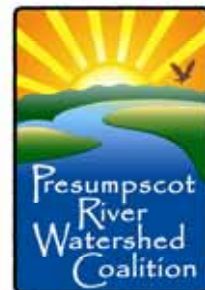


2007 Summary Report
Presumpscot River

Youth Conservation Corps



A COOPERATIVE PROJECT OF





Thanks to everyone who helped to make
the
Presumpscot River YCC a huge success!

Program Funding & Support

U.S. Environmental Protection Agency
Casco Bay Estuary Partnership
Presumpscot River Watershed Coalition
Cumberland County Soil & Water Conservation District
Friends of the Presumpscot River
Presumpscot River Watch
Portland Trails
Maine DEP
Maine DOT
City of Portland
Portland Parks and Rec.
Town of Windham
Windham Public Works
City of Westbrook
Westbrook Public Works
Town of Gorham
Shaw Bros.
Falmouth Land Trust



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Forrest Bell, Presumpscot River Watch
Karen Young, Casco Bay Estuary Partnership
Diane Gould, U.S. Environmental Protection Agency
Betty Williams, Cumberland County SWCD
Matt Craig, Casco Bay Estuary Partnership

Background Information

The Presumpscot River Youth Conservation Corps (YCC) completed its second season in August, 2007. This report showcases the variety of conservation projects that the crew completed throughout the 8 week season. This program was highly successful, and project staff are working on securing funding for an additional season in 2008.

What is a Youth Conservation Corps?

The YCC model has been successfully adopted to protect and improve water quality in several other watersheds in Maine. YCC staff provide free technical assistance, labor and education to help address a wide range of pollution sources throughout the watershed.

A Technical Director oversees all aspects of the program including publicity, hiring and working with landowners to plan projects. Crew leaders supervise 5-person teams and make sure that projects are installed properly and safely. Local high school students are hired as crew members and work through the summer to plant vegetation, stabilize eroding soil and install a variety of conservation practices.

Why do we need a Presumpscot River YCC?

- * Despite recent improvements, water quality in the river remains degraded. As the river is cleaned up, development along the shoreline is resulting in significant soil erosion and a loss of vegetated buffers alongside rivers and streams. Increased runoff and erosion has also altered stream channels and continues to degrade the river's once thriving fishery. The Presumpscot River Youth Conservation Corps (PRYCC) is working to reverse these impacts on both private and public lands through the implementation of recognized BMPs (Best Management Practices).
- * An active coalition of partners is in place to guide the PRYCC and other watershed improvement projects. The Presumpscot River Watershed Coalition (PRWC) is made up of more than a dozen government and private organizations concerned with improving fisheries, mitigating impacts from watershed development, and preserving natural areas along the river. Several studies have identified specific problem areas for improvement. Referring to the *Presumpscot River Management Plan*, the PRWC will guide the PRYCC toward high priority improvement efforts.
- * YCC's promote stewardship among community members and projects yield tangible water quality benefits. Organizers also rave that YCC's are an effective way to raise awareness, energize communities and inspire local youth to become environmental leaders.

Accomplishments

In just eight weeks, a team of five high school students, led by a crew leader and program director, successfully completed over 14 erosion control projects in the Presumpscot River Watershed. By the end of the summer they had:

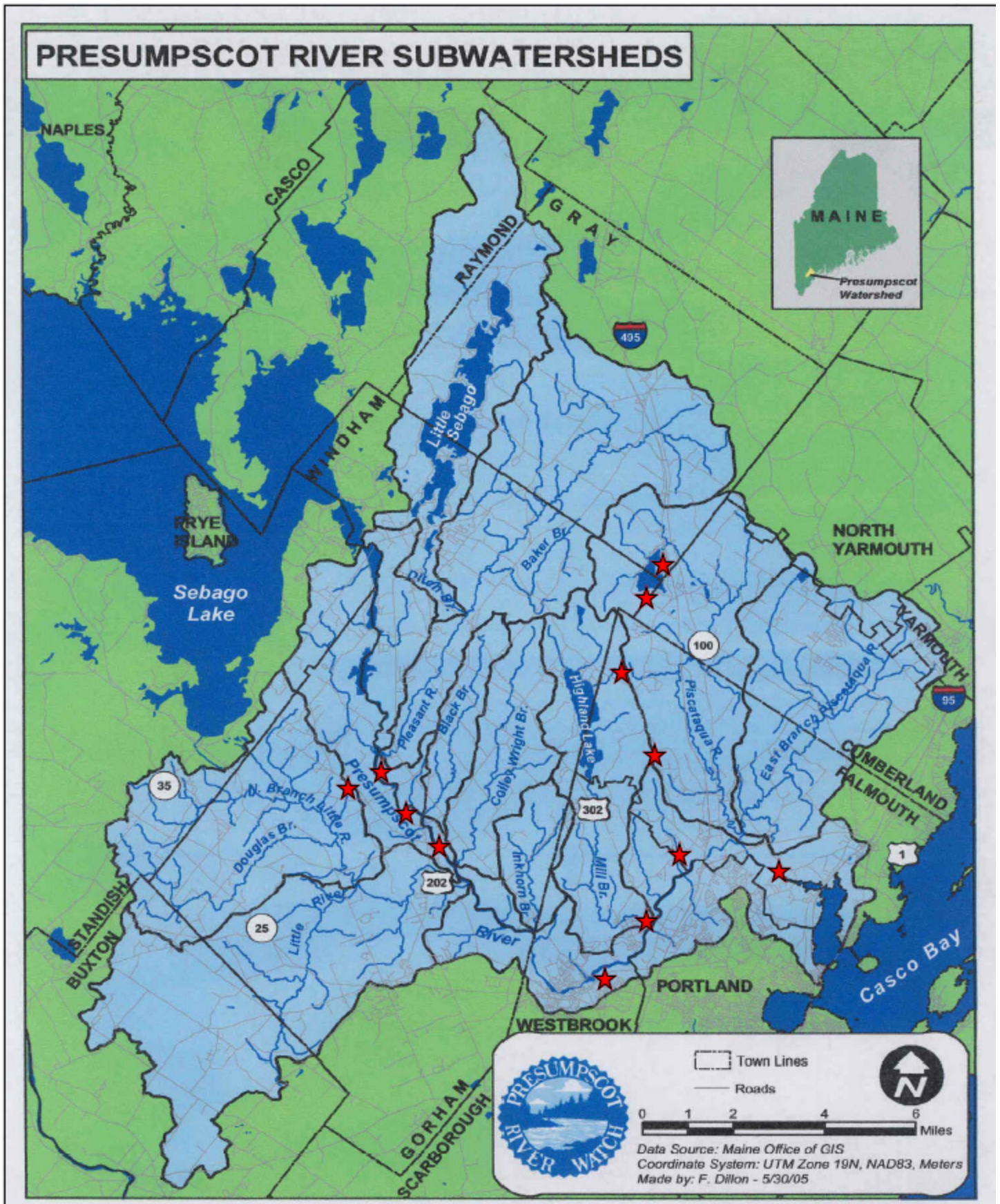
- * Planted 763 trees, shrubs, groundcovers, and perennials.
- * Spread 52 cubic yards of mulch.
- * Hand-placed 57 cubic yards of stone.
- * Installed 8 water bars to divert runoff to stable areas for infiltration.
- * Built and repaired 17 infiltration steps and landings.
- * Stenciled 42 storm drains.



Summary of Conservation Practices Installed

| <u>Type of Conservation Practice</u> | <u>Number Completed</u> |
|--------------------------------------|-------------------------|
| Shoreline Vegetation | 8 |
| Infiltration Landings | 1 |
| Grass Cultivation | 2 |
| Erosion Control Mulch | 7 |
| Culvert Stabilization | 2 |
| Trail Stabilization | 9 |
| Runoff Diverters | 8 |
| Roof Dripline Trench | 5 |
| Storm Drain Stenciling | 42 |
| Slope Stabilization | 7 |
| Infiltration Steps | 17 |
| TOTAL | 108 |

Presumpscot River YCC 2007 Project Sites



Infiltration Steps & Vegetative Buffer Strips

Infiltration steps and landings use crushed stone to slow down and infiltrate runoff before it reaches the water. We used pressure treated timbers and rebar to secure the rock in place and provide a contained area for the water to collect. Infiltration steps are ideal for shorefront property where access is necessary and foot traffic can often be high.

Vegetated buffers provide a filter and percolation area for the runoff that comes from our home and play areas. The vegetation in the buffer uses the nutrients carried in the stormwater as fertilizer.

Riverbank Park, Westbrook



One of three sets of infiltration steps that were retrofitted at Riverbank Park by increasing the depth of the steps, filling with larger (1 1/2") crushed stone and reinforcing the edges with sidebars and riprap. Westbrook Public Works provided assistance and all the necessary materials for the work completed at Riverbank Park.

Riverton Trolley Park, Portland



The crew planted 300 plants, trees and shrubs to help restore this buffer so that the nutrients from runoff do not reach the Presumpscot River, where they can cause algae blooms and a host of other problems. Portland Parks and Rec. provided invaluable assistance and materials for work completed at Riverton Trolley Park.

Runoff Diverters and Soil Stabilizers

Runoff Diverters are structures used to divert stormwater runoff to stable areas for infiltration. Diverters can be as simple as raised “speed bumps” such as timbers sunken into a slope. The crew also used a new product called Geoweb that is specially designed to stabilize heavily used areas by preventing lateral movement of soil through confinement.

Blackstrap Preserve, Falmouth



Trail runoff was causing severe erosion on this steep trail section in Blackstrap Preserve. The crew measured and cut timbers that were on site and installed the waterbars to divert runoff to small plunge pools and vegetated areas. The crew also leveled out the soil and reinforced the timbers with rocks to help slow the runoff further and allow infiltration.

Shaw Park, Gorham



The park was planning to use this site which was experiencing severe soil erosion to rent canoes and kayaks this summer which would increase foot traffic and soil disturbance. The YCC installed 328 sq. ft. of Geoweb, providing a load distribution system that would stabilize the surface and prevent further loss of soil. Shaw Bros. Construction and Gorham Parks and Rec. provided all the necessary materials.

Path Stabilization

It is important to provide stable walking areas to maintain access to the lake while reducing soil erosion. Steep slopes can be stabilized with infiltration steps, landscaping timbers and mulch, or vegetation. For flatter areas, paths should be covered with mulch or crushed stone to protect the soil below.

Sloped areas where there is limited to no foot traffic should also be properly stabilized. These areas can be closed off with vegetation or stone to prohibit traffic and to hold soil in place.

Dundee Park, Windham



This path leading from the parking lot to the beach was washing out every year due to stormwater runoff. The crew spread 14 yards of erosion control mulch and installed waterbars at the top of each path to slow down and infiltrate the runoff. Windham Parks and Rec. supplied all the materials for completion of this project.

Earley Property, Windham



This path from the landowner's backyard to the lake was eroding due to foot traffic and stormwater runoff. The YCC installed an infiltration landing, planted a variety of shrubs and groundcovers and secured landscape timbers across the path to divert runoff into a vegetated area for infiltration. The area was also covered with erosion control mulch to protect the soil.

Ditch Stabilization and Roof Runoff

Ditches and stream crossings on paved and gravel roads need to be properly maintained to ensure they function properly and do not pollute water resources. They should be stabilized with grass and hay or stone riprap to prevent them from eroding.

Managing roof runoff is an important factor in reducing potential soil erosion and protecting the foundation from backsplash. The dripline trench collects and infiltrates stormwater until it soaks into the soil, minimizing soil erosion and wear on homes resulting from backsplash.

Blackstrap Road, Falmouth



The YCC stabilized two stream crossings with geo-textile fabric and riprap on Blackstrap Road that were experiencing severe soil erosion. Maine DOT provided all the necessary materials for work completed on Blackstrap Road.

Shaw Park, Gorham



The YCC created a dripline trench to protect this structure from the damaging effects of stormwater runoff. The trench now collects runoff coming from the roof and the adjacent hillside so it can soak into the soil and not end up in the nearby Presumpscot River.

Storm Drain Stenciling

Storm drains collect stormwater runoff that contains soil, fertilizers, pesticides, manure, and other toxic substances and debris. The water flows untreated into our rivers, streams, and eventually the ocean. Stenciling storm drains with a clean-water message is an effective way to discourage dumping, increase community awareness, and educate the public about the direct connection between polluted runoff, storm drains, and water quality.

Route 202 & Route 115, Windham

The YCC crew spent a day in Windham stenciling 42 storm drains. Special water-based latex spray paint was used to stencil the message "DON'T DUMP" in bright orange letters next to storm drains.



For more information, contact:

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