

Maranacook Lake-North Basin Watershed Survey & Demonstration Project

#98-18

Waterbody Name: Maranacook Lake - North Basin
Location: Readfield - Kennebec County
Waterbody Status: NPS Priority Watersheds, Most At Risk
Project Grantee: Town of Readfield
Project Duration: March 2000 – January 2004
319 Grant Amount: \$12,750
Local Match: \$11,678



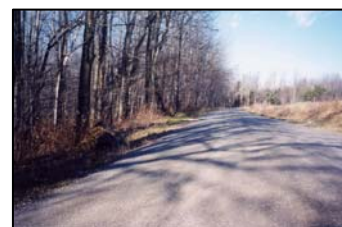
PROBLEM:

The north basin of Maranacook Lake is located almost entirely in the Town of Readfield. It has a surface area of 595 acres and a 12.7 square mile watershed. The north basin flows into the southern basin of Maranacook Lake - a secondary water supply for the Town of Winthrop. The southern basin flows to Annabessacook Lake and then to Cobbossee Lake.

The north basin is heavily developed and has 92 year-round homes, 178 seasonal homes and a summer youth camp. Water quality is threatened by increasing development and year-round home conversions. Oxygen depletion occurs annually at depths below 20 feet, which allows phosphorus to be released from bottom sediments, adds to the level of phosphorus in the water and renders the cooler bottom waters unusable by fish. The potential for nuisance algal blooms is above average.

PROJECT DESCRIPTION:

The purpose of the project was to survey and identify existing and potential sources of erosion, construct a demonstration project, plan for implementation of conservation practices at other identified problem sites, and educate shoreland land owners and citizens of Readfield about water quality protection.



Nearly 30 volunteers participated in a training workshop and the survey of 25 camp roads. A total of 108 erosion sites were identified. In addition, the Cobbossee Watershed District and Kennebec County SWCD completed a shoreline survey by boat of the entire 10.2 miles of shoreline and identified 980 feet of eroded shoreline. Numerous conservation practices were installed and demonstrated on Thorpe Shores Road and two adjacent driveways. A Youth Conservation Corp was assembled and assisted in the demonstration projects. Two mailings were sent to the about 300 property owners in the watershed prior to and after completion of the survey. Five articles were published and the annual town report included information about the project. The survey results were presented at a town selectboard meeting.

PROJECT OUTCOMES:

- 108 erosion sites and 980 feet of eroded shoreline were identified in the watershed and shoreline survey. A watershed survey report was completed- “Maranacook Lake-North Basin Camp Road & Shoreline Erosion Survey Summary Results”, August 2001.
- Camp road and driveway demonstration projects were installed on Thorpe Shores Road and included the following:

Road re-shaped	Rubber razor blades (2)
Culvert replacement (2)	Open-top box culverts (3)
Culvert armoring and plunge pools (2)	Vegetated buffer
Ditch re-shaped (2000’)	Waterbars (7)
Ditch armored (1000’)	Project and BMP identification signs
Ditch turn-outs (4)	
- The demonstration work spurred additional conservation practice installation. The Thorpe Shores Road Association took initiative to raise funds for remediation on the remaining segment of road not included in the demonstration project. Other road associations have installed conservation practices with assistance from Kennebec County SWCD.
- Cobbossee Watershed District obtained EPA 319 funding in 2004 to survey the southern basin and develop a management plan for the entire Maranacook watershed.



PROJECT PARTNERS:

Town of Readfield
Cobbossee Watershed District
Kennebec County Soil and Water Conservation District
Hillier & Associates, Inc.
Readfield Boy Scout Troop 650 & Youth Conservation Corps
Readfield Conservation Commission
Friends of Maranacook Lake

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Suggested Citation:
Maine Department of Environmental Protection (2005) “Nonpoint Source Management Program Annual Report 2004,”
Document # DEPLW0701 2005. Augusta: MDEP.