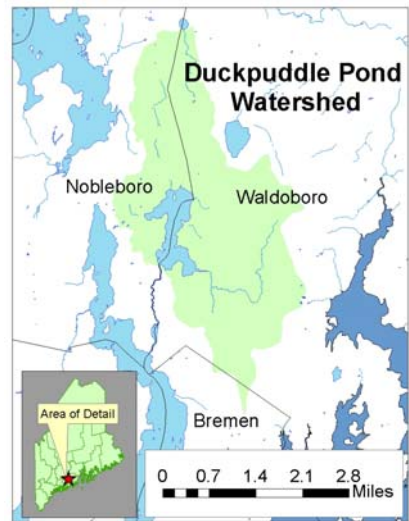


Duckpuddle Pond Watershed Restoration Project

#2000R-37

Waterbody Name: Duckpuddle Pond
Location: Nobleboro, Waldoboro, Lincoln County
Waterbody Status: Impaired, NPS Priority Watershed
Project Sponsor: Knox – Lincoln County SWCD
Project Duration: September 2000 – December 2004
319 Grant Amount: \$128,043
Local Match: \$81,708



PROBLEM:

Duckpuddle Pond is located in the towns of Nobleboro and Waldoboro and does not attain water quality standards (Class GPA) because of algal blooms. The contributing watershed of 8.47 square miles is mostly forested with interspersed agricultural and rural residential land uses. In 1994 and 1995 the pond experienced severe and prolonged algal blooms. Pemaquid Watershed Association and DEP completed a watershed survey in 1995 and identified 55 nonpoint source pollution sites, 75% of which were road related.

PROJECT DESCRIPTION:

The project's primary purpose was to implement corrective actions for land based sources of phosphorous that were identified in the watershed survey. Sites were chosen based on the severity of the problem and its impact to water quality. A high priority agricultural site was chosen where a manure storage facility, corn silage / haylage leachate containment system, winter cover crop seeding, permanent seeding of a crop field and adoption of a nutrient management plan was proposed. Working with the watershed towns, a number of town road sites were chosen for water quality best management practices implementation. Private roads were also targeted for BMP installation.



PROJECT OUTCOMES:

- Project staff worked with the Spear Farm, one of the largest agricultural producers in the watershed, to upgrade their manure storage facility to accommodate the milking herd of 188 Animal Units. This system also collects the milkhouse waste and discharges it directly into the manure storage system. This system alone reduced pollutant loading by 12,283 pounds of chemical oxygen demand and 237 lbs phosphorous.
- Two roads were chosen for the Town of Waldoboro to correct using best management practices. Cross culverts and riprap ditch lining were installed on the west end of Old County Road to allow discharge to be spread throughout the down gradient buffers. On a second site, a failing stream crossing at Beaverdam Brook was repaired and the east end of Old County Road was restored.
- The Town of Nobleboro installed 5 culverts along with inlet and outlet protection to improve ditch stabilization on Old County Road and Duck Puddle Road. Maintenance provisions have been established to help ensure long term effectiveness.
- As part of the project, the Cramer Road Association stabilized a ditch line, installed turn outs, and replaced a failing culvert over a small stream.
- A nutrient management report looked at the corrective actions taken for the entire project and estimated that around 600 pounds per yr of phosphorous loading has been eliminated through out the watershed.
- A *Duckpuddle Pond Water Quality Classification Attainment Status Report* was prepared by Lake & Watershed Resource Management Associates. The report summarized the current attainment status, the water quality trend and the duration and magnitude of algal blooms from 1994-2002. This report concluded that although early signs of improving water quality may be related to local conservation activities, further study will be necessary to assess long term trends.

PROJECT PARTNERS:

Knox – Lincoln County SWCD
Pemaquid Watershed Association
Town of Waldoboro
Town of Nobleboro
Spear Farm
Cramer Road Association



Project partners conduct a shoreline survey.

CONTACT INFORMATION:

David A. Waddell, DEP - (207) 287-2111, david.a.waddell@maine.gov

Mary Tiel, Knox-Lincoln SWCD - (207) 273-2005, mary-tiel@me.nacdnet.org

Pemaquid Watershed Association - (207) 563-2196, pwa@midcoast.com

Suggested Citation:

Maine Department of Environmental Protection (2006) "Nonpoint Source Management Program 2005 Annual Report," Document# DEPLW0758. Augusta: MDEP.