

The background image is a scenic view of a river, likely the Little River in Woodstock and Putnam, CT. It features a concrete bridge spanning the river, with two people wading in the water near the bridge. The surrounding area is lush with trees and vegetation, reflecting in the calm water. The text is overlaid on the top half of the image.

Thames River Basin Partnership Floating Workshop XVII

Little River (Woodstock and Putnam, CT), a
National Water Quality Initiative Watershed

A banner for the National Water Quality Initiative. It features a background image of a river flowing through a landscape with trees and hills. Overlaid on the left is a large, faint blue circular logo with a stylized 'N' and 'W' inside. The text 'National Water Quality Initiative' is written in large, white, sans-serif font across the top. At the bottom, the phrase 'Conservation Beyond Boundaries' is written in a smaller, yellow, sans-serif font, followed by 'NWQI' in a large, white, sans-serif font.

National Water Quality Initiative

Conservation Beyond Boundaries NWQI

- USDA Natural Resources Conservation Service (NRCS) and partners work with producers and landowners to implement voluntary conservation practices that improve water quality in high-priority watersheds while maintaining agricultural productivity.
- Priority watersheds where on-farm conservation investments will deliver the greatest water quality improvements.
- Involves coordination with local and state agencies, conservation districts, non-governmental organizations and others to implement this initiative.



Thames River Basin Partnership

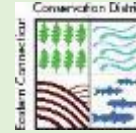
The Thames River Basin Partnership is a voluntary, cooperative effort to share organizational resources and to develop a regional approach to natural resource protection. The partnership grew out of locally led workshops held by the region's Soil and Water Conservation Districts.

Our Mission

- Protect the region's agricultural and natural areas being threatened by land use changes.
- Protect ground and surface water quantity and quality being threatened and degraded by contamination.
- Protect the region's biodiversity.
- Improve the coastal zone resource conditions.



Who are the Thames River Basin Partners?



Government and non-profit organizations, educational institutions, industries and municipalities with a shared focus on natural resource conservation in the greater Thames River watershed basin.



This workshop was sponsored in part by Millennium Power through The Last Green Valley and in partnership with the Eastern Connecticut Conservation District.



Floating Workshop XVII Planning Committee

- Jean Pillo, TRBP Coordinator
- Dan Mullins, ECCD
- Jim Hyde, USDA NRCS
- Lois Bruinooge, TLGV
- Eric Thomas, CT DEEP

Photo Courtesy of Patrick Smith

Thank you to our program sponsors and supporters!

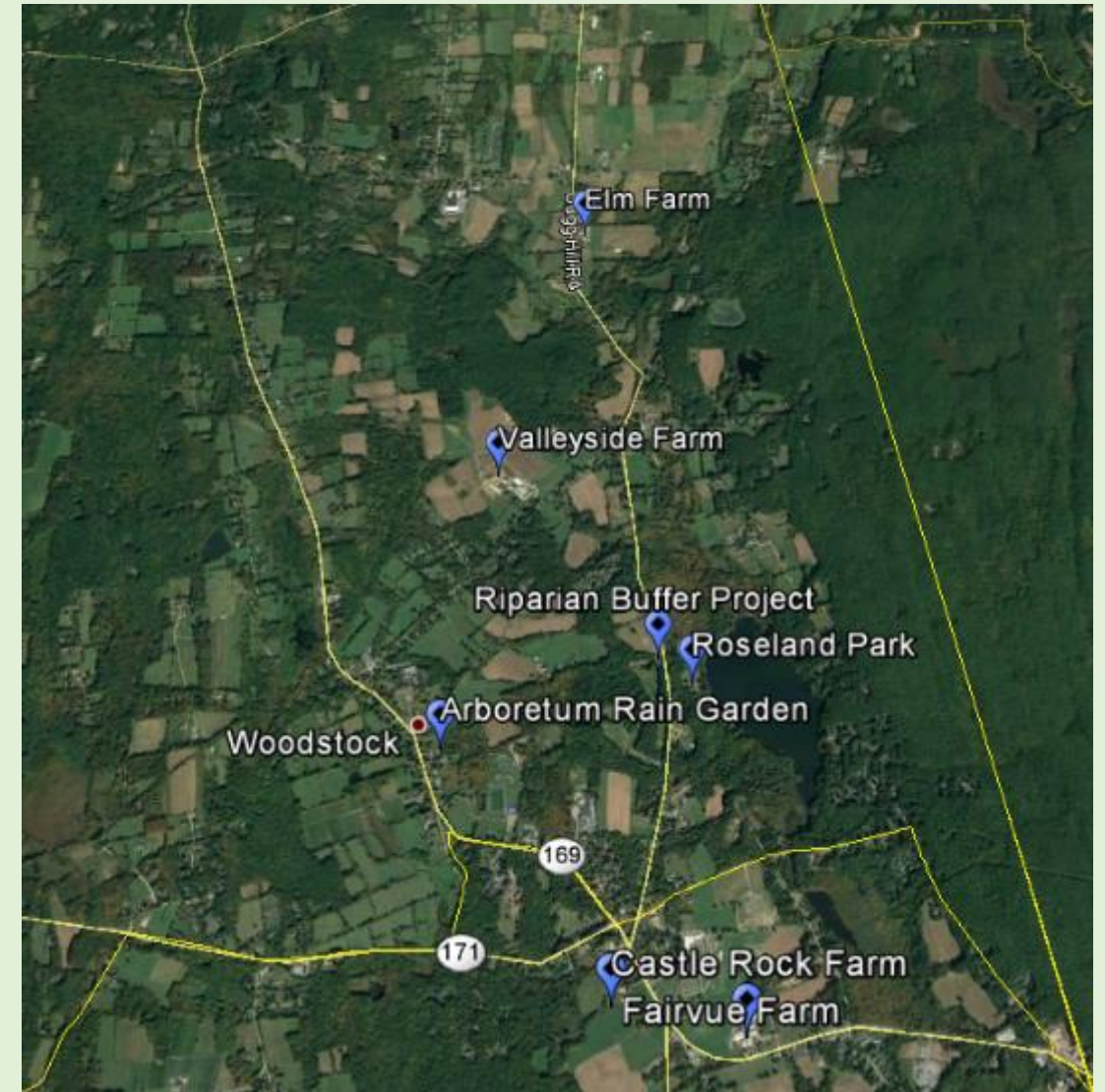


- Millennium Power
- The Last Green Valley
- Eastern Connecticut Conservation District
- Roseland Park Trust
- CT DEEP
- USDA Natural Resources Conservation Service
- Valleyside Farm, LLC
- Elm Farm, LLC
- Fairvue Farm, LLC



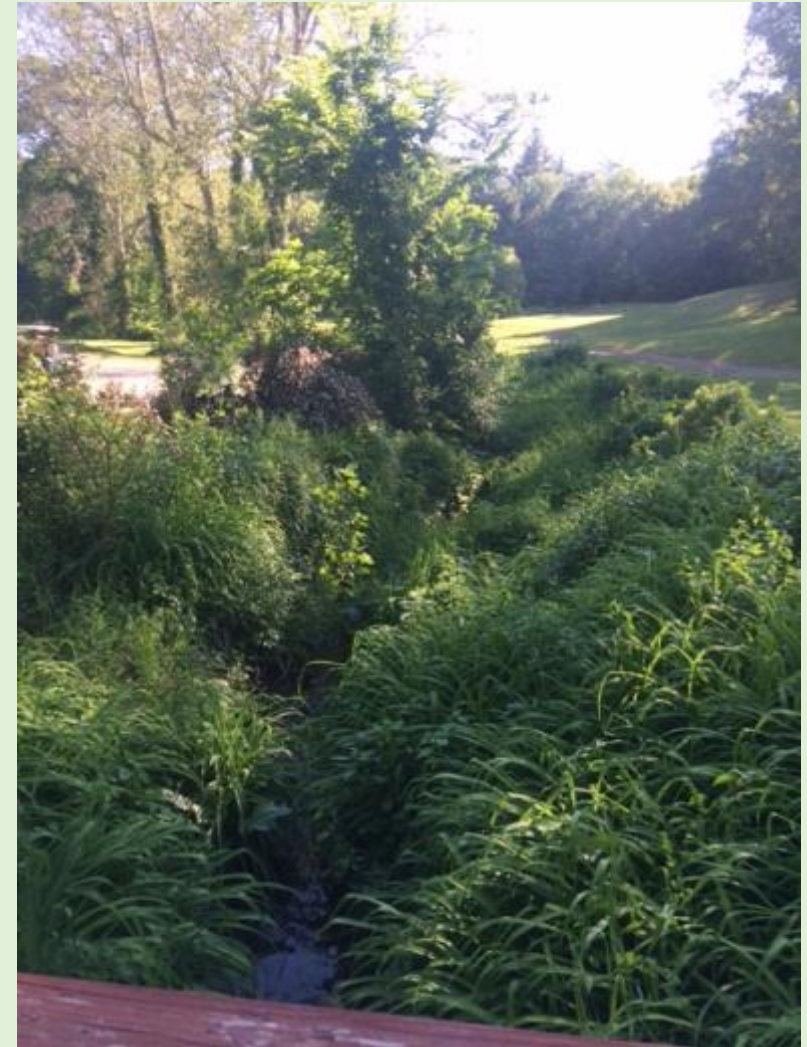
Special thanks to Rick Harless, Roseland Park Manager
<http://www.roselandpark.org/>

Roseland Park in Woodstock, CT hosted this year's Floating Workshop



Some of our workshop guests came early for an optional morning tour of complete and ongoing projects.

On the way to the first stop on the tour, we drove by the Woodstock Golf Course, where a riparian buffer was planted between the 9th hole green and the 1st hole tee to protect a small stream from runoff.



This project was funded in part by an US EPA Clean Water Act § 319 NPS grant through the CT DEEP.



Elm Farm was our first stop, where Matt Peckham described an Aerated Composting Facility for heifer manure and dairy mortalities.

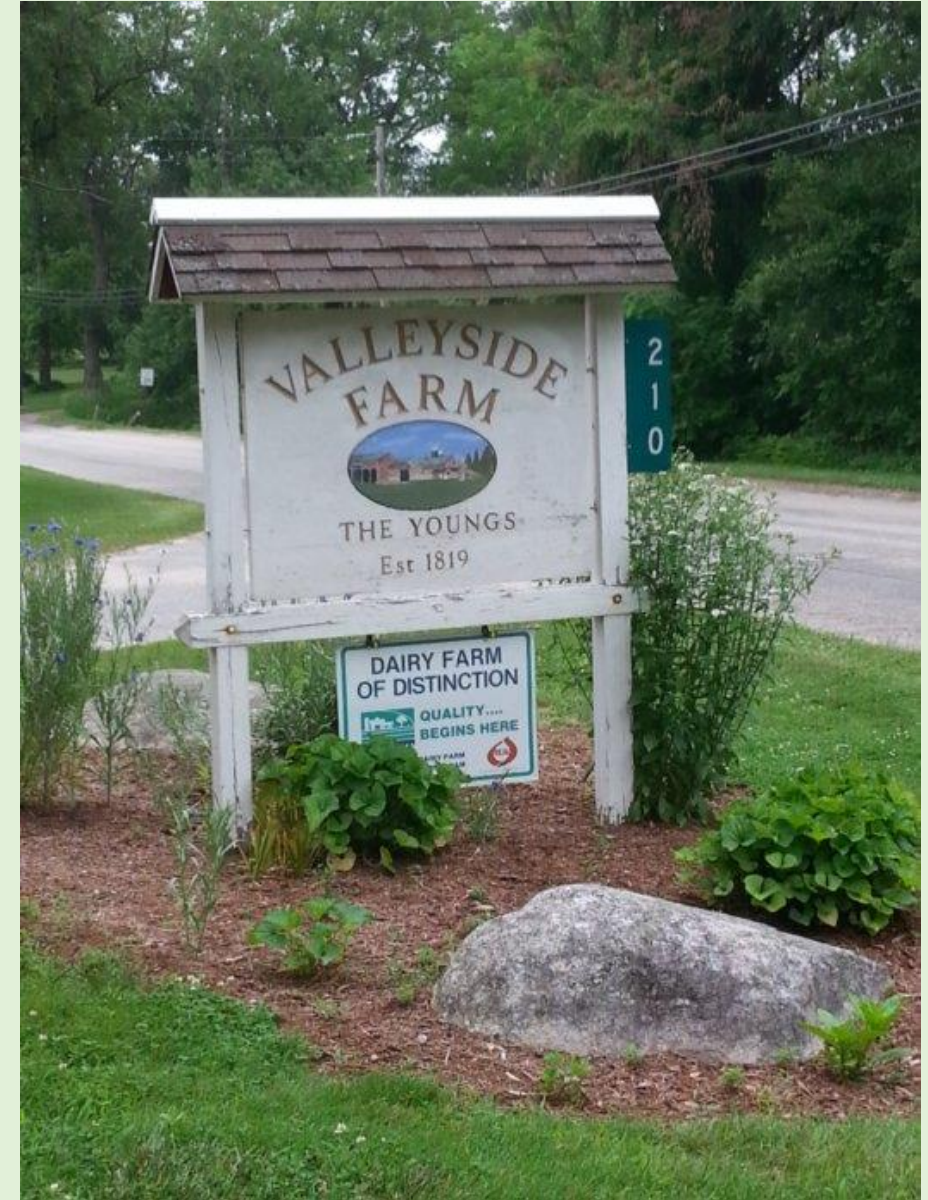


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Much to talk about at Valleyside Farm

- Silage Leachate Collection System
- SARE Cover Crop demonstration plots
- ECCD Conservation Innovation Grant
“Monitoring Edge of Field Monitoring”
- Newly completed heifer barn
- Precision Planting Equipment





State Agronomist Jim Hyde of USDA NRCS explains the SARE cover crop demonstration project at Valleyside Farm.



Project partners include NRCS, ECCD, UConn CT Ag Experiment Station, URI, CT NOFA, and 6 farmers in CT and RI

SARE Cover crop demo at Valleyside Farm



Goal 1:

Cover Crop Germination (GRM)

Typically: broadcast rye or mixed cover crop after 109 day corn, spring burn-down, then plant corn.

- Test Method: plant cover crop in the spring for ideal growing conditions under a mix of seeding methods:
- Each block has four seeding methods (treatments 1, 2, 3, 4) planted in each block or replication.
- Each block is replicated four times. Get the cover crop wet weights, dry weights, and canopy cover for analysis to describe which planting method resulted in the highest germination rate.
 - Grm 1: broadcast cover crop mix (100 lbs/ac)
 - Grm 2: broadcast + cultipack cover crop mix (100 lbs/ac)
 - Grm 3: broadcast + liquid manure applications (2500 gal/ac) over cover crop mix (100 lbs/ac)
 - Grm 4: drill winter rye @ 100 lbs/ac

Goal 2:

Cover Crop termination for biomass and nutrient retention (TRM)

Typically: Cover crop is burned down or terminated with broad spectrum herbicide 2-3 weeks before spring planting so it doesn't interfere with the corn crop germination or growth.

- Test Method: Terminate cover crop after spring planting for an additional 2-3 weeks of more vigorous cover crop growth (root development for soil health and shoot development for nutrient retention).
- Each method is replicated four times (one field each method). Get cover crop wet weights, dry weights, and canopy cover and measure corn growth and yields.
 - Trm1: pre-plant termination, 2-3 weeks before corn planting, typical pre- and post-emergent spray
 - Trm 2: post-plant termination, 1-2 weeks after corn planting, typical post-emergent spray

ECCD was awarded a Conservation Innovation Grant from the USDA NRCS to compare two different edge of field monitoring runoff collection systems



High tech ISCO flow meters and auto-sampling equipment are set up to collect stormwater runoff samples at the edge of a corn field.



A passive stormwater collector designed by GKY is in place upslope of the collector flume for the ISCO system. The systems will be compared for cost effectiveness and data usefulness.

Project partners include ECCD and UCONN and funded by an USDA NRCS Conservation Innovation Grant

This Precision Planting Equipment can plant through standing cover crops, deliver a dose of nutrients, and press the seed into the soil for better seed/soil contact, all while mapping field conditions which are displayed live on an I-pad in the tractor cab.



Lucas Young demonstrates the precision planting equipment and field maps on his I-pad.
The purchase of this equipment was funded in part by an US EPA Clean Water Act §319 grant through the CT DEEP

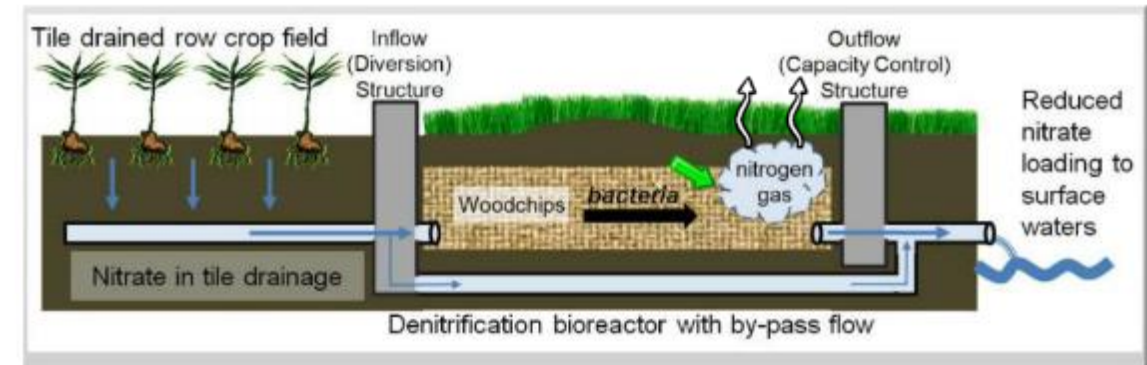
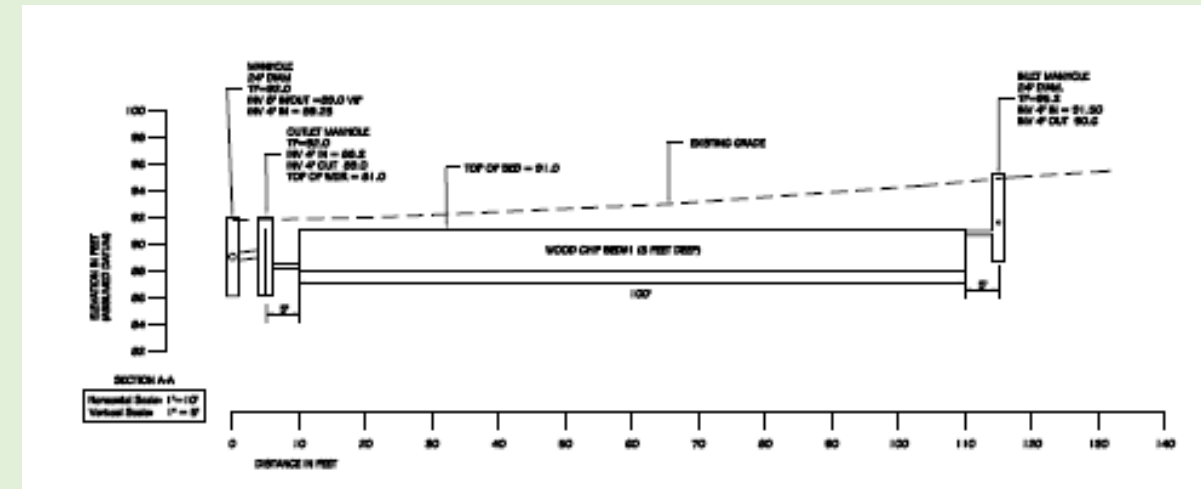
Woodstock Arboretum Bioretention Rain Garden



Completed by ECCD in 2012 and funded in part by an US EPA Clean Water Act §319 grant through the CT DEEP

Castle Rock Farm (Valleyside south) Woodchip Bioreactor Demonstration Project

- Many farm fields have tile drainage systems under them to drain excess water and extend the growing season.
- Tile drainage systems may carry nutrients and pathogens away from the field.
- By passing the under field drainage through a woodchip filter, natural bacteria will use up the excess nutrients, especially nitrate nitrogen, a key nutrient causing eutrophication in Long Island Sound.
- Pathogens in the drainage may also be reduced by this method.
- This system is scheduled to be installed soon on this south Woodstock Farm.



Graphic courtesy of an Iowa Learning Farms webinar



This project was funded in part by an US EPA Clean Water Act § 319 NPS grant through the CT DEEP.



Fairvue Farm Silage Leachate Collection System (under construction)



Limited to a few because it is an active construction site, Dan Mullins of ECCD explained the leachate drainage collection system being installed at Fairvue Farm in South Woodstock.

The new leachate collection system will drain into a custom concrete receiving tank, then transported via underground pipes to two larger storage tanks being constructed by NRCS.

Coordinated projects using US EPA Clean Water Act funds with NRCS EQIP funding are common in this watershed.



This project was funded in part by an US EPA Clean Water Act § 319 NPS grant through the CT DEEP.



Soil Health Demonstration with a rainfall simulator



1. Forest understory soil
2. Meadow
3. Lawn grass
4. Farm soil with cover crop residue and corn seedlings
5. Bare soil, recently tilled

Simulates runoff/infiltrations differences under various soil health conditions after a 1" heavy rain event.

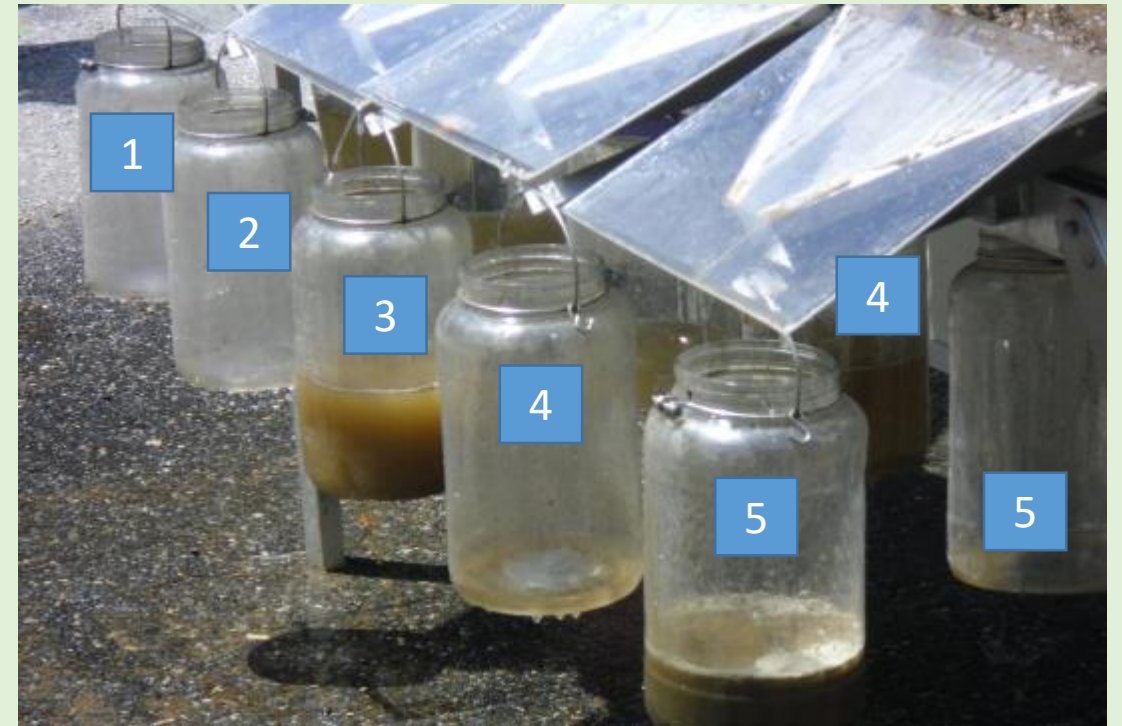
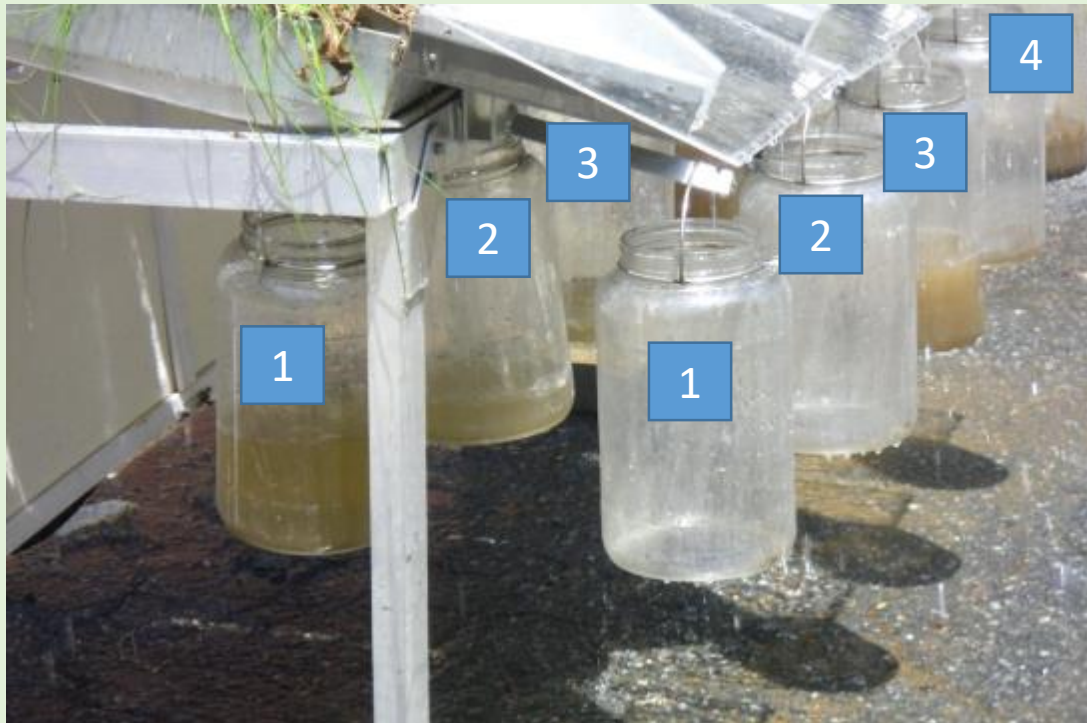
Ray Covino, Windham County District Conservationist and Soil Health Enthusiast from the USDA Natural Resources Conservation Service (NRCS)

Soil Health Rainfall Simulator

Jars in front = runoff.

Jars in back = infiltration.

Healthier soils run off less, infiltrate more.



Bare, tilled soil did not soak in much rain.
Most of the rain ran off the surface, carrying a lot of top soil with it.

Roseland Lake Nutrients Modeling Project



ECDD's Watershed Conservation Project Manager Jean Pillo presented an overview of an ongoing study to determine if nutrient enrichment is continuing.

After the data modeling is completed, a Roseland Lake Nutrients Management Plan will be prepared.

This project has been supported in part by an US EPA Clean Water Act Grant through the CT DEEP, the Town of Putnam WPCA and The Last Green Valley Volunteer Water Quality Monitoring Program.

Little River, Big Projects overview

ECED staff summarized over a decades worth of projects to improve soil health and water quality in the Little River watershed.

Many of these projects were recommended in a 2009 Muddy Brook and Little River Water Quality Improvement Plan, an EPA formatted watershed-based plan, the development of which is a prerequisite to receiving EPA CWA § 319 funding.



The part that puts the “floating” in the Floating Workshop

While some workshop participants went on a walking tour of Roseland Park, others took to the water for a guided tour of Roseland Lake

Matt Snurkowski of NRCS detailed a forest management plan developed for Roseland Park.



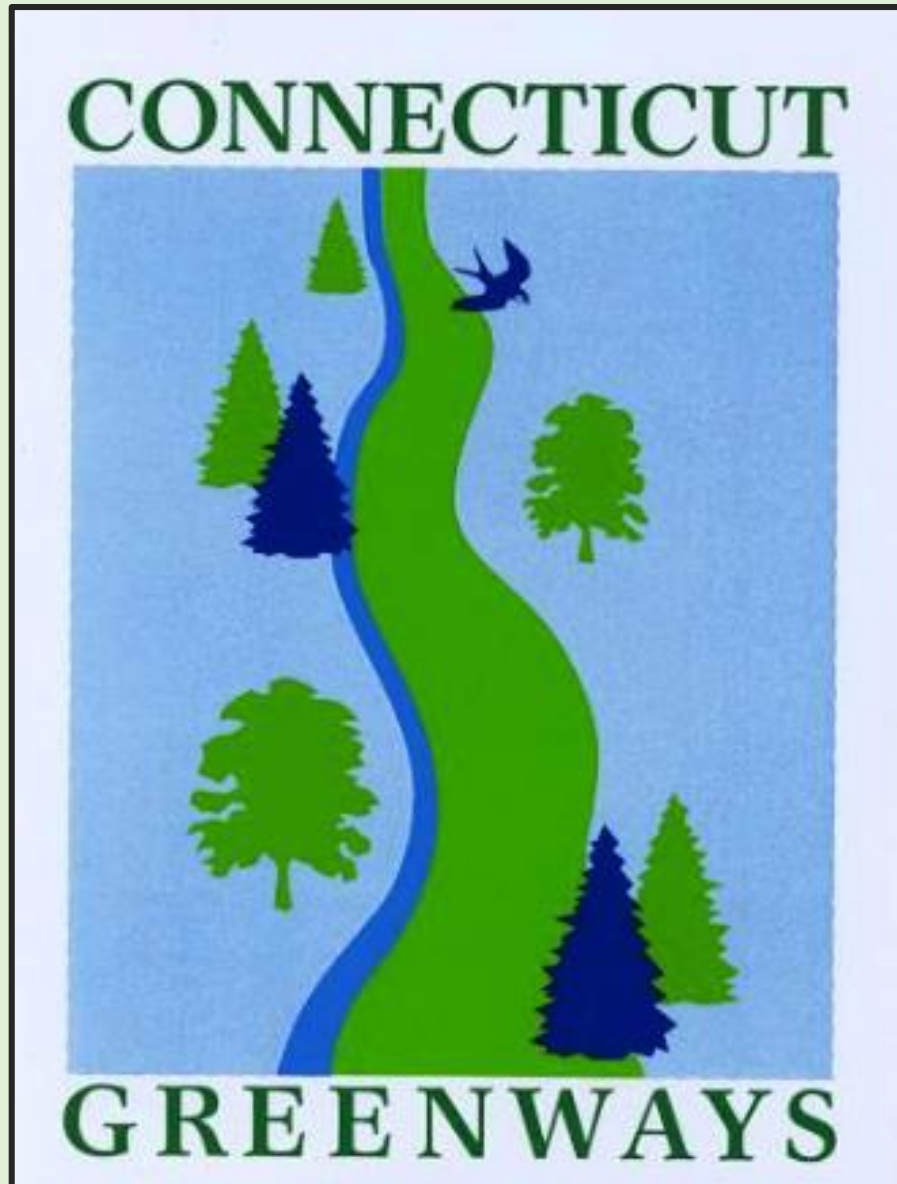
Paddlers gather at the mouth of Muddy Brook, the main tributary and external nutrient source to Roseland Lake



Paddlers gather to hear Patrick and Bet Zimmerman Smith describe their inspiration for recent donations of land fronting on Roseland Lake to the Wyndham Land Trust.



Local efforts to protect Little River as a drinking water source for neighboring Putnam



Little River Greenway Putnam and Woodstock

The Little River greenway protects a public water drinking supply surface intake, provides a wildlife corridor linking several parcels of committed open space and wetlands, and potentially links other trails in adjacent towns such as the River Walk in Putnam to Woodstock's local Historic District. It is accessible to elementary school children, hikers, bikers and canoeists; and could become linked to a National Scenic Byway (Route 169). The greenway includes land along the Little River, Muddy Brook, and Roseland Lake.

<http://www.ct.gov/deep/cwp/view.asp?a=2707&q=323852>



www.TRBP.org

