical Assistance for small and medium sized wastewater treatment plants through ongoing technical assistance to treatment plant operators to improve treatment plant operation and improved permit compliance, and ultimately less delivery of point source phosphorus to Lake Champlain and its tributaries.
- 7) Implement Best Management Practices for Roadside Erosion Stabilization in the Lake Champlain Basin as identified in the CWICNY Roadside Erosion Assessment and Inventory project funded through an American Recovery and Reinvestment Act grant to the Lake Champlain-Lake George Regional Planning Board. This initial planning effort identified more than \$1.7 million in projects.
- 8) Implement a Rural Roads Program currently being developed by CWICNY with a grant from the Lake Champlain Basin Program to assist local municipalities with inventories and assessments of road, culvert, and ditch network erosion problems and development of corrective projects. Identify a funding source and develop cost-share programs with local highway departments to undertake improvements to the road drainage networks to improve storm resiliency and reduce phosphorus loadings.
- 9) Implement the Department of State funded watershed management plan for the Ausable River Watershed.
- 10) Complete the Department of State funded watershed management planning process for the Boquet River Watershed.
- 11) Continue and expand the Trees for Tribs program in the New York Watershed of Lake Champlain.

- 12) Implement Boquet River Watershed Stream Restoration projects.
- 13) Implement Rivermeade Riparian Corridor Improvements.
- 14) Upgrade the Whitehall Village Wastewater infrastructure.
- 15) Acquire LIDAR data and interpretation for all areas of the Basin for planning and assessment of impacts of recent heavy precipitation and flooding events.
- 16) Develop municipal cost-share program for community stormwater retrofitting initiatives. This project would also include prioritizing sites and identifying large scale opportunities for corrective practices, as well as low cost green infrastructure practices that can be implemented during redevelopment projects. Identify opportunities to improve community resiliency for added benefits in stormwater retrofits.
- 17) Develop cost-share program to address Steep Slope Logging Best Management Practice Program: Re-stabilizing areas disturbed by logging activities on steep slopes and large staging areas to prevent erosion and sedimentation from areas of disturbance through use of hydroseeding, temporary stream crossings, and steep slope stabilizing BMPs



- 18) Provide a rotating residential, surface water protection Septic Pumpout Program including Visual Inspection, Education and On-Site holding tank pumpout cost-share every 3-4 years for lake/stream-side residents. Focus will be individual properties on small lakes and communities with residential clusters lacking combined treatment systems

- 19) Hire a basin-wide Stormwater Administrator to work with non-MS-4's (as well as MS-4s) to increase stormwater management in identified priority areas
- 20) Hire three Nutrient Management Specialists to work with ag producers to develop, implement, and update CNMPs
- 21) Work with local municipalities to protect and restore floodplains and wetlands. Demonstrate the asset value to a community in reduced flooding and improved recreational opportunities for community residents. A direct benefit will also be phosphorus reductions.
- 22) Develop cost-share programs with local municipalities and watershed groups for protecting and restoring riparian corridors and improving stream stability. Demonstrate benefits in flood reduction, protection of infrastructure and property, and phosphorus loading reductions.
- 23) Evaluate technical and financial feasibilities for implementing Enhanced Phosphorus Removal Standards for construction projects subject to the construction stormwater permit
- 24) Evaluate technical and financial feasibilities for designating additional MS4 communities
- 25) Evaluate technical and financial feasibilities for an accelerated program of eliminating all remaining CSOs
- 26) Work with local municipalities to evaluate covered salt storages and improved winter road maintenance equipment, storage, automated spreaders, and de-icing equipment
- 27) Evaluate technical and financial feasibilities for an accelerated program of eliminating all remaining CSOs

CONCLUSION

Excess phosphorus remains a concern throughout the Lake. Wastewater treatment facilities are meeting their targets, and loading trends in a few tributaries have improved over the last decade, but much work remains in reducing nutrients from the landscape. Until phosphorus concentrations in the Lake are reduced, algae blooms will occur when weather conditions are favorable. Flood resiliency dominated lake and tributary discussions in 2011. Preliminary analyses indicate that nutrient delivery to the Lake from most tributaries was well above the 20-year average, and in-lake phosphorus concentrations were above average as well. Management agencies around the Basin are developing flood resiliency plans to mitigate impacts of flood events in the future.

Implementation of such plans will not only help to improve resiliency, but will also support phosphorus reduction efforts. Programs to reduce nutrient loading must be continued and expanded in many parts of the Basin in order to achieve desired phosphorus loading targets. Continuation and expansion in all land sectors will help work toward this goal. Efforts targeting key phosphorus loading vectors such as agricultural operations, the developed landscape, road drainage networks, and eroding stream corridors must be enhanced and adequately funded. Adaptive management will become an increasingly useful method for integrating local science with decision-making, providing tools to apply what we know now about managing phosphorus, and allowing for mid-course corrections as new information renders old information and goals obsolete.

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Lake Champlain Basin Program - <http://www.lcbp.org> August 2013

State of Lake and Ecosystems Indicators Report 2012 - <http://sol.lcbp.org>

Hyperlinks

Page 3 - The Lake Champlain Phosphorus Total Maximum Daily Load (TMDL)
http://www.dec.ny.gov/.../champlain_final_tmdl.pdf

Page 6 - Lake Champlain
http://en.wikipedia.org/wiki/Lake_Champlain

Page 6 - US Environmental Protection Agency (New England and Region 2)
<http://www.epa.gov/>

Page 6 - New York State Department of Environmental Conservation
<http://www.dec.ny.gov/>

Page 6 - Vermont Agency of Natural Resources
<http://www.anr.state.vt.us/>

Page 6 - Québec Ministry of Sustainable Development, Environment, Fauna and Parks
<http://www.mddep.gouv.qc.ca/>

Page 6 - New England Interstate Water Pollution Control Commission
<http://www.neiwpcc.org/>

Page 6 - Memorandum of Understanding
<http://www.lcbp.org/wp-content/uploads/2012/08/FedPartners-MOU.pdf>

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Page 6 - Opportunities for Action: An Evolving Plan for the Lake Champlain Basin
<http://plan.lcbp.org/>

Page 8 - harmful algal blooms (HAB)
<http://www.dec.ny.gov/chemical/77118.html>

Page 12 - State of the Lake and ecosystems indicator report 2012
http://sol.lcbp.org/phosphorus_how-are-p-levels.htm

Page 19 - SPDES General Permit for Stormwater Discharges from Construction Activity - GP-0-10-001 (PDF)
http://www.dec.ny.gov/docs/water_pdf/gpsconspmt10.pdf

Page 19 - Notice of Intent (PDF)
http://www.dec.ny.gov/docs/water_pdf/noipgr10a.pdf

Page 20 - SWPPP Acceptance Form (PDF)
http://www.dec.ny.gov/docs/water_pdf/swpppaccept10.pdf

Page 20 - Local Waterfront Revitalization Program
http://www.dos.ny.gov/communitieswaterfronts/grantOpportunities/epf_lwrpGrants.html

Page 20 - Approved LWRP's can be found [here](#).
http://www.dos.ny.gov/opd/programs/WFRevitalization/LWRP_status.html

Page 21 - The New York State Agricultural Environmental Management (AEM) Program www.nys-soilandwater.org

Page 22 - Ausable River Watershed Management Strategy Essex and Clinton Counties, New York
<http://www.ausableriver.org/pdf/AusableWMPStrategy.pdf>

Appendix 1

Table 2 – Lake Champlain Basin Point Source Data

SDPES #	Lake Segment	NAME OF FACILITY	DMR FLOW (mgd)	FLOW LIMIT (mgd)	ROLLING P AVERAGE (lbs/day)	TOTAL P LIMIT (lbs/day)
NY0030627	South Lake B	FORT ANN (V) WWTP	0.047	0.110	0.335	1.330
NY0021547	South Lake B	GRANVILLE (V) WWTP	0.540	1.300	9.037	4.300
NY0035041	South Lake B	GREAT MEADOW CORRECTIONAL	0.345	0.400	0.277	1.670
NY0202070	South Lake B	WASHINGTON CORRECTIONAL	0.105	0.250	0.411	0.720
NY0024929	South Lake B	WHITEHALL (V) WWTP	0.599	1.700	1.412	3.600
NY0239844	South Lake A	CROWN POINT SD#1 WWTF	0.031	0.060	0.862	1.03
NY0004413	South Lake A	IP Ticonderoga	13.800	Monitor	19.340	37.8
NY0036706	South Lake A	TICONDEROGA SD#5 WPCP	1.281	1.700	5.925	8.900
NY0022969	Port Henry	PORT HENRY & MORIAH	0.367	0.850	2.059	3.34
NY0020222	Port Henry	WESTPORT SD#1 WWTP	0.095	0.180	1.121	2.0
NY0201910	Main Lake	AU SABLE FORKS	0.040	0.147	1.577	4.470
NY0256471	Main Lake	ESSEX SD NO. 1 WWTP	0.008	0.065	0.126	0.27
NY0025097	Main Lake	KEESEVILLE (V) WPCP	0.248	0.400	0.218	2.000
NY0022187	Main Lake	LAKE PLACID (V) WPCP	1.012	2.500	7.475	13.00
NY0023949	Main Lake	PERU	0.211	Monitor	1.520	3.700
NY0183636	Main Lake	VALCOUR SD WWTF	0.005	0.000	0.237	0.32
NY0217760	Main Lake	WADHAMS SD #1 WWTP	0.006	0.015	0.145	0.240
NY0239682	Main Lake	WILLSBORO SD#1 WWTF	0.030	0.075	0.918	1.73
NY0035335	Cumberland Bay	ADIRONDACK FISH CULTURE STA	3.212	3.600	0.353	0.450
NY0255751	Cumberland Bay	CADYVILLE WWTP	0.003	0.006	0.105	0.250
NY0022195	Cumberland Bay	DANNEMORA (V) WTP	0.833	1.500	13.875	20.30
NY0026018	Cumberland Bay	PLATTSBURGH (C) WPCP	4.442	16.000	48.367	65.50
NY0021733	Cumberland Bay	SARANAC LAKE (V) WPCP	1.470	2.620	4.700	13.50
NY0020991	Cumberland Bay	ST. ARMAND SD WWTP	0.020	0.060	0.808	1.700
NY0183512	Isle LaMotte	ALTONA CORRECTIONAL FAC	0.066	0.120	0.104	0.500
NY0032204	Isle LaMotte	CHAMPLAIN (V) WWTF	0.148	0.650	0.919	3.450
NY0255971	Isle LaMotte	CHAZY (T) WWTF	0.060	0.085	0.800	0.600
NY0021831	Isle LaMotte	ROUSES POINT (V) WWTP	0.628	2.000	4.808	15.78
			29.652	36.393	127.834	212.180

Table 3 – WQIP Projects

Project Name	Applicant Name	Total Project	Grant Amount	County	Project Type
Little Ausable Watershed Protection Farm Nutrient Management	Clinton County SWCD	\$849,558.00	\$719,000.00	Clinton	Ag NPS
Monty Bay Agricultural Waste Management	Clinton County SWCD	\$177,000.00	\$84,600.00	Clinton	Ag NPS
Lake Champlain Basin Grazing and Nutrient Management Program	Essex County SWCD	\$253,927.00	\$183,000.00	Essex	Ag NPS
Town of Franklin Salt Storage Facility	Town of Franklin	\$36,200.00	\$18,100.00	Franklin	NPS
Dannemora Sewer District #2 Sewage Collection System	Town of Dannemora	\$426,208.00	\$287,000.00	Clinton	WWT
Port Henry-Moriah Wastewater Management Program - P removal only	Town of Moriah, Village of Port Henry	\$7,112,800.00	\$481,800.00	Essex	WWT
Little Ausable River Sea Lamprey Barrier Dam Construction	NYS DEC Region 5	\$246,900.00	\$226,500.00	Clinton	AHR
Finkle Brook Stormwater Project - LC	Bolton	\$197,270.00	\$98,635.00	Warren	NPS
West Brook Stormwater Project	Lake George	\$119,213.00	\$59,606.00	Warren	NPS
Monty Bay - B&R Ag. Waste Project	Clinton County SWCD	\$268,000.00	\$231,000.00	Clinton	Ag NPS
Five Mile Creek	Essex County SWCD	\$383,236.00	\$319,074.00	Essex	Ag NPS
Ausable River Bank Protection	Keene	\$191,000.00	\$95,500.00	Essex	AHR
Wastewater Treatment Plant And Infrastructure Improvements	Keeseville	\$1,719,398.00	\$1,461,488.00	Clinton	WWT
Port Henry-Moriah Wastewater Management Program	Moriah/Village of Port Henry (Joint)	\$2,565,882.00	\$1,220,146.00	Essex	WWT
Rehabilitation of Sanitary Sewer System and Improvements to WWTF	Whitehall	\$1,967,990.00	\$1,672,792.00	Washington	WWT
Wastewater Collection & Treatment	Chazy	\$3,405,000.00	\$350,000.00	Clinton	WWT
Black Point Rd. Sewer District	Putnam	\$1,102,000.00	\$300,000.00	Washington	WWT
Black Point Rd. Sewer District	Ticonderoga	\$1,437,400.00	\$300,000.00	Essex	WWT
West Brook Stormwater Project	Lake George	\$232,000.00	\$56,393.00	Warren	NPS
Crown Point/Ticonderoga Farms	Essex County SWCD	\$510,283.00	\$423,535.00	Essex	Ag-NPS

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Port Henry/Moriah Wastewater Mgmt.	Town of Moriah/Village of Port Henry	\$2,000,000.00	\$479,854.00	Essex	WWT
Willsboro Advanced WW Treatment	Town of Willsboro	\$418,366.00	\$355,611.00	Essex	WWT
Granville WWT Facility Improvements	Village of Granville	\$588,235.00	\$500,000.00	Washington	WWT
Halfway Brook Aquatic Habitat Improvement	Warren County SWCD	\$108,000.00	\$78,000.00	Warren	AHR
Halfway Creek - AEM Implementation	Washington County SWCD	\$181,111.00	\$163,000.00	Washington	Ag NPS
Ridgeview Farms Ag Waste Management Project	Clinton County SWCD	\$329,245.00	\$178,550.00	Clinton	Ag NPS
Hidden View Ag Waste Management Project	Clinton County SWCD	\$199,900.00	\$148,875.00	Clinton	Ag NPS
Keeseville Wastewater Treatment Plant Upgrade	Village of Keeseville	\$3,769,699.00	\$672,575.00	Clinton	WWT
Town of Moriah/Village of Port Henry Wastewater System Improvements	Town of Moriah	\$4,541,700.00	\$500,000.00	Essex	WWT
Lake Placid Water Pollution Control Plant Upgrade	Village of Lake Placid	\$10,600,000.00	\$433,584.00	Essex	WWT
Halfway Brook Wetland Improvement Project	Warren County	\$75,500.00	\$46,000.00	Warren	AHR
Lake George Basin Roadway erosion Control Program	Warren County SWCD	\$104,000.00	\$52,000.00	Warren	NPS
Essex Sewer dist 1 Wastewater Collection and Treatment System	Town of Essex		\$500,000.00	Essex	WWT
Sewer Dist. #1 Wastewater Collection and Treatment System	Town of Westport		\$500,000.00	Essex	WWT
Boquet River Streambank Stabilization	Town of Willsboro	\$252,534.00	\$113,000.00	Essex	NPS
Wilmington Salt Storage	Town of Wilmington	\$40,000.00	\$20,000.00	Essex	NPS
Prospect Mountain Brook Stormwater Improvement Project	Warren County SWCD	\$336,800.00	\$168,400.00	Warren	NPS
Salt/Storage Facility	Village of Saranac Lake	\$350,000.00	\$175,000.00	Franklin	NPS
Diamond Point Drainage Improvement	Warren County DPW	\$55,000.00	\$25,000.00	Warren	NPS
Stormwater Phase II MS4 Implementation of Local Laws and Policies	Warren County DPW	\$18,000.00	\$9,000.00	Warren	MS4
Glen Lake Watershed Stormwater Retrofit Project	Warren County SWCD	\$122,000.00	\$122,000.00	Warren	MS4

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Halfway Brook Stormwater Abatement Project	Warren County SWCD	\$184,200.00	\$184,200.00	Warren	MS4
Washington County MS4 Local Law Adoption & Implementation	Town of Kingsbury	\$30,000.00	\$30,000.00	Washington	MS4
West Brook	Town of Queensbury	\$300,000.00	\$100,000.00	Warren	NPS
Lake George Basin Fish Passage Culvert	Warren County SWCD		\$149,200	Warren	AHR
English Brook SW and Sediment Abatement	Warren County SWCD		\$186,850	Warren	NPS
Lake Champlain SW Reduction	Essex County SWCD		\$184,600	Essex	NPS
Black Ash Project Streambank Stabilization, Seg. 2	Town of Willsboro		\$775,000	Essex	NPS
New Road Salt/Sand Storage Structure	Town of Chazy		\$339,000	Clinton	NPS
Greater Glens Falls Urbanized Area MS4 Erosion and Sediment Control	Warren County SWCD		\$78,000	Warren	MS4

Ag NPS - Agricultural Non Point Source

AHR - Aquatic Habitat Restoration

NPS - Non Agricultural Non Point Source

WWT - Wastewater Treatment

Table 4 – Existing Project Summary

Project Name	Project Lead	Location	Description/Purpose	Cost Estimate
Lake Champlain Nonpoint Source Pollution Sub -Watershed Assessment.	Champlain Watershed Improvement Coalition of NY (CWICNY	Throughout Lake Champlain Basin in NY	Establish criteria to prioritize water quality impairments, evaluate the economic benefit of clean water and include recommendations for water quality protection objectives for each lake segment of the TMDL.	\$400 K
Rivermeade Riparian Corridor Improvements	CWICNY, the Ausable River Association, Essex Co. SWCD.	East Branch Ausable River, Keene	Repair the stream channel and return the stream to a more balanced function.	\$750K
Trees for Tribs in the Lake Champlain Basin	CWICNY, River Associations, County SWCD, DEC	Throughout Lake Champlain Basin of NY	Riparian corridor stabilization and protection along numerous river segments in the Basin.	\$50K.
Plattsburgh Stormwater Mapping	City of Plattsburgh	City of Plattsburgh	Inventory, GIS mapping, and resilience assessment of City Stormwater Conveyance System	\$200,000

Table 5 – Future Project Summary

Project Name	Project Lead	Location	Description/Purpose	Cost Estimate
Roadside Erosion Stabilization in the Lake Champlain Basin	Champlain Watershed Improvement Coalition of NY (CWICNY)	Throughout Lake Champlain Basin in NY	Improve flood resiliency, protect infrastructure and reduce sediment loads that exacerbate downstream flooding issues.	\$1.7M in identified projects. Not funded
Ausable River Watershed Stream Restoration	Ausable River Association and CWICNY	Ausable River Watershed	Re-stabilize stream channels and riparian corridors and retrofit culverts.	\$2M. Identified, not funded
Boquet River Watershed Stream Restoration	Boquet River Association and CWICNY	Boquet River Watershed	Tropical Storm Irene: stabilize and re-vegetate stream banks, replace undersized culverts and restore floodplain function.	\$1M Identified, not funded
Whitehall Village WWTP infrastructure upgrades	Village of Whitehall	Whitehall, NY	Reduce storm flow and improve storm flow resiliency of the Village's infrastructure, sustain plant operating performance and improve opportunities for economic development.	\$20M Identified, not funded
Town of Bolton Auxiliary Supply Reservoir Spillway	Town of Bolton	Town of Bolton	Auxiliary spillway for water supply reservoir	\$300,000
Crandall Pond Outlet	City of Glens Falls	City of Glens Falls	Remove and reconstruct outlet structure	\$500,000
Halfway Brook Tributary	City of Glens Falls	City of Glens Falls	Reroute clay storm sewer pipes	\$95,000
Wilkie Reservoir, Butler Storage and Butler Pond access road	City of Glens Falls	City of Glens Falls	Repair the access roads and to stabilize the soil	\$20,000
Hague Brook stormwater project	Town of Hague	Town of Hague	Install hydrodynamic flow separators	\$750,000
Headwater tributaries of East Brook	Town of Lake George	Town of Lake George	Retrofits for upland stormwater sources and a stabilization of the stream channel	\$150,000
Halfway Brook	Town of	Town of	Reduce NPS impacts and flooding	\$300,000

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project	Queensbury	Queensbury		
Prospect Mountain Brook	Village of Lake George	Village of Lake George	Streambank stabilization	\$200,000
Foster Brook, stream Corridor restoration and stabilization	Town of Dresden	Town of Dresden	Restoration and Bank/channel reconstruction	\$100,000
Disconnect roof water downspouts	Village of Saranac Lake	Village of Saranac Lake	Disconnect roof water downspouts from buildings adjacent to the Saranac River flowing through the village	\$300,000

Appendix 2

Partnerships - New York

Lake Champlain Basin Program Bill Howland, Manager 54 West Shore Road Grand Isle, VT 05458 802-372-3213 Email: lcbp@lcbp.org	Lake Champlain Research Institute at SUNY Plattsburgh Dr Tim Mihuc, Director 028b Hudson Hall SUNY Plattsburgh Plattsburgh, NY 12901 518-564-3039 Email: mihuctb@plattsburgh.edu
AuSable River Association Corrie Miller, Executive Director PO Box 8 Wilmington, NY 12997 518-637-6859 Email: info@ausableriver.org	Boquet River Association Anita Deming Cornell Cooperative Extension PO box 388 Westport, NY 12993 518-962-4810 Email: info@boquetriver.org
Champlain Watershed Improvement Coalition of New York (CWICNY) C/O Warren County Soil & Water Conservation District 394 Schroon River Road Warrensburg, NY 12885 518- 623-3119	FUND for Lake George PO Box 352 2199a Route 9 Lake George, NY 12845 518-668-9700 Email: info@fundforlakegeorge.org
The Nature Conservancy PO Box 65 Keene Valley, NY 518-576-2082 Email: Adirondacks@tnc.org	Miner Agricultural Research Institute Catherine Ballard, Director of Research 1034 Miner Farm Road PO Box 90 Chazy, NY 12921 518-846-7121
Lake Champlain Chapter Trout	Lake Champlain Committee

<p>Unlimited Bill Wellman 7 Helen Street Plattsburgh, NY 12901 518-593-7748 Email: wellman1985@charter.net</p>	<p>Lori Fisher, Executive Director 208 Flynn Avenue Building 3, Studio 3F Burlington, VT 05401 802-658-1414 Email: lorif@lakechamplaincommittee.org</p> <p>LCC is a bi-state organization whose focus is the entire Lake Champlain watershed</p>
<p>Lake Colby Association Nancy R. Keet, President PO Box 934 Saranac Lake, NY 12983 518-891-0972 Email: info@lakecolby.org</p> <p>Lake George Waterkeeper PO Box 591 2199a Route 9 Lake George, NY 12845 518-668-5913 Email: info@lakegeorgewaterkeeper.org</p>	<p>Lake George Association, Inc. Walter Lender, Executive Director PO Box 408 Lake George, NY 12845 518-668-3558 Email: lender@lakegeorgeassociation.org</p> <p>Lincoln Pond Association Gerry Zahavi, President 4172 Lincoln Pond Road New Russia, NY 12964 518-942-5933 Email: gzahavi@albany.edu</p>
<p>Mirror Lake Watershed Association Bill Billerman, Chair PO Box 1300 Lake Placid, NY 12946 518-523-8925 Email: bbillerman@netscape.net</p>	<p>Saranac Lake River Corridor Commission Jeremey Evans, Community Development Director 39 Main Street, Suite 9 Saranac Lake, NY 12983-2294 518-891-4150 Ext. 235 Email: comdev@saranaclakeny.gov</p>
<p>Shore Owners' Association of Lake Placid Nicole Broderick PO Box 1235 Lake Placid, NY 12946-1235</p>	<p>Upper Saranac Lake Association Ron Otten, President PO Box 872 Saranac Lake, NY 12983 518-796-1052</p>

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Rainbow Lake Association John McKeon, President Email: info@rainbowlakeassn.org	The Lake Champlain-Lake George Regional Planning Board (LCLGRPB) 310 Canada St, Lake George, NY 12845 (518) 668-5773

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