2005 Summary Report

Royal River Watershed

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Royal River Youth Conservation Corps

FRIENDS OF THE ROYAL RIVER

Youth Conservation Corps

FRIENDS OF THE ROYAL RIVER

Thanks to everyone that helped make the Royal River YCC a success in 2005!

Royal River Youth Conservation Corps

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Crew:
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Diane Gould, US EPA
Jessica Hunter, Maine DEP
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Sarah Plummer, Cumberland County SWCD
Betty Williams, Cumberland County SWCD
Karen Young, Casco Bay Estuary Partnership

Program Funding and Support

Maine DEP
EPA Five Star Grant
Libby Brook 319 Project
Casco Bay Estuary Partnership
Town of New Gloucester
Town of North Yarmouth
Town of Yarmouth
Sabbathday Lake Association
Crystal Lake Association

Casco Bay Estuary Partnership

Sabbathday Lake Association

Department of Environmental Protection, State of Maine

Cumberland County Soil & Water Conservation District

United States Environmental Protection Agency

Background Information

The Royal River Youth Conservation Corps (RRYCC) finished its second season in August, 2005. The Royal River will continue it's watershed work in 2006 with the goal of fixing pollution problems, enhancing habitat, raising awareness, and inspiring youth to become environmental leaders in the Royal River Watershed. This booklet showcases a diversity of the conservation projects completed this season, throughout 8 towns of 12 in the entire watershed.

Why do we need a YCC in the Royal River Watershed?

- The Royal River Watershed and its beautiful natural resources are in jeopardy. **Polluted runoff** is harming the scenic beauty, fish, recreational value, clam flats and other critical resources of the system. Otherwise known as nonpoint source pollution or NPS, polluted runoff includes road sand, soil, phosphorus, nitrogen, bacteria, debris and other pollutants washed into lakes and streams by water from rainstorms and snowmelt. The Royal River YCC was created in 2004 to start fixing these pollution problems within the watershed.
- The watershed is ready for coordinated on-the-ground action. Several local groups have completed studies and identified specific problem-areas that are perfect candidates for YCC assistance. Additionally, a diverse group of organizers have combined efforts to support and coordinate YCC activities in this region.
- YCC programs generate a myriad of benefits. The YCC model has been successfully adopted to protect and improve water quality on Sabbathday Lake and several other watersheds in Maine. YCC staff provide the community with free technical assistance, labor and education to help fix pollution problems throughout the watershed.

Wilkie's Beach is mulch happier now

Becca Gerber, David Miklovich, Crew Leader Abby Morgan, Nate Reimensnyder, Duncan Fowler and Mary Cloutier planted and mulched at Crystal Lake on Tuesday, July 12. The teens hail mostly from New Gloucester. Jeanne Adams photo.

The Royal River Youth Conservation Corps planted and mulched 50 non-invasive Virginiana roses at Wilkie's Beach last Tuesday. When the roses reach maturity they will prevent fence hopping and the mulched area will help prevent erosion. When theyt finished with the roses they tended to the area they had worked on last year at the Beach. Crew leader Abby Morgan said, "Vegetation is the best way to prevent erosion." The teens are paid but their labor is free to the town, funded by Friends of the Royal River - a non-profit group dedicated to protect the Royal River watershed. The group funds the corp through grants.

The corps will stay busy through August 19 and then will offer a tour of their work. Contact Henry Nichols at 847-9399 if you would like more info on the tour.

YCC in Action at the Royal River Watershed

ALL TOWNS—On July 5, The Royal River Youth Conservation Corps (YCC) kicked off its second season of work in the Royal River Watershed. The Royal River YCC partners with landowners to install erosion control measures on their properties.

Landowners purchase the necessary materials and the YCC crew provides technical assistance and labor free of charge.

Residents of the Royal River Watershed —Gray, New Gloucester, Pownal, Yarmouth, North Yarmouth, Freeport, Durham and Auburn — are eligible to work with the Royal River YCC. The ultimate goal is to protect water quality and habitat in the Royal River and the streams and lakes in its 142-square-mile watershed. The program is run by the Friends of the Royal River, with support and funding from several area towns, lake associations, Cumberland County SWCD, Maine DEP, and the Casco Bay Estuary Project.

Last summer, the Royal River YCC successfully installed over 20 erosion and pollution control projects and kept over 18 tons of soil out of the water. This season, the YCC crew will be completing a wide range of conservation practices in the Royal River Watershed, including storm drain stenciling in Freeport and Auburn, streamside buffer plantings in Gray and North Yarmouth, a variety of lakefront projects on Crystal and Sabbathday Lakes, and trail stabilization along the Royal River in New Gloucester and Yarmouth. A public tour on August 18will showcase a sampling of their completed sites.

For more information about the Royal River YCC, contact Henry Nichols at the Friends of the Royal River (847-9399) or e-mail sarah-plummer@me.nacdnet.org.

David Miklovich – New Gloucester, Abby Morgan (Crew Leader) - Portland, Duncan Fowler – New Gloucester, Mary Cloutier - Auburn, Nathan Reimensnyder – New Gloucester, Rebecca Gerber – Freeport/New Gloucester, Not Pictured: Kevin Santillo - Yarmouth.

The YCC was featured in several newspaper articles this season, including the Gray Monument and Falmouth Forecaster shown here. In addition, they were the focus of a segment of "Doug's Discovery" on WGME News Channel 13.

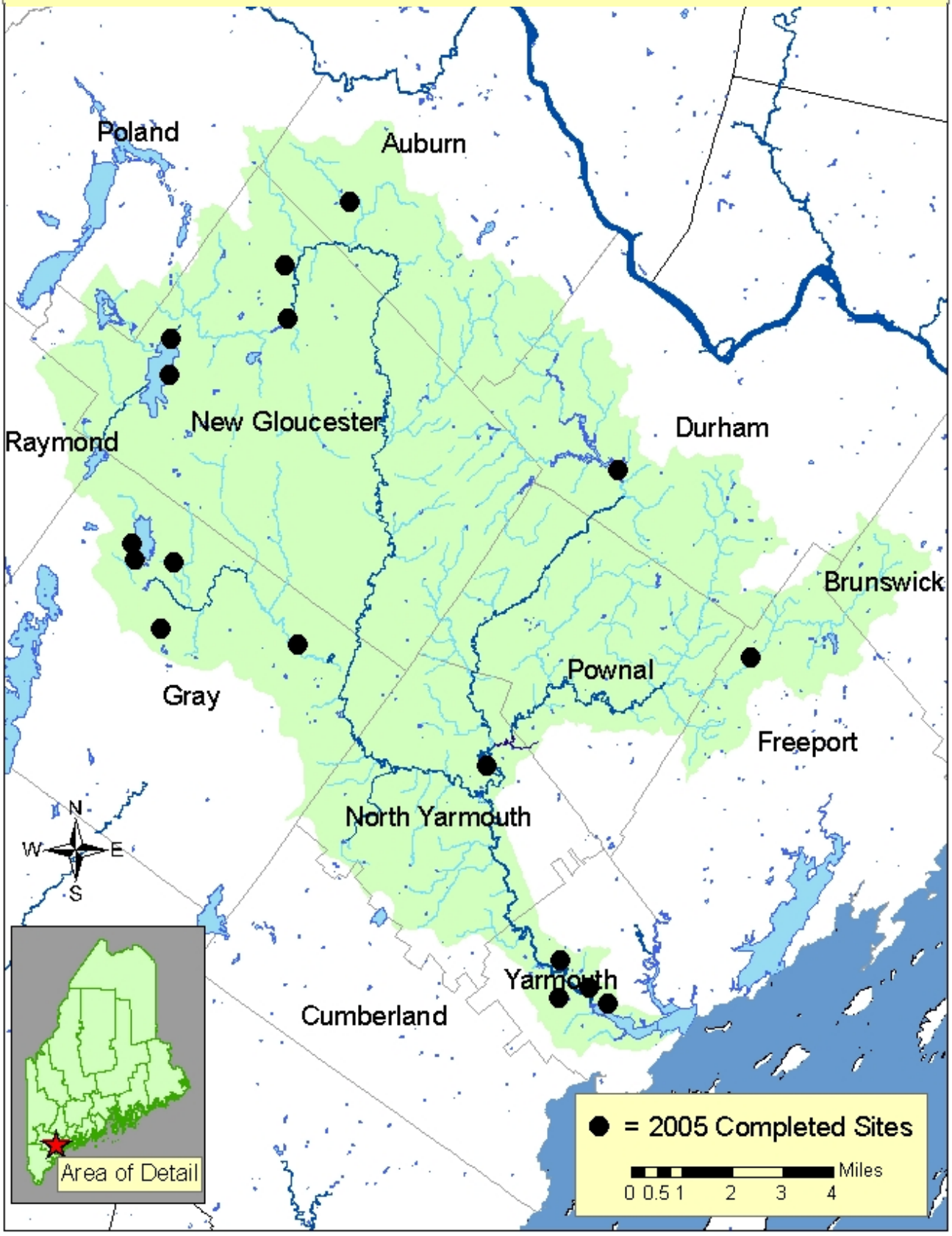
Accomplishments

In just seven weeks, a team of six local high school students, led by a crew leader and technical director, successfully completed over 34 erosion and pollution control projects within 18 locations in the Royal River Watershed. By the end of the summer they had:

- Planted 534 trees and shrubs
- Moved 66 cubic yards of mulch
- Hand-placed 42.5 cubic yards of rock
- Stabilized over 150 feet of ditches
- Created and enhanced over 450 feet of trails
- Led a tour for stakeholders showcasing completed projects
- INSTALLED OVER 366 CONSERVATION PRACTICES

Summary of Conservation Practices Installed	
Type of Conservation Practice	**Number Completed**
Buffer Planting	14
Infiltration Steps	21
French Drain	1
Shape/Re-seed Ditch and Culvert	3
Plunge Pool	2
Trail Stabilization	7
Water Bar/Water Diverter	12
Stone-Lined Turnout	3
Drywell	1
Stream Clean-up	1
Watershed Survey	1
Stormdrain Stenciling	300+
Total	**366**

Royal River Watershed: YCC Project Locations



New Gloucester

The YCC was able to complete several impressive projects in New Gloucester, which lies almost entirely within the Royal River Watershed. Selected sites were highlighted on the end of season tour, led by YCC crew members.

Morrissey Property, Sabbathday Lake

Whitney Property

The YCC created these paths with infiltration steps, consisting of timber steps that are back-filled with stone. Infiltration structures like these prevent erosion by helping runoff filter into the ground. Other eroded areas were planted with low-bush blueberries to help stabilize the soil.

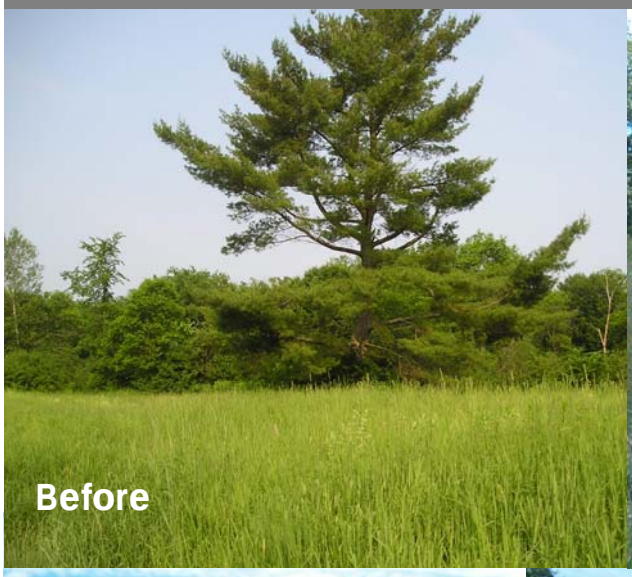
New Gloucester Fairgrounds

During this first project of the season, a network of trails was established to direct foot traffic using bark mulch, which serves to absorb water, reduce the rate of flow, and protect soil. Near an old boat launch, a vegetative buffer was planted and boulders were placed to prevent vehicles from driving down the steeply eroding hill.

North Yarmouth

The YCC undertook a large-scale riparian buffer planting project in North Yarmouth this year. Together with Curtis Bohlen from Trout Unlimited, the crew planted 280 trees along Chandler Brook, a tributary of the Royal River.

Chandler Brook Preserve



In 2005 and 2006, the YCC began a two-year riparian restoration project on what is currently open grassland. Friends of the Royal River assisted the town of North Yarmouth in acquiring this parcel for riparian habitat protection and passive recreational purposes. As the trees and shrubs become established, they will help anchor the stream banks, filter runoff, provide wildlife habitat, and shade the stream.

Photo's Courtesy of Curtis Bohlen, Trout Unlimited

Yarmouth

Four projects were completed in Yarmouth, including work at Grist Mill Park and a large-scale project at the Royal River Park. Additionally, the YCC participated in a stream clean-up behind Hancock Lumber on Main Street, and a project at the Public Town Landing.

Grist Mill Park

At this site, the crew filled in a severely eroded gully with crushed stone and defined a stone path. They also established two planting beds and shoreline buffers to stabilize eroded areas and enhance water filtration. Erosion control mulch was also added to unstable shoreline trails. This project was highlighted on the end of season tour.

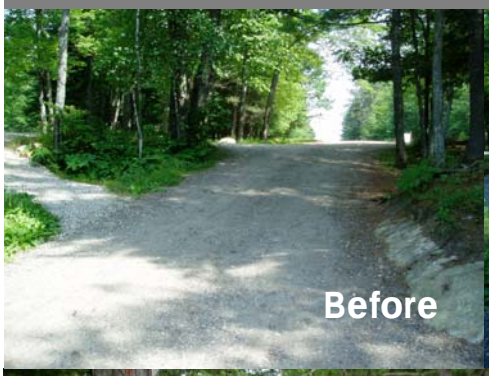
Royal River Park

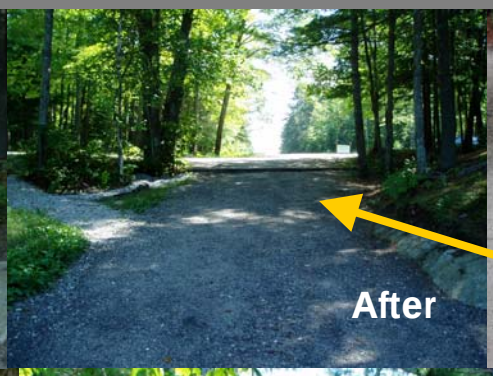
The YCC installed an impressive array of conservation practices at the Royal River Park this summer. They were able to stabilize a huge portion of the trail system by staking in logs and back-filling them with crushed stone to enhance water filtration. They also created infiltration steps, mulched eroded trails and root stems, and planted buffers. A sampling of this work was featured during the tour.

Durham

The Durham Conservation Commission nominated and helped coordinate a YCC project at the Runaround Pond Boat Launch. Work here included installing a rubber razor blade water diverter, mulching areas of bare soil and exposed roots, and adding crushed stone to create a French drain and two water turnouts.

Runaround Pond Boat Launch





The crew created and installed a rubber razor blade diverter. A strip of rubber, usually from an old conveyer belt, is sandwiched between two pressure-treated pieces of lumber and secured into the ground, with a portion of the rubber extending above ground. Water hits the rubber at an angle, and is diverted to a nearby vegetated area or other water infiltration device.

The eroding path and exposed root systems shown here were reinforced with mulch, which acts as a sponge that absorbs water and excess nutrients, and helps hold soil in place. Up to six inches was spread to protect the severely eroded roots in this high-use area.

Gray

The YCC was able to complete six projects and a wide diversity of conservation practices in Gray, which covers a significant area of the Royal River Watershed. Although not featured here, work was also completed at Pineland Farms, JW's Awesom Auto's, and Wilkies Beach.

Sawyer Property

This severely eroded driveway was stabilized with a rubber razor blade, two plunge pools and two level-lip spreaders. Water is now diverted by the blade and sent to the plunge pools, where it is collected and allowed to slowly percolate into the ground. The crew was proud to showcase this site during the tour of completed projects at the end of the season.

Libby Hill Trails

A variety of waterbars and trails, such as those featured here, were created throughout this site. Waterbars were fashioned from downed logs and installed in eroded areas to divert runoff. Erosion control mulch was used to define trail areas and encourage water filtration.

Weymouth Road

This eroded road shoulder leads to a drainage ditch that flows directly into Hatchery Brook, located in the upper Royal River Watershed. To reduce the amount of sediment flowing into the stream, the YCC crew reinforced a 150 foot stretch with over 10 cubic yards of rip rap.

Auburn, Cumberland, Freeport

Stormdrains collect stormwater runoff containing soil, fertilizer, manure, and other toxic substances and debris. This water flows unfiltered into our lakes, streams and eventually the ocean. Stenciling stormdrains with a clean water message like, "Don't Dump...Drains to Stream," is an effective way to discourage dumping, increase community awareness, and educate the public about the direct connection between polluted runoff, stormdrains, and water quality. This season, The Royal River YCC stenciled over 300 stormdrains in Cumberland and Freeport.

Stormdrain Stenciling

Moose Brook Watershed Survey

DARYN SLOVER/SUN JOURNAL

Big scrutiny for a tiny brook

Volunteers are studying Royal River tributary to see how its water quality has been affected.

BY SCOTT TAYLOR
Staff Writer

AUBURN — Nate Reimensnyder couldn't help himself.

Looking over a ditch between Washington Street and the Irving Mainway parking lot, Reimensnyder just had to clean it up a little. A volunteer with the Youth Conservation Corps, his job Monday was to observe and report the condition of Moose Brook. Strictly hands-off.

The shoulder of the ditch wasn't bad, as far as gas station parking lots go. Developers had taken care to keep most of the parking lot runoff from fouling the tiny brook's watershed. But the side was still lined with truck-stop refuse — bottles, cans, food wrappers and rusted bits of metal.

He knelt to pick up a rusted rivet gun by the side of the road.

"No, Nate, we're not here to repair it," said teammate Mary Cloutier.

Repairing it is the next step, a couple of years down the road, according to team leader Zach Henderson. He led a group of eight volunteers Monday as they wandered the Moose Brook watershed to see how its surroundings affect its water quality.

Moose Brook begins somewhere north of Interstate 95's Auburn cloverleaf. It stubbornly winds its way through southern Auburn, past gas stations and busy roads, industrial lands and RV parks. It's never a cascade. It's a 20-foot-wide channel at its widest and runs up to 5 feet deep during the wettest times.

It collects runoff throughout southern Auburn and part of Poland, eventually dumping its haul in the Royal River, which empties into Casco Bay.

"That's what we're looking for today — what's going to eventually make it into the Casco Bay," Henderson said.

It's far from pristine, according to quality studies. Tests in 1996 gave it a failing grade for not having enough dissolved oxygen. It failed two-thirds of the time for E. coli bacteria contamination.

Henderson's group spent Monday trying to figure out why. They looked for ways development might contaminate the brook. The watershed is already 6 percent developed, covered with hard materials such as

SEE BROOK PAGE B2

This season, the Royal River YCC had the unique opportunity of participating in the Friends of the Royal River's Moose Brook Watershed Survey in Auburn. Moose Brook is an urban stream that is a tributary of the Royal River. Currently, this waterbody is threatened by increasing development and associated polluted runoff.

Watershed Surveys utilize volunteers to identify and record potential sources of nonpoint source pollution. Results of the Moose Brook Watershed Survey will be complied into a report that will be used for future environmental planning and restoration efforts.

For more information or to nominate a site for 2006, contact:

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