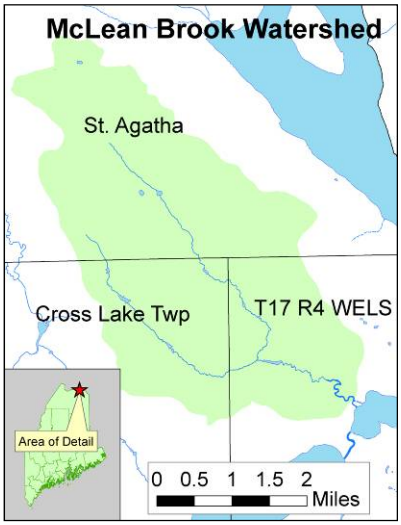
McLean Brook Watershed BMP Implementation Project

2010RR03

Waterbody Name:	McLean Brook
Location:	St Agatha – Aroostook County
Waterbody Status:	Attains Class B
Project Grantee:	St. John Valley SWCD
Project Duration:	January 2010 – October 2012
319 Grant Amount:	$33,044
Local Match:	$42,443



PROBLEM:

McLean Brook is located near the Canadian Border. The upper watershed topography is dominated by rolling, hilly farm fields, with slopes averaging 2% to 8% on Plaisted/Howland soils, however some slopes exceed 25% on Thorndike soils. Lower in the watershed the dominant land features include active industrial timberlands and wooded wetlands. McLean Brook and its tributaries occupy the open valleys between ridges; residences in the watershed are mostly farmsteads.

McLean Brook is classified as a Class B Stream and has an 8,260 acre watershed. Over the past decade there have been numerous calls to the DEP concerning a sediment plume from McLean Brook entering Long Lake. In 2009 DEP sampled the brook for the first time and found it failed to attain Class B standards. In 2008 the St. John SWCD completed a watershed survey identifying a number of agricultural-related NPS pollution issues, some of which could be addressed with conservation practices. The shape of agricultural parcels in this area is long and narrow, which limits the use of conservation practices such as contour planting. In addition, the timing of the potato harvest in this northern climate severely limits establishing a post-harvest winter cover crop. Overall, the majority of McLean Brook's water quality issues are due to row crop production in the upper watershed that has resulted in sediment and nutrient loads to the Brook.

PROJECT DESCRIPTION:

The 319-funded watershed survey completed by the St. John SWCD identified six major NPS sites, one is an ATV crossing and the other five are a combination of agricultural and road issues. Specifically, many of the tillage practices encroach on local roads or discharge storm events onto local roads and into associated ditches without any method of pollutant removal, treatment, or filtration. To solve these problems District staff coordinated communication and design plans between landowners, the town of St. Agatha, and the NRCS. During the

A grass-lined waterway breaks up the watershed and diverts field runoff into a stabilized area.

project, it was discovered that St. Agatha did not have the ownership and road maintenance responsibilities for Flat Mountain Road but rather those lay with the Maine DOT. The District then coordinated with Maine DOT and the local grower/landowner to design and install road-related BMPs.

PROJECT OUTCOMES:

- Numerous BMPs were installed to reduce erosion and sediment on about 500 acres of row crops, local and state roads.
- The Town of St. Agatha and farmers cooperated on installing BMPs on town roads and farm fields.
- Maine DOT, local farmer and St. John SWCD installed a road ditch turnout into a buffer at the edge of a field.
- An eroding ATV trail stream crossing and the approaches to the crossing were stabilized.
- Pollutant loading to McLean Brook was reduced by 887 tons of sediment, 1,008 pounds of phosphorus, and 1,976 pounds nitrogen per year.

PROJECT PARTNERS:

Local landowners
Town of St. Agatha
Maine Department of Transportation

CONTACT INFORMATION:

Kathy Hoppe, DEP, 207-540-3134, kathy.m.hoppe@maine.gov
Sigrid Houlette, St. John SWCD, 207-834-3311, sigrid.houlette@me.nacdnet.net
www.sjv.me.nacdnet.org

Town road lacking a stabilized ditch

Town road with a grass-stabilized ditch

Suggested Citation:
Maine Department of Environmental Protection (2013) "Nonpoint Source Management Program 2012 Annual Report," Document # DEPLW-1245. Augusta: MDEP.