



Cumberland County Soil & Water Conservation District

Fall 2010

DISTRICT NEWS

Long Creek Restoration Project: Mall Plaza Retrofit

The District was recently involved with a stormwater retrofit project at Mall Plaza in South Portland. The project is identified in the Long Creek Management Plan as one of the best opportunities to manage a large stormwater discharge into Long Creek. The Mall Plaza is situated on the corners of Maine Mall Road and Gorham Road in South Portland, co-located with Dick's Sporting Goods.

The Mall Plaza drainage area includes 3.4 acres of rooftop and 10.3 acres of parking. The retrofit was designed to fit among the existing retail and restaurant establishments. The largest property owner, GMG Limited Family Partnership, worked closely with the District and the consulting engineer, Deluca Hoffman, to develop a design that would take advantage of limited green space and the owner's willingness to lose some parking spaces and reconfigure a portion of the parking area.



Underdrained soil filter under construction. Each cell is comprised of geotextile filter fabric, a 12 inch layer of drainage stone and underdrain piping, and an 18 inch layer of soil media that provide the effective absorption of pollutants and fine sediment removal.

The retrofit project consisted of two phases. Phase I was completed this summer with the installation of an underdrained soil filter, used to treat 11 acres of impervious surface.



Completed underdrained soil filter. Stormwater is collected from the Mall Plaza site and distributed through a junction box to the separate cells. Overflow outlets (concrete structures with beehive covers) are designed to control runoff from storms greater than one inch.

Phase II took place this fall, when StormTreat units and StormTech holding tanks were installed to treat 3.5 impervious acres. Each retrofit component is designed to store and treat the first one inch of runoff.

Phase I of this retrofit (\$786,007) was funded through the American Recovery and Reinvestment Act (stimulus funding) of 2009, which is administered through the Maine Department of Environmental Protection Clean Water Revolving Fund Program. Phase II of this retrofit (\$248,000) is being funded by the Long Creek Watershed Management District with the assessments collected from participating landowners.

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- Adam Karch, *Project Coordinator*
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- David Chiappetta, *Soil Conservationist*
- Geoff Coombs, *Resource Conservationist*
- John Malley, *Earth Team Volunteer*



Aerial photo of the Mall Plaza project. Upper right: Soil media filter location. Middle: Storm Tech/Storm Treat area.

(continued from front)

The Long Creek Watershed Management District was recently developed to implement the Long Creek Watershed Management Plan, which includes cost effective, prioritized actions to retrofit existing built areas, improve stream habitat, and reduce pollutant loading from impervious surfaces. In 2009, the Environmental Protection Agency exercised its Residual Designation Authority that requires landowners to retroactively comply with state stormwater standards or

participate in the implementation of the Watershed Management Plan. To learn more, visit www.restorelongcreek.org.

Education: Falmouth’s Youth YardScapers

Last spring, District staff worked closely with two sixth grade science classes at Falmouth Middle School. Students began by learning general information about watersheds and nonpoint source pollution. They then formed a mock lawn care company, naming themselves Youth YardScapers, to learn more about environmental impacts from yard care products and practices.

Yard care products, such as fertilizers and weed and bug killers, are major pollutants in southern Maine waters. Students conducted an ongoing experiment to test effects of various lawn chemicals on water quality. Teams of students also worked within the “company” to become experts on healthy lawn care practices, such as topdressing, fertilizing, and pest control. As part of their research, they implemented the practices on the school’s courtyard. Finally, they presented their research and demonstrated the practices to a public audience of about 40 attendees. Several members of the audience took notes during the students’ presentation and stayed after to discuss their lawn practices with students and District staff.

Students’ written evaluations indicated the success of the program, with responses such as “you can care for your lawn without damaging the waterways around you” and “make sure the things you use and do are safe for local watersheds and the environment.” Students also learned how to conduct research projects and present their information to the public, stating “I liked getting to do the presentation in front of people, because I felt really important educating them,” and “I shared with my parents all of the healthy lawn care practices...and the affect on local watersheds. I only told my parents, but plan to share it with many more.”

This program will be modified this school year with hopes of future expansion. For more information, contact Sarah Plummer at sarah-plummer@cumberlandswcd.org.



Top: A student uses compost to topdress the Falmouth Middle School courtyard. Bottom: The Watering Wisely group presents their research to about 40 people.



Conservation Districts Gather at Northeast Conference

On August 9-11, the Maine Association of Conservation Districts hosted over 100 staff, supervisors and partners from around the Northeast at the Northeast National Association of Conservation Districts Conference to discuss "The Changing Climate of Conservation." The Conference featured new tools that allow Conservation Districts to overcome challenges presented by current economic pressures and featured sessions such as "Climate Change and Hazard Mitigation" and "Public Education and District Training." The conference also featured tours that highlighted the Presumpscot River, local agriculture, and restoration efforts in the Long Creek Watershed.

"The take away message is that Conservation Districts are in a unique position," said keynote speaker Dr. Curtis Bohlen, Executive Director of the Casco Bay Estuary Partnership. "They are the only institution whose focus is to bring local people together to identify what matters and work voluntarily and cooperatively to find solutions to local resource problems."

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- Curtis Bohlen
Executive Director,
Casco Bay Estuary Partnership

Soil and Water Conservation Districts, founded in the 1930's, are some of the nation's oldest conservation organizations. As the national voice for conservation districts, the National Association of Conservation Districts supports voluntary, incentive-driven natural resource conservation programs that benefit all citizens.

Updating Cumberland County's Hazard Mitigation Plan

The District has been working with the Cumberland County Emergency Management Agency to update Cumberland County's Hazard Mitigation Plan (HMP). Hazard mitigation is any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards. Updates to the HMP include reporting from all 28 Cumberland County municipalities on the status of their existing mitigation efforts and identifying new mitigation projects.



The Hazard Mitigation Plan includes measures to eliminate risk from natural hazards, like this 2010 winter storm. Photo credit: T. Greenway, Portland Press Herald.

The HMP planning team has been meeting with municipal officials to explain the update process and collect data. The team has gathered photographs and other historical documentation of existing locations and infrastructure subject to damage from natural hazards such as flooding, severe winter and summer storms, and wildfires. Identification of these mitigation projects in the HMP will help municipalities complete pre-disaster mitigation grant applications.

Enlisting public participation and municipal support for the plan and its mitigation projects are important to the update process. The Plan must be adopted by the local governing bodies of all 28 Cumberland County communities. The draft HMP is currently available for public review and comment and is posted on the Cumberland County website at www.cumberlandcounty.org/EMA/hmp_plans.htm. For more information, contact Chris Baldwin at chris-baldwin@cumberlandsacd.org.



Native Plant Spotlight

Obedient Plant

(Physostegia virginiana)

- Grows 18-24 inches tall with a 24 inch spread
- Prefers full sun to partial shade and moist, well drained soils
- Flowers are pink or white and bloom from late July through late September
- Can be aggressive in very fertile locations; to keep it truly obedient, plant it in drier sites
- Makes an excellent cut flower





Cumberland County Soil & Water Conservation District

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Cumberland County Natural Resource Assessment

Cumberland County Soil & Water Conservation District
is assisting the Natural Resource Conservation Service
in conducting a county-wide natural resource assessment.

Visit our website and take a moment to fill out a short
Natural Resource Assessment Survey at
www.cumberlandswcd.org

Your input will help create a plan to conserve our resources for the future.
Please note: A public meeting will be held in January 2011.

