

West Branch Sheepscot River Water Quality Restoration - Phase II #2002R-12

Waterbody Name: West Branch of the Sheepscot River

Location: Palermo, China, Windsor & Whitefield
Kennebec, Waldo and Lincoln Counties

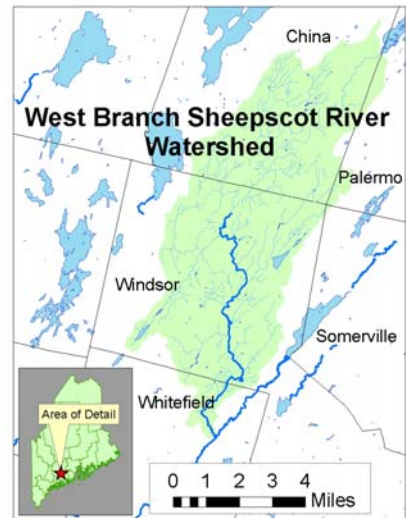
Waterbody Status: NPS Priority Watershed, Impaired

Project Sponsor: Kennebec County SWCD

Project Duration: October 2002 – January 2005

319 Grant Amount: \$187,500

Local Match: \$248,932



PROBLEM:

The West Branch of the Sheepscot River fails to attain Class AA water quality standards for bacteria and dissolved oxygen due to nonpoint sources. The watershed (about 50 square miles) is mostly rural with a few areas of concentrated residential development. Atlantic salmon is listed as an endangered species. Atlantic salmon populations have declined within the entire Sheepscot River, in part, due to sedimentation of spawning habitat, high water temperatures and other habitat factors. Atlantic salmon require cool, well-oxygenated streams with coarse gravel beds and suitable water depths and velocities. Atlantic salmon habitat is lost if dams, road culverts, pollutants, elevated water temperatures, or reduced stream volume block or delay adult passage to spawning areas. Sediment eroded from roads, cleared and developed land, and agricultural fields and pastures fills spaces in gravel streambeds, reducing productive capacity. Several stream and watershed surveys documented these types of problems at over 100 specific sites in the watershed.

PROJECT DESCRIPTION:

Phase II continued work to help restore water quality in the West Branch of the Sheepscot River to attain Class AA standards and support high quality Atlantic Salmon habitat. The project provided technical and financial assistance to towns and landowners prompting use of BMPs to reduce polluted runoff from roads, agricultural, and other lands.

The plan called for installation of BMPs at 20 high and medium priority road sites and 5 riparian buffer sites. Water quality monitoring was continued at 12 stations for 3 years. Kennebec County Natural Resources Conservation Service worked with farmers to use USDA farm bill programs to help install practices at agricultural sites.



PROJECT OUTCOMES:

- Towns, MDOT, and private landowners constructed BMPs at 30 road sites and stream crossings that were sources of erosion and sedimentation. Over 3 miles of road ditches were established, 8 culverts were replaced, 6 settling basins installed, over 1000 feet of geotextile material used, 600 feet of recycled asphalt material installed and 1/2 mile of shoulders were paved or had berms installed. These improvements were funded by \$84,000 in grant monies and over \$230,000 of matching funds.
- Sediment loading into the West Branch was reduced by roughly 36 tons/year (Region 5 Model and WEPP).
- Extensive (12 stations) water quality monitoring was continued for 3 years and guided by a Quality Assurance Plan. A Water Quality Report summarized the outcome of 6 years (1999 - 2004) of monitoring. Dissolved oxygen, bacteria and temperature exhibits a relatively stable trend. Exceedences of Class AA criteria are isolated in specific reaches.
- Staff secured funding for a fluvial geomorphic assessment of the river.
- Towns leaders and road crews learned new skills to help with design and installation of roadside runoff BMPs, road maintenance, winter sanding, and environmental permits to both protect the river and maintain roads at lower costs.



PROJECT PARTNERS:

Sheepscoot Valley Conservation Association
Towns of China, Windsor, Whitefield and Palermo
Sheepscoot River Watershed Council
Natural Resources Conservation Service
Maine Department of Environmental Protection

Maine Department of Transportation
Maine Atlantic Salmon Commission
Maine Department of Agriculture

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