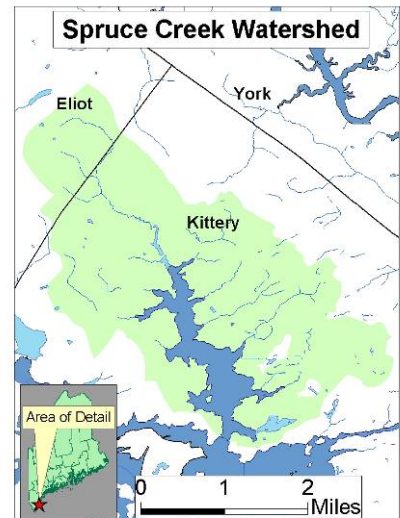


Spruce Creek Watershed Survey

#2005R-01

Waterbody Name: Spruce Creek
Location: Kittery and Eliot – York County
Waterbody Status: NPS Priority Watershed, Impaired
Project Grantee: Wells National Estuarine Research Reserve
Project Duration: May 2005 – January 2007
319 Grant Amount: \$23,725
Local Match: \$19,322



PROBLEM:

The Spruce Creek watershed covers 9.6 square miles in Kittery and Eliot in southernmost Maine. The creek flows into the Piscataqua River about 1.5 miles from where the river meets the Gulf of Maine. The creek is primarily fed by six freshwater streams and includes approximately 3 square miles of tidal area (including high salt marsh, ledge and mud flats). Watershed land use includes sparse residential development and some active farmland and woodlots in the upper reaches in Eliot. Along the Route 1 and Route 95 corridor, there are extensive impervious areas in commercial strip malls, roads and interchanges. The tidal portion is residential with larger homes along the immediate shoreline.

The Maine DEP lists Spruce Creek as Impaired due to bacterial contamination, low dissolved oxygen, toxic contamination and a compromised ability to support aquatic life. Although a portion of Spruce Creek was open to shellfish harvesting in the past, the flats have been closed since 2005 due to poor water quality and high fecal coliform concentrations. The Spruce Creek Association formed in 2002 to promote watershed stewardship and now has over 180 members.

PROJECT DESCRIPTION:

The purpose of this project was to identify, document, and prioritize NPS sites within 250 feet of the estuary and major tributaries of Spruce Creek. On June 4, 2005 over 50 volunteers were trained to document NPS pollution sites, riparian area conditions, and any other impacts on water quality. Over the course of the summer and fall, staff and volunteers surveyed over 56 miles of shoreline and identified 197 NPS sites.



Survey data, maps and recommendations for each site were compiled in the report, *Spruce Creek Watershed: Non-Point Source Pollution Survey* (June, 2006). Copies of the report were shared with town officials and the public, and the report was also posted on the Spruce Creek Association's website. Public outreach was provided to the general public, planning boards, selectmen, conservation commissions and land trusts through mailings, posters, press releases and the survey training session. Letters about the project were mailed to over 280 riparian landowners. A total of 49 people attended two public presentations about survey findings.

PROJECT OUTCOMES:

- A shoreline survey of Spruce Creek and its major tributaries was completed. The survey documented 197 NPS sites. The most prevalent NPS problems included excess nutrients, lack of vegetated shoreland buffer, trash and debris, impervious surfaces and flow restrictions.
- The *Spruce Creek Watershed: Non-Point Source Pollution Survey* report was completed in June, 2006. The report includes maps and descriptions of the identified NPS sites.
- The survey project established the Spruce Creek Association as a prominent leader in the watershed and helped galvanize local support for ongoing Spruce Creek protection efforts. Since the survey project, a watershed-based plan has been completed, and the Town of Kittery was awarded a 319 grant to begin watershed mitigation efforts in April 2008.
- The value of local match for the project was \$19,322, which far exceeded the planned goal of \$13,325. High volunteer participation in the survey and the Town of Kittery's \$2,500 contribution to the project helped boost match levels.



50 volunteers participated in the Spruce Creek survey. Due to the high turnout, 75% of the survey was completed on the first day. A local restaurant donated lunch to project volunteers.

PROJECT PARTNERS:

Town of Kittery
Town of Eliot
Kittery and Eliot Conservation Commissions
Kittery Shellfish Commission
Kittery Department of Public Works
Kittery Land Trust
Great Works Regional Land Trust

Spruce Creek Association
Spruce Creek Watershed Council
Maine State Planning Office
Maine Department of Marine Resources
Southern Maine Regional Planning Commission
Nonpoint Education for Municipal Officials (NEMO)

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Suggested Citation:

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