

## Long Lake Watershed Improvement Project, Phase II

### Project #2006R-01

Waterbody Name: Long Lake

Location: Long Lake is located north of Sebago Lake in Northern Cumberland County. The lake resides in the towns of Naples, Bridgton and Harrison.

Waterbody Status: Long Lake has been designated by MDEP as an Impaired Waterbody, an NPS Priority Watershed and a Lake Most At Risk for Development.

Project Grantee: Cumberland County Soil and Water Conservation District

Project Duration: September, 2006 – November, 2009

319 Grant Amount: \$59,566.55

Local Match: \$43,324.74

#### **PROBLEM:**

Long Lake is a very large 5,358-acre waterbody with a moderately developed shoreline. Its direct watershed area is 36 square miles. The Lakes Environmental Association (LEA) has been working to protect Long Lake for over 30 years by performing comprehensive water quality testing, providing technical assistance to landowners, carrying out watershed education workshops and trainings, and producing educational newsletters and brochures. However, water quality data continued to show a declining trend in Long Lake's water quality. Dissolved oxygen profiles in August and September of 2006 showed DO depletion in the deep areas of the lake at or near zero, which is attributed to phosphorous entering the lake through soil erosion during storm events. A comprehensive land use inventory was undertaken to assist MDEP in developing a Phosphorus Control Action Plan (PCAP) and a Total Maximum Daily Load (TMDL) report for the Long Lake watershed. In total, 77% of the 830 developed shoreline sites documented in the TMDL survey were deemed to need some enhancement. 8% (65) were high impact sites, 69% (577) were medium impact and 23% (188) were low impact.

#### **PROJECT DESCRIPTION:**

The primary purpose of this project was to significantly reduce erosion and export of sediment and phosphorus into Long Lake. In order to do this, the project brought together the Cumberland Country SWCD, LEA, watershed volunteers and the Towns of Bridgton, Harrison and Naples to coordinate and install conservation practices at identified problem sites within the watershed. The overall goal of Phase II was to provide the Long Lake Watershed with funding and technical support to continue to address the existing erosion issues on the identified road and shoreline phosphorus hot spots; solidify the establishment of the Youth Conservation Corps (YCC) as a means to provide long-term support for installation of residential conservation practices; and enhance the three watershed towns' shoreland zoning ordinances to put in place long-term protections for Long Lake's water quality. Project staff worked with contractors, private road associations, landowners, the Maine Department of Transportation (MDOT), the YCC and the Towns of Bridgton, Harrison and Naples in order to reach these goals.

## **PROJECT OUTCOMES:**

- The project successfully removed 87 tons of sediment, and 74 pounds of phosphorus from entering Long Lake each year through NPS abatement projects. The methodology for calculating these numbers came from “Pollutants Controlled Calculation and Documentation for Section 319 Watersheds Training Manual”, MI DEQ. 13 NPS abatement project sites were used in the calculation.
- 36 NPS sites were addressed during the project. BMPs installed to address these sites included; waterbars, infiltration steps, stone & vegetated swales, plunge pools & sediment basins, shoreline vegetation, road grading & crowning, mulched paths and many more.
- The LEA worked with the town of Harrison to update the Town’s Shoreland Zoning Map. The previous version of the map had not been updated since 1993 and was in black and white. The new map LEA created for Harrison incorporated color and uses the most current data layers available. One of the most positive changes to the map was the addition of several new areas to Resource Protection, which is Harrison’s most protective district. These areas were identified by the Maine Department of Inland Fisheries and Wildlife as high or moderate value for wading bird habitat. The new Shoreland Zoning map was adopted at town meeting in June of 2007
- LEA also worked on updating Bridgton’s Shoreland Zoning Map during the project. The primary focus for these revisions was the addition of new areas into the Resource Protection District. These areas were designated based on newly identified high and moderate value wading bird habitat. The map also incorporated several important revisions based on landowner, planning board and DEP input. The new Shoreland Zoning Map was adopted at town meeting in June of 2009.

## **PROJECT PARTNERS:**

Cumberland County SWCD  
Lakes Environmental Association  
Town of Bridgton  
Town of Harrison  
Town of Naples

## **CONTACT INFORMATION:**

DEP – Donald Kale, (207) 822-6319, donald.kale@maine.gov

Sponsor – Jami Fitch, Cumberland County SWCD, (207) 892-4700, jami-fitch@me.nacdn.net, cumberlandswcd.org

## **PHOTOS & GRAPHICS**

Include 2-5 project photos or other graphics to draw in attention of readers. These may be somewhat hard to come by, but they are probably equally if not more important than the text. You can ask project sponsors to send you digital photos, you could scan things in your deliverables file and/or you could use digital photos that you have taken during the project.

Try to avoid using very large digital files. Feel free to just place the jpgs right in the folder with the Word file. (Note: You do not need to generate the watershed map like the one in the sample report. We will do that—unless of course you already have one that you could share with us.)

Submissions could include:

- scenic photos of the resource
- before and/or after photos of NPS sites
- workshop or group event photos
- tables, maps and/or pie charts from watershed survey or other reports
- photo of a project publication or newspaper article