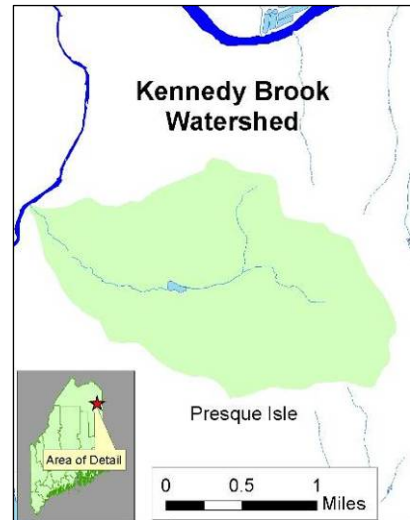


Kennedy Brook/Mantle Lake Watershed Improvement

#2007WW21 - WIFAP

Waterbody Name: Kennedy Brook and Mantle Lake
Location: Presque Isle – Aroostook County
Waterbody Status: Tributary to NPS Priority Watershed (Presque Isle Stream)
Project Grantee: Central Aroostook SWCD
Project Duration: September 2007 – September 2009
319 Grant Amount: \$30,000
Local Match: \$25,890 (local), \$20,000 (ME Dept Ag)



PROBLEM:

Kennedy Brook is a subwatershed of Presque Isle Stream, and Mantle Lake is an impoundment situated midway between the headwaters and the confluence with Presque Isle Stream. Mantle Lake is the focal point of a busy city park with trails, bathrooms, picnic shelters and playground equipment.

Row crop agricultural land occupies 42% of the Kennedy Brook watershed. Because of the climate in northern Maine and the nature of row crop (particularly potato culture), fields may be bare 7 months of the year. The short growing season and late potato harvest in the fall often preclude farmers from establishing a cover crop in time for winter. This leaves fields susceptible to soil erosion from November until late June or early July, when a new crop is well established. Agricultural land is the major contributor of sediments in the Kennedy Brook watershed and in particular to Mantle Lake. A major agricultural operation in the watershed is the Christie Farm. This farm has 270 acres or 15% of the watershed. The watershed survey identified this area as a high priority.

PROJECT DESCRIPTION:

The project purpose was to improve water quality of Kennedy Brook and Mantle Lake by reducing sediment loads from agricultural land. The project focused on the steepest agricultural fields in the watershed

NRCS engineers surveyed the site, completed an assessment and designed two sediment basins with attendant rock-lined waterways, spillways and rock aprons. The basins were designed to collect sediments from the water and spread the output in a vegetated buffer. The design will provide 25 year, 24 hour protection and allow routine cleanout. Cavendish Farms, Maine provided a contractor to install the BMP structures, matched construction costs and agreed to a long-term maintenance plan.



PROJECT OUTCOMES:

- Best management practices were installed to capture soil lost from 65 acres of row-cropped fields in the Kennedy Brook and Mantle Lake watersheds.
- Pollutant loading to Kennedy Brook and Mantle Lake was reduced by an estimated 75 tons of sediment, 126.2 pounds of phosphorous and 252.3 pounds of nitrogen per year (RUSLE Method).
- The project generated momentum that will help address additional NPS pollution sources to Kennedy Brook and Mantle Lake.



Rock-lined waterways collect runoff from fields



Waterways transport runoff into sediment basins

PROJECT PARTNERS:

USDA Natural Resources Conservation Service, Presque Isle Field Office

Maine Department of Agriculture

Cavendish Farms, Maine

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