

Unity Pond Watershed Restoration- Phase I

#2003R-19A - WIFAP

Waterbody Name: Unity Pond (Lake Winnecook)

Location: Burnham, Thorndike, Troy, Unity – Waldo County

Waterbody Status: Impaired, NPS Priority Watershed

Project Grantee: Waldo County SWCD

Project Duration: January 2004 – December 2006

319 Grant Amount: \$54,000

Local Match: \$69,197 (local), \$6,000 (ME Dept. Ag.)



PROBLEM:

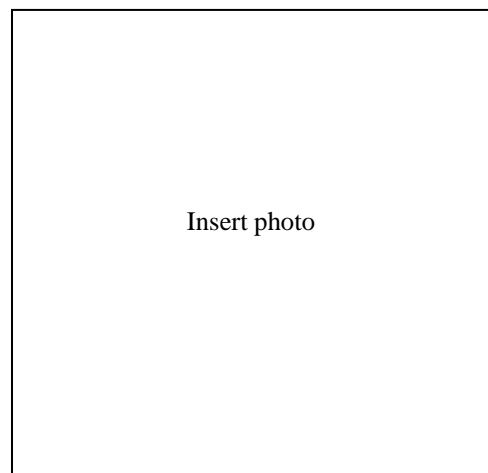
Unity Pond (also known as Lake Winnecook) is a 2,423 acre waterbody with a mean depth of 22 feet that is valued for fishing, swimming, boating and wildlife. The pond has a long history of nuisance algae blooms in the late summer and early fall, due to phosphorus from erosion and sediment sources in the watershed and from phosphorus accumulated in the pond bottom sediments.

The 32.7 square mile watershed is mostly forested with only about 7% agricultural and 6% developed lands. Residential areas along the lakeshore, agricultural lands, roads, and low density residential are the more significant watershed phosphorus sources. The Unity Pond Phosphorus Control Action Plan and TMDL Report (September 2004) provides a thorough assessment of the watershed and water quality conditions and actions needed to help restore water quality.

PROJECT DESCRIPTION:

The purpose of the Phase I project was to build local support and control erosion and export of sediment and phosphorus loads in order to reduce the magnitude and duration of algal blooms in Unity Pond.

Guided by the TMDL report, the Waldo County SWCD and its key partners coordinated efforts to install best management practices at the highest priority sources of phosphorus. The project provided technical and financial cost sharing assistance for BMP design and installation and established a support network that will help continue local stewardship in the Unity Pond watershed. The project worked with individuals, local organizations and town officials to provide educational information and site specific recommendations.



PROJECT OUTCOMES:

- Conservation practices that reduce sediment and nutrient loading were installed at 20 high priority sites (4 agriculture sites, 2 town roads, 3 public access sites and 11 shoreline properties). BMPs included a grazing and fence system, conversion of a corn field to a permanent cover crop, barnyard water runoff control system, vegetated buffers, rain gardens, 2 nutrient management plans, and a road stream crossing with a high water bypass.
- Technical assistance and educational information was provided to 34 individuals, including private landowners, three unorganized neighborhood camp road associations and the Towns of Unity, Burnham and Freedom.
- The project reduced annual pollutant loading to Unity Pond by an estimated 951 tons of sediment and 1093 pounds of phosphorus. Staff estimated installation of conservation practices and closure of a poultry egg farm operation accounted for much of this reduction (952 tons of sediment and 1370 pounds of phosphorus).
- Supplemental funds were secured through the MBNA Historical and Conservation Grant Program to design and install BMPs at medium priority shoreline property sites. Some of the conservation practices installed included vegetated buffers, rain gardens and roof dripline trenches.
- The Unity Pond project coordinator worked extensively with the Friends of Lake Winnecook to increase the active membership, improve communications and help coordinate activities.
- The value of local contributions to the project was \$69,197, which far exceeded the planned goal of \$33,250. This was due to the MBNA grants and strong participation from Unity College and the University of Maine Cooperative Extension.
- A watershed-based plan was developed to outline a general strategy for NPS implementation in the watershed to improve the water quality of Unity Pond.

PROJECT PARTNERS:

Unity College
USDA Natural Resources Conservation Service
Maine Department of Agriculture
University of Maine Cooperative Extension
Friends of Lake Winnecook
Unity Barn Raisers
Towns of Unity and Freedom

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