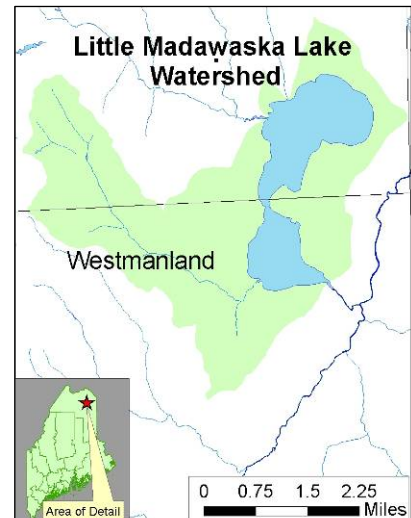


# Little Madawaska Lake Conservation Project

#2003R-35

Waterbody Name: Little Madawaska Lake  
Location: Westmanland – Aroostook County  
Waterbody Status: Removed from Impaired List  
Project Grantee: Town of Westmanland  
Project Duration: July 2006 – September 2008  
319 Grant Amount: \$79,700  
Local Match: \$82,269



## PROBLEM:

Madawaska Lake is a 1564-acre lake with two distinct basins, known locally as the Big and Little Lake. The Little Lake is located entirely in the Town of Westmanland, while the Big Lake is located entirely in unorganized territory, T16 R4. The lake was listed as impaired in 1988 due to frequent algae blooms and a TMDL was completed in 2000. Water quality improved following changes in timber harvesting practices, septic system replacements and increased oversight and assistance to lakefront properties. The lake was removed from the impaired list in 2006.

The western side of Little Madawaska Lake is bordered by seasonal camps and year round residences. These structures are accessible by a single road, Little Madawaska Lake Road (LMLR). The Town of Westmanland and the residents of LMLR are responsible for the road upkeep and condition. Excessive erosion and sedimentation from the road was identified as a high priority problem in a 2003 watershed survey. The watershed survey also identified numerous high priority residential sites, which included driveways, unstable shorelines and lack of buffers. Together these land uses have contributed a significant load of sediment and nutrients to the lake.

## PROJECT DESCRIPTION:

The goal of the project was to significantly reduce pollutant loading to Little Lake. The Town of Westmanland worked with landowners to correct significant erosion problems on the LMLR and camp lots. An engineering study completed in 2003 on the LMLR helped prioritize work sites on the road. The town hired the engineering firm that had completed the study to design the BMPs and conduct inspections of some of the complex BMPs. The same engineer was hired to help design BMPs on a few of the residential lots where there were significant problems and space was limited.



A local contractor who is certified in erosion control practices was hired to install BMPs, which included establishing and/or reshaping ditches, adding appropriate road surface material, grading, installing plunge pools, replacing culverts and reconstructing a stream crossing on LMLR. Residential BMPs included redirecting water from driveways into stable areas, planting buffers, limited use of rip rap, controlling roof runoff, and using reverse drainage swales.

## PROJECT OUTCOMES:

- The greatest outcome is the stabilization of major sections of the Little Madawaska Lake Road. The road had been a significant source of sediment load to the lake that contributed an estimated 82.3 tons of sediment/year and 82.3 pounds of phosphorous/year to the lake.
- The correct alignment and sizing of the McClusky Brook crossing prevented a significant washout from occurring during May 2008 County flooding event.
- Sediment and nutrient loading to the lake was reduced by an estimated 83.9 tons of sediment and 83.9 pounds of phosphorous/year (EPA Region 5 Method) The TMDL set a target of 227 pounds of phosphorous from entering the lake; this project met 37% of the target.
- The homeowners and town also put tremendous support behind this project with nearly all the match raised in cash.



## PROJECT PARTNERS:

Residents of Little Madawaska Lake Road

## CONTACT INFORMATION:

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