

# The Voice of Local Conservation



## Northwest Conservation District Education Edition 2022

In Celebration of the 50th Anniversary of the Enactment of  
Connecticut's Inland Wetlands and Watercourses Act

# An Introduction to the Northwest Conservation District

Conservation Districts were established nation-wide in the 1930's in response to national concerns over agricultural erosion, floods and the sky-blackening dust storms that swept across the country in the Dust Bowl. Congress enacted the Soil Conservation Act of 1935, which set national policy for the control and prevention of soil erosion, and established the Soil Conservation Service to implement this policy.

The Dust Bowl taught everyone a valuable lesson on the importance of protecting natural resources at the local level. In Connecticut, there are five Conservation Districts that were established by State Statute (Section 22a-315) to advise the CT Department of Energy and Environmental Protection (CT DEEP) on matters of soil and water conservation, erosion and sedimentation control and to assist in implementing programs concerning such matters.

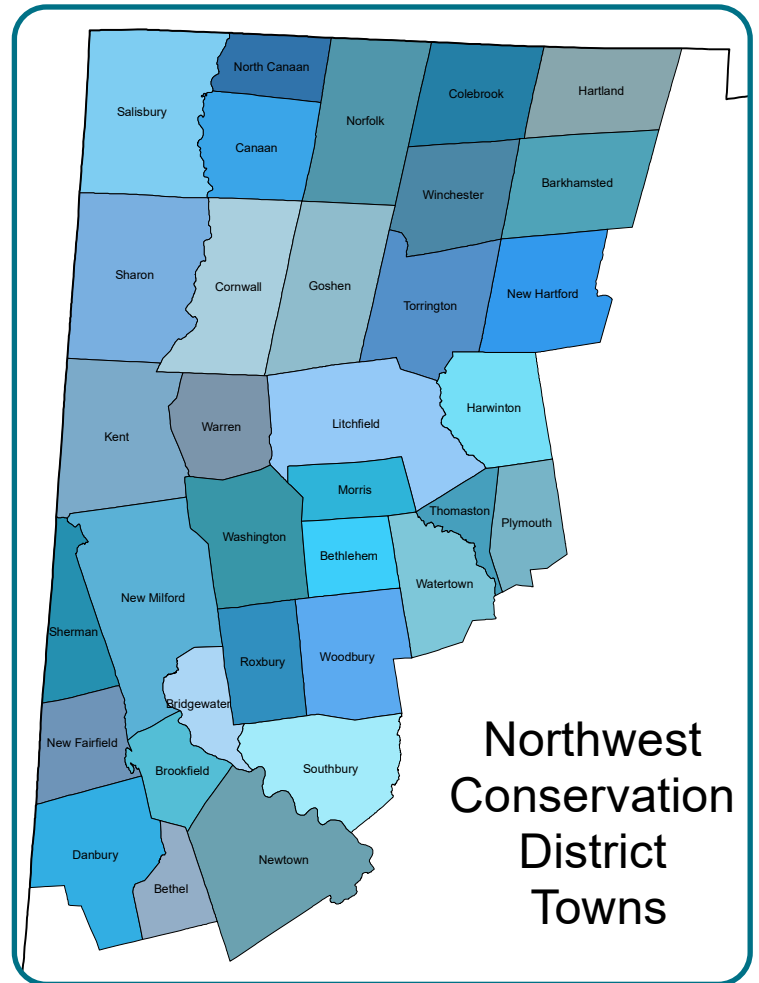
The Northwest Conservation District or NWCD offers technical services and educational programs to our 34 local communities - check out the map on the right to see if your town is in our district!

Today, NWCD works in partnership with our communities, other local non-profits and state agencies, as well as the public on conservation challenges such as:

- Drinking Water and Aquifer Protection
- Wetland Protection and Restoration
- Aquatic Resource Protection through Low Impact Development (LID) Planning and Implementation
- Open Space and Farmland Preservation
- Sustainable Lawn Care and Land Use
- Agricultural Resiliency, Renewable Energy, and more!

The information outlined on the following pages represent key initiatives that NWCD addresses.

***If you have questions, are interested in NWCD sponsoring an educational event, or you would like us to partner with you on a specific project, contact us at [info@nwcd.org](mailto:info@nwcd.org) or call the office at 860-626-7222.***



**Northwest  
Conservation  
District  
Towns**

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# The 50th Anniversary of Connecticut's Inland Wetlands and Watercourses Act!

2022 is the 50th anniversary of the enactment of Connecticut's Inland Wetlands and Watercourses Act! All year long, our partners will have special events to celebrate this important milestone. Our partners include: Connecticut Association of Wetland Scientists, our four sister Connecticut Conservation Districts, the Water Planning Council and their subgroups, Rivers Alliance of CT, CT DEEP and other state agencies, and many more! Follow our social media for more information.



## What Wetlands Do for Us

Inland Wetlands (IW) provide important functions and values (F&V), also known as ecosystem services, that are often taken for granted:

- IW clean water through infiltration into the ground where roots, soil particles, and soil microorganisms remove pollutants and nutrients from the water. Most of Connecticut's drinking water comes from surface water which is improved by filtration over a wide landscape that includes trees and wetlands.
- Infiltration and spreading water over wider areas in wetlands reduces downstream flooding. The infiltration occurring in wetlands also helps to recharge groundwater supplies which many people rely on for drinking water.
- IW retain some of the sediment that is carried in stormwater runoff, helping to protect the larger downstream watercourses and coastline of Connecticut.
- IW provide habitat for plants and animals, some of which rely exclusively on special aquatic or hydric environments. Many organisms need these systems for sources of water, food, and lifecycle fulfillment.
- Where wetlands lie along streams, rivers, or lakes, they protect the shorelines of these watercourses reducing erosion and destabilization.
- Many wetlands are destinations for healthy recreational activities and bring people into nature to observe, hike, fish, etc. These activities are beneficial to people's health and well-being.

*~Cynthia Rabinowitz*



Wetlands at White Memorial Conservation Center  
Litchfield CT



Wetlands along the Housatonic River at the Native  
Meadows Preserve in New Milford CT

## Wetlands: Essential Bird Habitat

We've all heard the mantra "location, location, location" — from a bird's perspective, that perfect spot could well be a wetland. Swamps, marshes, and other types of wetland provide essential habitat for many hundreds of bird species, at least for a part of the year. Some bird species' very existence depends on wetlands; without them, they would become extinct. Wood ducks, for instance, are dependent on forested wetlands.

What's so wonderful about a wetland for birds? For one thing, wetlands serve as sources of drinking water and food for many birds. Just think about all the edibles — fish, amphibians, snakes, insects, and aquatic plants — that abound in a marsh or swamp. A great blue heron might spear a fish with its sharply pointed beak. A green heron might catch a frog. Mallards might munch on plant stems and leaves, insects, tadpoles, or small fish. Tree swallows can scoop up hordes of mosquitoes and other flying insects that swarm above a wetland.

Wetland vegetation can shelter birds from predators. One bird that takes advantage of this is the American bittern, whose vertically striped breast blends in perfectly with reeds and marsh grasses. Wetland

vegetation also can protect birds from wind, precipitation, and cold weather.

The food, water, and shelter wetlands afford make them very desirable breeding grounds. Up to one-half of North American bird species, including ducks, geese, woodpeckers, hawks, wading birds, and some songbirds, nest or feed in wetlands, according to the U.S. Environmental Protection Agency. Coastal and inland wetlands provide resting, feeding, breeding, or nesting grounds for millions of migratory waterfowl.

Among the bird species inhabiting Connecticut's inland wetlands are black duck, wood duck, mallard, green-winged teal, Canada goose, green heron, great blue heron, least bittern, American bittern, Virginia rail, sora, spotted sandpiper, marsh wren, red-winged blackbird, tree swallow, Acadian flycatcher, willow flycatcher, Eastern kingbird, warbling vireo, swamp sparrow, and woodcock.

Birds such as clapper rail, black duck, blue-winged teal, willet, and seaside sparrow nest in our coastal salt marshes. Other birds such as marsh wren, pied-billed grebe, herons, glossy ibis, and egrets also feed and nest in Connecticut's coastal wetlands.

*By Diane Edwards, Litchfield Hills Audubon Society*



Wood Duck Hens and Ducklings in a Marsh,  
PC: Diane Edwards, Litchfield Hills Audubon Society



American Bittern, PC: Andy Regal &  
Chrissy McClarren, Wikimedia Commons

### Litchfield Hills Audubon Society

The Litchfield Hills Audubon Society holds bird and other wildlife focused programs that promote and teach conservation, awareness of environmental issues and the overall enjoyment of nature. To learn more about their great programs, go to [lhasct.org](http://lhasct.org). As part of our plant choices every year, NWCD chooses many native plants that provide food and habitat for birds.

For more information and resources about birds, go to [nwcd.org/plant-sale-education](http://nwcd.org/plant-sale-education).



# Wetlands, Watercourses and Watersheds

This year, I sat on various committees pertaining to the 50th Anniversary of the Connecticut Inland Wetlands and Watercourses Act (IWWA). Two things really surprised me during these meetings.

First - I never realized how ahead of its time Connecticut was when we passed the IWWA, and how unique their approach was. Federally, the amended modern-day Clean Water Act was passed the same year as the IWWA. Some cite CT's IWWA as influencing this process. Additionally, by choosing to define wetlands by soils, it allowed for the greater designation and protection of these areas. Especially in times of drought, relying on vegetation to characterize wetlands may be inadequate. (For more on how to define wetlands in CT, check out <https://portal.ct.gov/DEEP/Water/Inland-Wetlands/How-Are-Inland--Wetlands-and-Watercourses--Defined>).

Many call the IWWA just 'the Wetlands Act' - but creating an Act that includes both Wetlands and Watercourses is another sign of CT's uniqueness approach and foresight. Watercourses, defined on the right, encompass many different systems ensuring that we protect aquatic resources of all sizes and types. Protecting these resources are instrumental in how Connecticut faces Climate Change. Our wetlands and watercourses are the first lines of defense against large storms and flooding. While we can better conserve aquatic resources, the IWWA uniquely lays the groundwork for their protection into the future.



Sucker Brook, Warren CT

*"The Act also defines the term watercourses very broadly to mean rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private."*

*~CT DEEP (<https://portal.ct.gov/DEEP/Water/Inland-Wetlands/How-Are-Inland--Wetlands-and-Watercourses--Defined>)*

The second thing that surprised me was how important the concept of a watershed is, and how integral it is to the protection of wetlands and watercourses. A watershed, as defined by CTECO or the Connecticut Environmental Conditions Online, is, "...an area of land that drains to a common outlet...different sizes of watersheds nest within each other..." Each basin affects its downstream watershed. Eventually in Connecticut, all watersheds drain to Long Island Sound.

Watersheds that have significant areas of wetlands are much more resilient and stable. Wetlands are the kidneys of watersheds. This does not mean that we can funnel our pollution into them and overwhelm them. Instead, their integrity should be protected and monitored to ensure their longevity. Wetlands play a critical role in watercourse protection. Many lakes and streams have wetlands that go right up to their shorelines and act as a buffer from direct human impact. Wetlands higher up the watershed also play a vital role in cleaning surface runoff and creating stable headwaters that feed watercourses. Making sure we properly care for all wetlands is key to sustaining healthy watersheds and protecting our aquatic resources.

There are many threats to wetlands and watercourses in the future - from improper anthropogenic (human) land use to climate change altering their natural biorhythms and ecosystems. Having protected and connected wetlands throughout all levels of watersheds will increase the resilience of our watercourses. Whether you live next to a wetland / watercourse or not, whatever you put on the ground will affect the whole watershed and all the aquatic resources within it. Managing our land with this in mind is key.

*~Kelsey Sudol*

# Solar for Farms: the Rural Energy for America Program

A major threat to the survival of our family farms is the high and increasing cost of energy. Wouldn't it be great to make your own electricity and be financially rewarded for investing in sustainability? In fact, that is now possible by taking advantage of the several programs supporting solar for family farms.

Solar electricity has long passed what is called "grid parity," that is, power from solar PV is now cheaper per kilowatt-hour than buying it from your utility. Net metering allows you bank excess solar production (especially on long summer days) with Eversource, while drawing down your kWh "credit" when you need it (at night and during the short winter days). A new Eversource program will now pay you a bonus for each solar kWh you produce, whether you have used it or banked it. Adding this to your cost-avoided savings for each kWh you use can actually make your system a profit center after a brief payback period.

The hitch, of course, is the high up-front cost of the solar installation. However, support for that is available from either or both of two sources: The first is a federal tax credit (called ITC, for Investment Tax Credit) of 26% of system cost, taken right off the top of any federal tax obligation. This can be rolled over to future years if not needed right away. Second is the Rural Energy for America Program (REAP)

administered by the USDA. This program provides farms or rural agribusinesses grant funding and guaranteed loan financing for renewable energy systems and energy efficiency improvements. (Agricultural producers may also apply for new energy efficient equipment and new system loans for agricultural production and processing.) REAP grants are available for up to 25 percent of total eligible project costs. Loan guarantees are available for loans up to 75 percent of total eligible project costs.

Taken together these programs can reduce the payback time for any solar investment from a typical 9 to 10 years to as little as 4 years. And since solar PV systems can produce electricity for 30+ years, energy security actually becomes profitable. For an assessment of the suitability of your farm property for solar PV, get in touch with your local solar installer. To determine how REAP can help, visit: <https://ctfarmenergy.org/> or contact Amanda Johnson at amanda@ctfarmenergy.org

Finally, note that these programs support "solar for farms," not "solar farms." The former are designed to offset a farm's electrical loads and so allow it to keep farming. "Solar Farms," on the other hand, are commercial-scale systems designed to sell power to the utilities, and may divert good cropland or forest acreage from their otherwise valuable functions.

*~Ray Furse, Vice-Chair NWCD*



Kent Falls Brewery, Kent



Ginger Creek Nursery, Norfolk



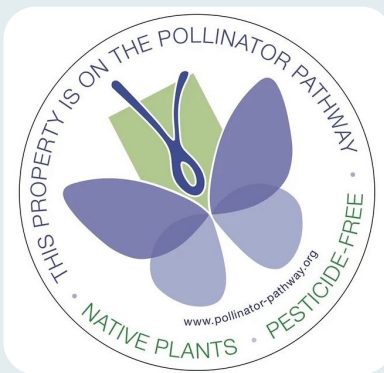
## Pollinators - Thinking Beyond the Honey Bee... ...and Your Own Backyard

Too often, people only think of the honey bee as the main pollinator for our food sources such as fruit trees and vegetable plants, and native and non-native flowering trees and shrubs in our backyards and local landscape. In fact, many birds, (including but not limited to hummingbirds), bats, beneficial insects such as butterflies, and most often overlooked, native bees and wasps are pollinators. Similar to us, all pollinators require healthy food sources, safe shelter and clean water to survive.

As spring weather is upon us, many ground-dwelling native bees and wasps are already busily working in our own backyards, providing other year-round services for soil health and biodiversity. A little known fact about those humble creatures, the most famous being the bumble bee, is that their traveling distance from



A female bumble bee (*Bombus bimaculatus*) visiting native bergamot  
PC: Tracy Zarrillo, CT DEEP



one pollinator friendly habitat to another is only 750 meters or less than ½ mile. We have the capacity to travel miles for food, have year-round safe “permanent shelter” and can turn on a faucet for clean water. As we think beyond the honey bee, consider making your backyard a pollinator safe habitat and walk half a mile beyond to find, create or encourage your neighbors to be part of your pollinator pathway.

To become a part of a great Connecticut based Pollinator Pathway initiative, visit Pollinator Pathway Northeast at [www.pollinator-pathway.org](http://www.pollinator-pathway.org) To learn more about Pollinators, visit [nwcd.org/plant-sale-education/](http://nwcd.org/plant-sale-education/). Or have a question? Email Karen Griswold Nelson at [karengnelson@nwcd.org](mailto:karengnelson@nwcd.org)

## No Mow May - Increasing Pollinator Diversity and Habitat

There is a movement afoot and it's called **NO MOW MAY**. Our fragile pollinator population will thank you for learning about it! **No Mow May** promotes pollinator-friendly habitat and awareness in a very simple and easy way - **JUST DON'T MOW YOUR LAWN (OR A PORTION OF YOUR LAWN) FOR THE MONTH OF MAY! SIMPLE....RIGHT?**

Long grass allows for a greater variety of flowers to grow, some of them rare plants. They attract and feed pollinators! Research has shown that by not mowing your lawn at the beginning of the season for 4 weeks, the bee abundance increases fivefold and the diversity increases by threefold. It's a simple way to help feed wildlife on a multitude of levels, directly for bees and insects and indirectly for the wildlife that eats the pollinators. Just wait until the 1st of June. You will have plenty of mowing for the rest of the season. For a **No Mow May** yard sign, **contact NWCD at 860-626-7222 or [karengnelson@nwcd.org](mailto:karengnelson@nwcd.org)**



# Teamwork to Create New Habitat at Robbins Swamp - Wildlife Management Area Site of New Meadow

Written by Peter Picone, DEEP Wildlife Division  
This is an Excerpt. Full Article found in the  
CT Wildlife Magazine Nov/Dec 2021 Edition

Imagine taking a 14-acre area with only two or three plant species present and turning it into a biologically diverse meadow with dozens of native wildflowers and grasses. This is currently happening at Robbins Swamp Wildlife Management Area in Falls Village. Not only is it a habitat project with a diversity of plants but also a diversity of partners. Partners in the meadow enhancement project include the DEEP Wildlife Division, students with the Housatonic Valley Regional High School Natural Resource Program (growing native plants in a greenhouse), Northwest Sportsman's Council (donated native seeds), the Connecticut Chapter of the Ruffed Grouse Society, Denise Ciastko of NativearthSeed LLC, and the Connecticut Agricultural Experiment Station (pollinator monitoring).

Biologically diverse fields planted with native grasses and wildflowers are used by an abundance of wildlife. Once the project is completed, native wildflowers will be blooming throughout the growing season, providing pollinators, such as bees and butterflies, with a variety of blossoms to choose from. Native grasses will be planted to create clumps with

Monarch butterflies will be able to find milkweed in the restored field at Robbins Swamp WMA.  
PC: Tracy Zarrillo, CT DEEP



nooks and crannies that wildlife can use for cover and food. A variety of birds, butterflies, bees, other insect pollinators, reptiles, and amphibians will find the new biologically diverse meadow suitable for their particular needs of food, cover, and space.

## The Habitat Project Over Time

Over the next three growing seasons, students from the Housatonic Valley Regional High School are going to supply native wildflowers and native grasses as plugs grown in their greenhouses. The seeds for growing these native plants are being donated by Denise Ciastko of NativearthSeed LLC. Science teacher David Moran said that "this gives students an opportunity to use their horticultural skills and be engaged with field biology and applied science". Mr. Moran's students will be growing a variety of native plants, including Joe Pye Weeds, milkweeds, asters, and grasses.

According to Mr. Moran, the Housatonic Valley Natural Resources Program, which includes forestry, freshwater fisheries, wildlife, and the Connecticut Envirothon, has always been excited to partner with the DEEP in many projects over the years, a direct spin-off and benefit of the Envirothon Program. Mr. Moran said, "We again enter in a welcome partnership with the Wildlife Division in helping to restore the Robbins Swamp meadow with native perennials. Students will raise plugs in a greenhouse for the restoration of the meadow and for use by biologists across the state. We thank Wildlife Division biologist Peter Picone for connecting students, once again, to meaningful environmental work."

## PARTIAL LIST OF NATIVE WILDFLOWERS PLANTED AT ROBBINS SWAMP

*Asclepias incarnata* - Red Milkweed  
*Asclepias syriaca* - Common Milkweed  
*Asclepias tuberosa* - Butterfly Milkweed  
*Aster laevis* - Smooth Blue Aster  
*Aster novae-angliae* - New England Aster  
*Chamaecrista fasciculata* - Partridge Pea  
*Eupatorium fistulosum* - Joe Pye Weed  
*Lobelia siphilitica* - Great Lobelia  
*Mimulus ringens* - Monkey Flower  
*Monarda fistulosa* - Wild Bergamot  
*Penstemon digitalis* - Tall White Beardtongue  
*Pycnanthemum tenuifolium* - Mountain Mint  
*Solidago juncea* - Early Goldenrod  
*Tradescantia ohiensis* - Ohio Spiderwort, PA Ecotype  
*Veronica noveboracensis* - New York Ironweed  
*Zizia aurea* - Golden Alexanders



# What is Soil Health and Why Should We Care?

Life depends on soil and water. For centuries, some human civilizations destroyed these life-supporting resources.

Soils differ with climate and topography, but similarities exist:

- Soil particles vary in size; particles form aggregates with pore spaces that allow movement of air and water, and root penetration, through and between the aggregates.
- Soil microbiomes comprise living microorganisms and organic matter/humus.
- Billions of microorganisms live in the soil.
- Decomposed organic matter binds the soil promoting steady capture and release of water and nutrients.
- Soil life and organic matter sequester vast amounts of carbon, keeping it from the atmosphere.

Undisturbed, in grasslands or forests, soils can remain healthy. When vegetation is removed and soil is left bare, or plows and garden tillers churn the soil,

the aggregates and microbiome are damaged. Eventually, soil breaks down causing irreversible damage: erosion and compaction, and loss of carbon into the air. Globally, whole civilizations declined and sometimes disappeared after their soils were destroyed.

Repair/protect damaged soils with these practices:

- Minimize or avoid tilling.
- Use broadforks to aerate the soil without turning it over.
- Grow green living mulches – aka cover crops; or add compost, chopped leaves, grass clippings, straw etc. to the surface.
- Avoid or minimize use of fertilizers and pesticides.
- Avoid planting up and down hills. Instead opt for “on-contour” beds.
- “On-contour” swales between beds capture and slow water runoff from hills.
- Return garden waste – leaves, chopped woody material, kitchen waste, to the compost pile and then the garden.

~*Cynthia Rabinowitz*

## Edible Forest Gardening

Edible Forest Gardening is an approach to growing food-producing trees, shrubs and herbaceous perennials in permanent comingled plots. Mimicking a natural forest with tree-species canopy, understory shrubs, perennials, and root crops, EFGs efficiently comingle fruits; nuts; perennial vegetables; culinary and medicinal herbs. The diagram below is of an EFG based on one canopy tree and associated understory plants, creating a guild of plants forming an ecosystem.

Edible Forest Gardens (EFG) may have a few or many understory plants with a central tree, usually a fruit tree. Available space is fully used with guild plants providing habitat for beneficial creatures such as pollinators or predator insects, and frogs and garter snakes that lie-in-wait for their prey. The guild provides desirable harvests - berries, edible leaves or roots. The web of perennial roots and permanent ground cover promotes soil health.

Understory plants like blueberries can tolerate some shade. Normal pruning of fruit trees permits dappled light to penetrate the tree canopy giving sufficient sunlight for the well-chosen understory plants.

~*Cynthia Rabinowitz*

### PEACH TREE GUILD

Bayberry: N-fixer, culinary leaf and berry, wildlife plant

Comfrey: medicinal salve, dynamic accumulator, pollinator and hummingbird attractor,

Daffodil: aesthetic flower, repels rodents

Dill: culinary herb, beneficial insect attractor (pollinators and predators)

Dutch White Clover: N-fixer, pollinator attractor

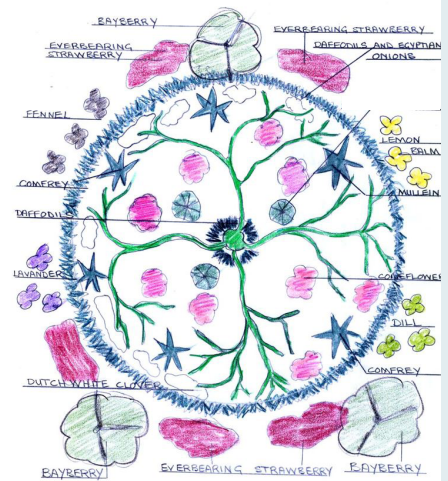
Echinacea: medicinal, pollinator and predator insect plant

Egyptian Onion: edible, repels rodents

Everbearing Strawberry: season-long fruit bearing

Bronze Fennel: edible herb, beneficial insect attractor

Mullein: wildlife plant, useful fuzzy leaf



## Bogs - A Rare & Fragile Wetland

Wetlands are one of our most valuable ecosystems; but are not always understood. They sequester carbon, filter our groundwater, mitigate floodwaters, and provide critical habitat to countless species. They are defined by their soil type, their water source, and topographical location. Wetlands are a vital connection between land and water; and are protected statewide through the Connecticut Inland Wetlands & Watercourses Act of 1972.

Bogs are one type of wetland found in Connecticut. They are rare, and may reside in a forest. Found in open or forested environments around the world in most latitudes, Bogs are especially prevalent in northern latitudes. If you have never had the opportunity to visit one, it is almost as if you have stumbled upon a fairy land. Peat moss, lichens, ferns, blueberries, black spruce trees and carnivorous plants are among the many plants that call bogs home. Some of the animals you may see here are bog turtles, salamanders, beavers, bears, moose and numerous bird species.

Rain serves as its only source of water, it does not have major inflows or outflows of water. Bogs are very acidic ecosystems with low nutrient soils that support very specific plants adapted for such conditions. *Sarracenia purpurea*, Pitcher Plant, is one of the more famous bog-dwellers. Carnivorous photosynthesizers catch and digest insects to compensate for the lack of nutrients in the soil. *Picea mariana*, Black Spruce, conserve energy by growing a thick waxy layer on their leaves. This curbs predation and conserves water resources.

Bogs are carbon sinks; they store large quantities of carbon in their peat deposits. They play a crucial role in mitigating the effects of climate change. The natural formation of a bog may take anywhere from hundreds to thousands of years. They are scarce, old growth ecosystems that must be conserved.

Bogs that are open to the public usually have a narrow board walk system. Visitors must stay on the path and practice "[leave no trace policies](#)". Bogs are very fragile ecosystems and require extreme respect on the part of visitors to keep them healthy.

Any established wetland in a forest will strengthen the diversity of the entire ecosystem, and provides corridors for many species to migrate. Wetlands play a critical role in nutrient cycling within our forests. They are beautiful spaces that represent cultural significance, and are accessed for education and recreation. We all must contribute to their care; and inspire our children to be stewards of forests and wetlands.   
~*Leane Marvin*



Bog in Northwestern CT



## The Iconic Wild & Scenic Farmington River

This year we celebrate the 50th Anniversary of the Connecticut Inland Wetlands and Watercourses Act of 1972. One of our most iconic watercourses in Northwest CT is our Wild and Scenic Farmington River. The west branch in total is 15.1 miles long, flowing from Goodwin Dam in Hartland to the Nepaug River in Canton. The initial 14 miles received designation on August 26, 1994, and the remaining 1.1 miles were designated March 12, 2019. The Wild and Scenic designation is a testament to just how important and valued the river is to Connecticut residents.

To qualify as a Wild and Scenic River, specific outstanding remarkable values (ORV's) must be met. The ORV's that the Farmington River possesses are free flowing waters, provides habitat for many fish and wildlife species, recreational use and, of course, its scenic beauty. People come from far and wide to fish, kayak and hike in and along the river.

The Farmington River is very well cared for. The Farmington River Coordinating Committee, The Farmington River Watershed Association and the annual crew of River Stewards all do their part to protect and advocate for the river. Educational outreach, invasive plant removal, litter removal, and spreading

the message of "No Glass No Trash" are just a few of the roles they continually oversee for the river. Community science participation and volunteerism is an invaluable part of the long-term conservation goals of the Farmington River. With continued conservancy and activism, this natural resource will remain an example of wild beauty for many generations to come. To find out how you can be involved, please visit these resources:

- <http://www.farmingtonriver.org/index.php>
- <https://frwa.org/>
- <https://falps.org/>

~Leeane Marvin



Farmington River, Barkhamsted CT

## Rain Gardens - Cleaning Runoff One Yard at a Time

### GREAT RAIN GARDEN PLANTS

#### Trees

*Betula nigra* - River Birch

*Juniperus virginiana* - Eastern Red Cedar

#### Shrubs

*Aronia arbutifolia* - Red Chokeberry

*Aronia melanocarpa* - Black Chokeberry

*Clethra alnifolia* - Summersweet

*Hamamelis virginiana* - Witch-hazel

*Ilex glabra* - Inkberry

*Ilex verticillata* - Winterberry

*Salix discolor* - Pussy Willow

*Sambucus canadensis* - Elderberry

#### Perennials and Ferns

*Asclepias incarnata* - Swamp Milkweed

*Caltha palustris* - Marsh Marigold

*Chelone glabra* - Turtlehead

*Echinacea purpurea* - Coneflower

Rain gardens are simple and attractive solutions for runoff from footing and roof drains, driveway drains, and from lawns laden with pesticides and fertilizer. Rain gardens work best in well-drained soils and are the most common type of Low Impact Development (LID) system used to clean polluted residential stormwater runoff.

Careful planning is essential to success. Suitable soil types (well-drained soils) are an important component for proper infiltration. Not every site has suitable soils and even if an area does, not every location is ideal for installing rain gardens. Rain gardens are NOT water gardens or wetlands. Placing rain gardens in poorly drained soils may lead to slow infiltration and unwanted long term ponding. These structures should not be installed over a septic system, reserve area site or close to a drinking water well. A homeowner can determine their property's soil drainage class by visiting the <https://nemo.uconn.edu/raingardens/sizing.htm> website under "Checking Soils". For more regarding sizing, siting, cost, etc., visit <https://nemo.uconn.edu/raingardens/installation.htm>.

To learn more, visit [nwcd.org/plant-sale-education/](http://nwcd.org/plant-sale-education/), or email NWCD at [info@nwcd.org](mailto:info@nwcd.org) with questions.

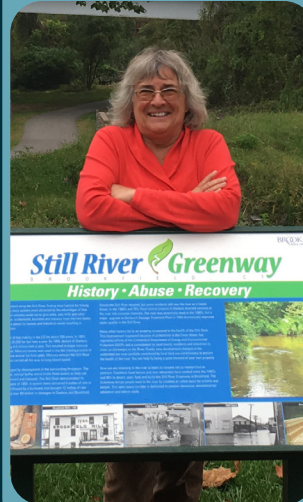
# Meet the Authors / Staff

## Cynthia Rabinowitz, Executive Director



Applying wetland sciences, horticulture and permaculture to serve NW Connecticut where forests are expanding but subject to climatic changes and are vulnerable; farms struggle to stay solvent. I continue to work for local resiliency in agriculture; open space preservation; forest adaptation; low impact development strategies; and habitat improvement. Contact me at [cynthiar@nwcd.org](mailto:cynthiar@nwcd.org)

## Karen Griswold Nelson, Programs



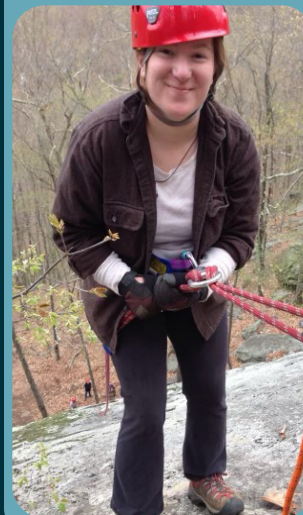
I am a product of the 70's, English and philosophy college degree, conceptual and environmentally bent. Many careers and years later, I share my work time between "land use" and NWCD, both supporting my core values that all earth's creatures are entitled to clean air and water, healthy food and respectful, ethical treatment from all others. Contact me at [karengnelson@nwcd.org](mailto:karengnelson@nwcd.org)

## Kelsey Sudol, Environmental Associate



I focus on watershed / lake protection and monitoring, grant writing, and aquatics education. I am the current aquatics chair for Connecticut Envirothon, and work to develop educational material for NWCD. If you are interested in an educational presentation, NWCD as a partner or for assistance for aquatic resource planning or monitoring, contact me at [kelseys@nwcd.org](mailto:kelseys@nwcd.org)

## Leane Marvín, Agricultural Technician



My background is in natural resources, forestry and farming. As a mother and an educator, I seek opportunities to do outreach to inspire the next generation of environmental stewards. Bringing awareness of how invaluable our soils, forests, and rivers is my goal. "We do not inherit the land from our ancestors, we borrow it from our children", Native American Proverb. Contact me at [leanem@nwcd.org](mailto:leanem@nwcd.org)

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