

Lake Champlain Watershed Water Quality Management Planning

Final Report

February 2011

Prepared by the Lake Champlain-Lake George Regional Planning Board

For the New York State Department of Environmental Conservation

American Recovery and Reinvestment Act (ARRA) Clean Water Act Section 604(b)



Final Report

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Project/Organization Information

| Project Information | | | |
|-----------------------|--|--------------------|--------------|
| Project Name | Lake Champlain Watershed Water Quality Management Planning | | |
| Primary Project Type | Water Quality Management Planning | | |
| State Contract Number | C304262 | | |
| Project Start Date | 04/01/2009 | Project End Date | Feb 17, 2012 |
| ARRA Award Amount | \$130,625.00 | Total Project Cost | \$176,500.00 |

| Organization Information | | | |
|--------------------------|--|--------------|-----------------|
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Introduction

Project Introduction & Description

The primary purpose of the project should be described, along with a general overview of major project goals and outcomes. Affected bodies of water and project locations should also be noted.

The goal of this project was to identify critically eroding roadside banks that contribute significant sediment loads to the high quality streams throughout the Champlain Watershed. The areas of concern for roadside erosion included the major subwatersheds within the Champlain Basin including the Chazy River, Saranac River, Ausable River, Boquet River, Lake George, Halfway Brook, Poultney River, Mettawee River and the Champlain Canal. There were also a number of sites identified that drain directly into Lake Champlain. The success of this planning initiative was achieved through a strong partnership between the Lake Champlain - Lake George Regional Planning Board (LCLGRP), the Champlain Watershed Improvement Coalition of New York (CWICNY), and the Clinton, Essex, Franklin, Warren and Washington County Soil and Water Conservation Districts (SWCDs).

Data reconnaissance and field work was completed by the five County SWCDs using newly purchased Trimble Juno SB GPS units with a comprehensive erosion site Data Dictionary produced by the partnering agencies. Data points, coordinating metadata and photos were post-processed using TerraSync and ARC GIS software, and maps identifying erosion sites were produced for each county and township. For each specific site, a prioritization ranking matrix was used to determine the criticalness of erosion; High, Moderate or Low. Also determined were methods for remediation of the sites and the associated cost estimates. Overall, 319 roadside erosion sites; 117 high priority, 77 moderate priority & 125 low priority; were identified throughout the watershed on state, county and town roads with a total remediation cost of \$1.7 million.

Another part of this initiative was the planning and executing of several educational trainings including CWICNY's annual North Country Stormwater Tradeshow and Conference. From 2009 to 2011, over 300 local engineers and municipal staff were educated on stormwater and erosion control methods. Also throughout this project, individual County SWCD's performed Erosion and Sediment Control trainings for local contractors. In all, over 1000 local code enforcement officers, contractors, and professionals have been educated on important water quality issues that the Champlain region has been facing.

This funding contributed to 15 jobs throughout the Champlain Basin and also created five additional summer intern positions at the county Soil and Water Conservation District (SWCD) offices. Overall, over 3000 hours were spent on this planning initiative.

Summary of Activity

Objectives, Tasks, & Outcomes

Work plan objectives should be clearly linked to final project outcomes. For each objective listed on the work plan, a brief summary of the tasks and activities should demonstrate how project deliverables and outcomes have accomplished that objective.

Objective

Develop Site Assessment Protocol

Task Summary & Project Outcomes: Involved personnel established a uniform data collection protocol for roadside erosion site assessments. The protocol was translated to a data dictionary and uploaded onto four new Trimble Juno SB GPS units. The data entry fields were given drop down menu choices to reduce subjectivity between multiple data collectors.

Objective

Database Development and Mapping

Task Summary & Project Outcomes: County SWCDs located and mapped areas experiencing chronic erosion throughout the Champlain Watershed on town, county and state roads. All together, 319 sites were identified, assessed and photographed.

Objective

Project Outreach and Education

Task Summary & Project Outcomes: Part of this initiative was the planning and executing of several educational trainings, including CWICNY's annual North Country Stormwater Tradeshow and Conference. From 2009 to 2011, over 300 local engineers and municipal staff were educated on topics such as flood plain management, cold climate best management practices and performance, low impact development, advanced mechanisms and design for phosphorus treatment, green roofs and pervious asphalt. Individual SWCDs also performed Erosion and Sediment Control trainings for over 1000 local contractors.

Objective

Develop Plan of Action

Task Summary & Project Outcomes: Each site was prioritized using a matrix established to rank to sites as high, moderate and low priority. Of all the assessed sites, 117 are high priority, 77 are moderate priority and 125 are low priority. Best management practice recommendations were established for each site which include hydroseeding, installing rolled erosion control products, constructing check dams and sediment traps, stabilizing bank toes and re-grading slopes and roads. Cost estimates for remediation were calculated for each site, and range from \$100 to \$500,000 each. The total restoration cost for all the sites in the watershed is \$1.7 million. Maps identifying the erosion sites were produced for each individual town and county wide.

Objective

Complete Reporting Requirements

Task Summary & Project Outcomes: Quarterly reports were prepared on time in March, June, September and December of each of the contract years. Reimbursement requests were sent using the appropriate paperwork each quarter and a final report was prepared. Beyond the required DEC final report, an overall final report was prepared, designed and printed showcasing all the work

Outcomes done throughout the watershed. This 160 page report was mailed to all town and highway supervisor's where erosion sites were identified, as well as the County Department of Public Works, the State DOT & DEC Regional offices, the Central DEC office and the offices of the Lake Champlain Basin's Elected Officials and watershed organizations.

Problems Encountered/How Solved

A comprehensive summary of any problems encountered during the life of the project and how those problems were resolved should be listed. The list should include any information reported in the "Problems Encountered/How Solved" box on the Quarterly Report Cover Pages throughout the project.

The majority of the problems encountered involved shifting funds within the budget. \$4292.74 was shifted from Non-Personal services to Personal services to account for increased administration and fiscal administration needs. A total of \$2356.00 was shifted to the Equipment line item from Supplies & Materials and Travel to purchase 4 GPS units and the associated software. The "Soil Tests" portion of the Supplies and Materials line item was deemed unnecessary, and those funds were used to pay for the supplies and materials needed for the 2010 and 2011 North Country Stormwater Tradeshow and Conferences. Within the Contract line item, \$732.00 was reallocated to hire a graphic designer to assemble a final report and \$4541.82 was used to print 225 copies. To cover this cost, \$601.05 was shifted from Supplies and Materials.

No reports were given to the County Board of Supervisors after 2010 field season, as there was more data reconnaissance that needed to be done. Also, the massive flooding that occurred throughout the Champlain Basin in 2011 caused more damage to the eroded sites that were previously identified in the 2010 field season. Because of this, additional data reconnaissance was done to re-assess many of the sites throughout the basin so that the final report portrays a more accurate assessment of the sites as they are to date.

Changes to Project Work Plan

Any changes that were made to the project work plan during the life of the project should be noted, including a brief description of why the changes were necessary.

No changes were needed.