What’s a-buzz in your yard?
Rain gardens can beautify and protect water quality

To some, rain gardens are the latest environmentally friendly landscaping tool, to others they are the well known and loved perennial plantings used to beautify yards and homes. In many ways rain gardens are like traditional garden beds – they add seasonal color and texture and provide wildlife habitat. But rain gardens also serve a very special purpose; they help protect critical water resources by reducing stormwater runoff, improving water quality, and recharging groundwater.

Rain gardens are a type of “bioretention” basin. They retain, absorb, and filter stormwater from impervious surfaces (roofs, driveways, or parking areas) that would otherwise run off into storm drainage systems connected to wetland and watercourses. Whether simple or complex, all rain gardens have a number of common features: they are situated to receive stormwater runoff from impervious surfaces; are sculpted to have a bowl-shaped area to pond water; have loose, absorbent soil; and are planted with deep-rooted perennials.

A few simple rules of rain garden design.

While there is no “right” way to design a rain garden, there are a few rules that help ensure they successfully function as a bioretention basin. Rain gardens should be sized based on the total impervious area draining to them. Typically, a rain garden for a single-family home will be at about 150 to 400 square feet, that is, anywhere from 12x12 ft to 20x20 ft.

Rain gardens should be constructed at least 10 feet downslope of building foundations and septic system leaching fields. Stormwater can be directed into the garden via roof gutter downspouts, rock channels, swales, or pipes, and a small depression or ponding area should be created in the middle of the rain garden to collect and hold the stormwater.

Rain gardens need loose soil and healthy plants to absorb and infiltrate stormwater. Depending on existing drainage, fertility, and pH conditions, soil amendment or improvement may be needed before planting. To ensure the garden is a success, plants should be selected that will best tolerate soil conditions and moisture regimes (possibly from very wet to very dry) likely found in the rain garden.

Native plants add value to rain gardens.

Many native plants are well suited for rain gardens. Gardens planted with natives not only provide water quality benefits but also habitat for native butterflies, birds, and other wildlife. Because native plants are adapted to local soil and weather conditions, they can thrive with minimal care. Native planted rain gardens are low maintenance once established – no regular fertilizing, watering, or mowing is needed, just a yearly cleanup to trim, weed, and mulch is required.

Rain gardens can be a fun family or neighborhood project that enhance the scenic beauty of your yard; protect our rivers, lakes, and streams from stormwater runoff; and serve to educate others about the importance of protecting precious water resources.

To learn more about rain gardens and how you can build one visit www.raingardens.org or search the internet for the key word “rain garden.”

***Information in this article courtesy of www.raingardens.org***
In 2003 the Bolton Conservation Commission worked with the Connecticut River Watch Program (CRWP) to design and implement a community-based monitoring program for the headwaters of the Blackledge River. This relatively undeveloped stretch of river is currently under significant development pressure. Recognizing the value of the Blackledge River as a natural resource both locally and regionally, the Conservation Commission is concerned that land use change may impact the health of the river. One goal of the monitoring program is to collect baseline water quality data and another is to gain a better understanding of the river’s current health.

Monitoring activities in the Blackledge River included a stream walk survey—a survey of in-stream and streamside physical characteristics—and a biological assessment. The stream walk survey provided valuable baseline data that can be used to monitor natural or human caused physical changes important to the life a stream supports, and identified degraded areas or threats to river health that need to be addressed. Water quality was assessed using the DEP rapid bio-

assessment method for volunteers—a streamside protocol for evaluating the benthic macroinvertebrate community. Benthic macroinvertebrates are aquatic insects and other organisms that live in the stream bottom. They are good indicators of water quality because some are more tolerant of pollution and changes in physical habitat than others.

This project is unique in that it is the first time CRWP has partnered with a municipal commission to plan and implement river assessment activities. We were excited to work with the Bolton commission, whose members enthusiastically embraced and carried out both the stream walk survey and bioassessment. Commission members will spearhead future river monitoring activities in town, and plan to branch out to other watershed areas and recruit and train community volunteers to participate in future river assessments.

Ongoing CRWP activities also include water sampling and bioassessments in the Mattabesset watershed, bioassessments in the Eightmile and Hockanum river watersheds and water sampling in the Pequabuck River watershed (a tributary of the Farmington). For more information about ongoing programs, upcoming CRWP activities, and how you can get involved, please contact Jane Brawerman at (860) 346-3282.

**Connecticut Stormwater Quality Manual to be released in Summer 2004**

The Connecticut Department of Environmental Protection has been working to finalize and publish a Stormwater Quality Manual. The manual provides planning tools and design guidelines for minimizing adverse impacts of post-construction stormwater runoff. The manual covers the important issues of on-site planning, source control, pollution prevention, and stormwater treatment.

Once published, the manual will be available as a PDF on CD and at the CT DEP web site. In addition, a limited number of hard copies will be distributed. Questions concerning the manual should be directed to Cheryl Chase, DEP Inland Water Resources Division at (860) 424-3850.

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- **Ongoing CRWP activities:**
  - Water sampling and bioassessments in the Mattabesset watershed
  - Bioassessments in the Eightmile and Hockanum river watersheds
  - Water sampling in the Pequabuck River watershed

**Reading the Land:**

**A Practical Workshop for Realtors**

- Using Soils Maps
- Wetlands Identification
- Soil and Septic Systems

**February 26, 2004  8:30 a.m.—noon**

For more information call Barbara at (860) 346-3282
**Implementation of Mattabesset Management Plan Continues**

**Mattabesset Stakeholders Group Reenergizes**

This past year, the Mattabesset Stakeholders Group Steering Committee reassessed its role and decided to focus on promoting the Management Plan for the Mattabesset River Watershed to selected municipalities. Representatives will sit down with elected officials, commissioners and staff to discuss the Management Plan and share success stories from other watershed towns. With the coming NPDES Phase II Stormwater deadline, municipalities have shown renewed interest in enacting measures of the Management Plan.

**Reaching Out to Streamside Landowners**

The District, with local support, mailed *The Backyard Stream Guide* to streamside landowners in Berlin, Cromwell, Rocky Hill and Middletown. The guide promotes land stewardship practices that help protect backyard streams.

**New Municipal Implementation Committees Working Hard Throughout the Watershed**

Cromwell’s Watersheds Conservation Committee has made progress on three major projects. First, members acquired historical photos and began developing text for an educational display. Secondly, town staff ordered and acquired stream signs to be placed at road crossings to inform citizens of local waterways. Lastly, members marked storm drains and distributed educational pamphlets about nonpoint source pollution. In addition, the Committee invited UCONN professor Donna Ellis for a walk in Cromwell Meadows to explain her research on purple loosestrife biocontrol. Local press coverage of the walk helped bring awareness of invasive plants to the residents of Cromwell and neighboring communities.

Rocky Hill’s new watershed management committee coordinated a storm drain marking program throughout the town this past year. The committee is now working in cooperation with the Mattabesset River Watershed Association to acquire stream crossing signs.

**Natural Resources Technical Training Continues in the District**

The District held two new – and very successful – workshops this past year. The first, *Stream Restoration Using Natural Channel Design*, introduced the principles of fluvial geomorphology (that is, the science of stream channel dynamics) and explored methods to apply these principles to stream assessment and restoration. Under the tutelage of Dr. Greg Jennings, Professor of Biological and Agricultural Engineering at North Carolina State University, workshop participants spent two days learning about stream channel formation, natural channel evolution, the Rosgen stream classification system, and restoration options for impaired streams. Field assessment techniques to determine key stream channel features (e.g., dimension, pattern, and profile) were demonstrated during a trip to nearby Sawmill Brook in Middletown. District staff are planning to apply the skills and knowledge acquired from this workshop to restoration projects in the Mattabesset and other lower Connecticut River watersheds.

The second workshop, *Planning for Nature*, featured Michael Klemens and other experts from the Metropolitan Conservation Alliance. This daylong workshop focused on using effective conservation decision-making tools to preserve ecological integrity while allowing for economic growth. Each of the 60 land use commissioners, town staff, and interested members of the public attending the workshop received a copy of the recent publication “Best Development Practices: Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States,” by Drs. Aram J.K. Calhoun and Michael W. Klemens. This publication offers guidance on how to integrate science-based wildlife and conservation information into land use planning.
District Holds 57th Annual Meeting

The Connecticut River Coastal Conservation District held its 57th Annual Meeting on October 22, 2003. Business included the election of four new board members: David Bingham, Jim Costello, Chris Holden, and Doug McKain. The District’s annual conservation awards were also presented.

Dr. Theodore Andreadis, Chief Medical Entomologist and Head of the Department of Soil and Water at the CT Agricultural Experiment Station treated attendees to a fascinating talk on West Nile Virus. With a knack for making the technical quite accessible, he covered a great deal of information on the origin, incidence, spread and control of the disease, and helped dispel myths about the connection between West Nile Virus and vernal pools.

Welcome New Conservation District Board Members!

David Bingham of Salem is a Physician by profession. He has long been active in local and regional conservation efforts, and is currently a member of the Eightmile River Wild and Scenic Study Committee, on the Board of the Salem Land Trust, and on the Salem Planning and Zoning Commission.

Jim Costello of East Haddam is an Electrical Engineer by profession. He has a strong interest in local conservation, practices organic farming, and first became active with the District as River Watch volunteer.

Christopher Holden of Durham, appointed as an alternate board member, is an Environmental Engineer by profession. He has a broad range of experience with environmental issues, ranging from site planning and design, to water resource protection and stormwater management.

Douglas McKain of Berlin, appointed as an alternate board member, worked in the field of Information Technology Services. He has been active with District efforts in the Mattabasset River watershed, serves on the Mattabasset Stakeholders Group Steering Committee, is Treasurer of the Berlin Land Trust, and is on the Trails Committee and works as a Trail Manager for Connecticut Forest and Park Association.

January 2004

The Connecticut River Coastal Conservation District, Inc. is a nonprofit organization whose mission is to promote the sound use and management of our natural resources through technical assistance and education.

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The District serves the towns of Berlin, Chester, Clinton, Colchester, Cromwell, Deep River, Durham, East Haddam, East Hampton, Essex, Haddam, Hebron, Killingworth, Lyme, Madison, Marlborough, Middlefield, Middletown, New Britain, Newington, Old Lyme, Old Saybrook, Portland, Rocky Hill, Salem and Westbrook.

The Board of Directors hold public meetings every fourth Wednesday, 7:00 PM, at the deKoven Community Center in Middletown. All programs and services are offered on a nondiscriminatory basis without regard to race, color, national origin, religion, sex, age, marital status or handicap.

Conservation Times is published by:
Connecticut River Coastal Conservation District, Inc.
deKoven House Community Center
27 Washington Street
Middletown, CT 06457
(860) 346-3282 (phone)
(860) 346-3284 (fax)
crivercoastal@ct.nacdnet.org