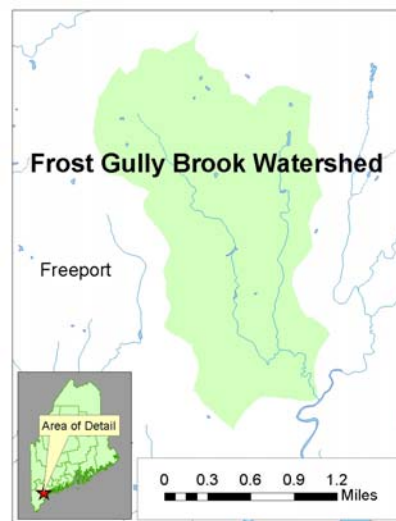


Frost Gully Brook Watershed Retrofit Project-Phase II

#2001R-28

Waterbody Name: Frost Gully Brook, Harraseeket River
Location: Freeport, Cumberland County
Waterbody Status: NPS Priority Watersheds, Impaired
Project Sponsor: Cumberland County SWCD
Project Duration: August 2001 - August 2005
319 Grant Amount: \$69,134
Local Match: \$52,754



PROBLEM:

The Frost Gully watershed is the largest of the three watersheds draining the downtown village area of Freeport - an area of approximately 2.45 square miles. Over the past decade, Freeport has experienced significant growth both in population and in the number of commercial establishments in the downtown village area. The brook drains into Mill Stream, which flows into the Harraseeket River, the site of a valuable clam flat resource. The economic value of this resource is estimated at \$1.77 million. Frost Gully Brook is also an important recreational resource for the town.

Frost Gully Brook is classified as a Class A stream. The 2002 and 2004 Integrated Water Quality Reports list the brook as impaired for aquatic life and recreation. The causes are dissolved oxygen and bacteria due to urban nonpoint source pollution. Monitoring during Phase I of the project and by DEP indicated that Frost Gully Brook has serious water quality problems that are caused primarily by polluted stormwater runoff from intensive urban development in the downtown village area. The major pollutants of concern are nutrients, solids and bacteria. The most serious of the water quality problems stems from one small tributary, referred to as the "urban drainage" that parallels the lower portion of Bow Street.

PROJECT DESCRIPTION:

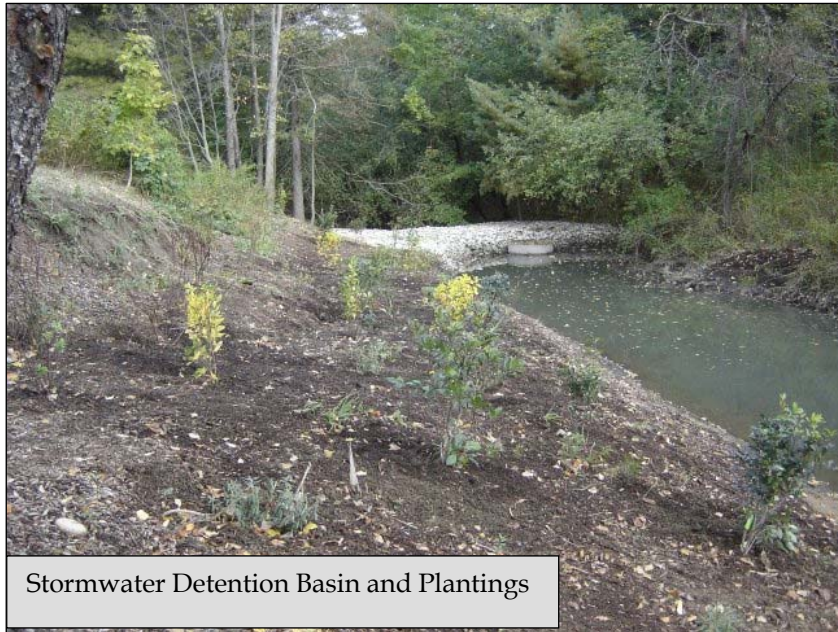
The goal of this project was to install Best Management Practices (BMPs) at four sites and then assess water quality conditions after construction. BMPs were installed at four sites in the watershed. One site was completed under the MDOT Surface Water Quality Protection Program. The follow-up monitoring was not completed as planned due to property ownership changes, construction delays and the departure of the USM staff person contracted to do the monitoring. DEP conducted macroinvertebrate monitoring in 2005 and plans to do post-construction monitoring if a contractor can be secured.

A workshop was held at the Bow Street site, where a Freeport High Environmental Science class planted more than 100 trees. In addition, the Environmental Science class has committed to collecting water quality data and presenting it to the town annually.



PROJECT OUTCOMES:

- Four sites were retrofitted with Best Management Practices in order to reduce the pollutant load entering the brook.
- A strong connection between Freeport High School students and the water resources in the town was established. Freeport High School students planted more than 100 trees at the Bow Street site, and the Environmental Science teacher and class have committed to continue monitoring the brook.
- Landowners and the town were educated about stormwater management.
- Freeport benefited by fitting the project into NPDES Stormwater Phase II requirements and their goals for managing stormwater.



PROJECT PARTNERS:

Town of Freeport

Freeport High School

Maine Department of Transportation

CONTACT INFORMATION:

Mary Ellen Dennis, DEP – (207) 287-7729, mary-ellen.c.dennis@maine.gov

Jami Fitch, Cumberland County SWCD – (207) 856-2777, jami@cumberlandswcd.org

Suggested Citation:

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