

# River Smart Guide to Waterfront Living

How to Keep  
Your Water Clean

RIVER-FRIENDLY TIPS  
FOR MAINTAINING  
YOUR PROPERTY

---

IDEAS FOR  
YOUR SPRING  
GARDEN

---

SIMPLE STEPS TO  
CURB POLLUTED  
RUNOFF

---

INTRO TO  
SEPTIC SYSTEMS  
& PRIVATE WELLS

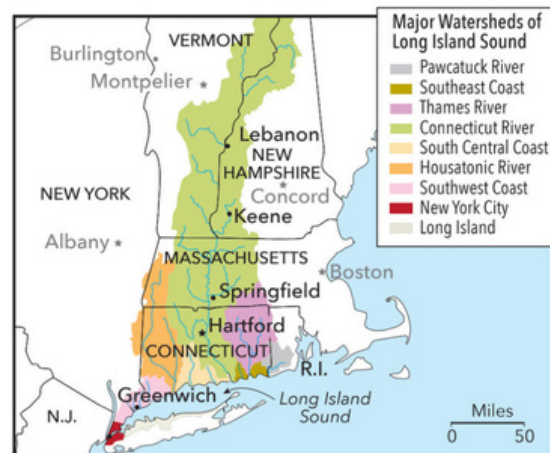




# Think Green, Stay Blue: Clean Water Starts with You!

## THE HEALTH OF CT'S WATER DEPENDS ON YOU!

No matter where we live, work, or play, we are always connected to a nearby river, stream, lake, pond, wetland, or shoreline. The rain that falls around us will move according to gravity, following a downhill path to the nearest body of water and, in Connecticut (CT), eventually to the Long Island Sound. This simple fact means that the **health of Long Island Sound—and every river and stream that flows into it—is connected to how we live on the land.** Yet, many people still think that most water pollution is caused by discharge from business and industry, and are unaware of the unique role each of us plays in determining the fate of our waterways.



## WHAT IS CAUSING A DECLINE IN RIVER HEALTH?

According to the U.S. Environmental Protection Agency (EPA), polluted runoff is the main culprit. Runoff is the water that does not soak into the ground during a rainstorm. In the past, water would soak into the ground beneath forests and meadows, but with a growing population, the land that once soaked up excess water has been developed and covered by impervious surfaces (roads, buildings, driveways, parking lots, sidewalks, etc.) therefore increasing the volume of displaced water and creating runoff. As this runoff travels, it picks up minerals, salt, sediment, bacteria, pesticides, and other chemicals from the ground. With fewer natural areas for water to soak into the ground and more excess pollutants, nature's cleaning system is overloaded, causing more of these pollutants to end up in our waterways.

## GOOD NEWS!

Industrial discharge is largely under control thanks to the Clean Water Act of 1972. With the passage of this act, the number of healthy rivers across the nation (those considered clean enough for fishing and swimming) increased from just 20% in the mid-1900s to 57% by 1994. Although that number dipped in the early 2000's, the number of healthy rivers is again improving as Phase II of the Act addresses widespread sources of polluted storm water runoff, which continues to be the leading cause of poor water quality.

## MAKE THE RIVER SMART PLEDGE TODAY!

Visit [www.RiverSmartCT.org](http://www.RiverSmartCT.org) to learn more about how polluted runoff affects the health of our local rivers and steps you can take to curb polluted runoff. The River Smart program can provide you with the information and tools you need to create areas that will naturally absorb and filter runoff, reduce chemical use, and conserve water.

The future health of your water is in your hands. Working collectively, we CAN reduce water pollution and restore the health of our rivers, streams, lakes, and the Long Island Sound. Show your commitment to clean water and make the River Smart Pledge today.

**REMINDER: IF IT'S ON THE GROUND, IT'S IN THE LONG ISLAND SOUND.**

**Going green keeps water clean.**

- Install Rain Gardens
- Plant Riverside Buffers
- Grow Native Plants
- Reduce Lawn Area
- Mow High - Let it Lie
- Reduce Hard Surfaces
- Use Fewer Chemicals
- Use Water-Efficient Fixtures
- Compost and Recycle More
- Put Pet Waste in Trash
- Use Carwash
- Don't Flush Medications

I took the River Smart pledge to keep our waters clean!

[www.riversmartct.org](http://www.riversmartct.org)



# CAN YOU WEATHER THE STORM?



During a storm, rain can pick up pollutants as it runs off your roof, driveway, and yard, and wash them into storm drains that flow to nearby lakes, streams, wetlands, and, eventually, the Long Island Sound.

## STORMS IN CT ARE BECOMING MORE FREQUENT AND SEVERE—STAY INFORMED ABOUT AREAS PRONE TO FLOODING

According to CT DEEP, **the temperature in CT has increased by 2.20° F** in the last century. A change of just a few degrees has a massive impact on climate because **warmer air holds more moisture and fuels storms**. The State of CT has already seen **significant rainfall increases, especially in the winter and early spring**.

As a result of more frequent storms and increasing human development in floodplains, **the impacts of flooding in CT are becoming more severe**.

For your safety, you should **stay informed** about the timing of storms in your area, local hazard alerts, and areas prone to flooding.

To monitor daily flows of rivers within the Pomperaug Watershed, visit: [www.pomperaug.org/water-watch](http://www.pomperaug.org/water-watch)

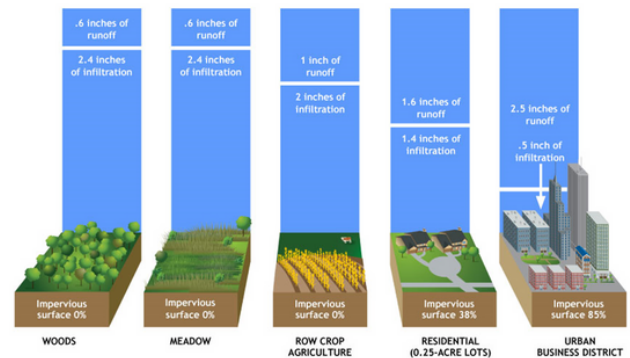
**“THE ECOLOGICAL HEALTH OF A STREAM DEPENDS VERY MUCH ON A SINGLE FACTOR: THE PERCENTAGE OF THE LAND IN ITS WATERSHED THAT IS PAVED.”**

– CT Council on Environmental Quality Report 2015

## WHAT IS AN IMPERVIOUS SURFACE?

An **impervious surface** refers to any **hard surface that prevents water from soaking into the ground**. This includes man-made structures such as **buildings, parking lots, sidewalks, driveways, and patios**. If adding impervious surface, bioretention features, such as **rain gardens and bioswales, should be installed to capture or dissipate excess stormwater runoff** that will no longer be able to soak into the ground naturally.

In addition to increasing polluted runoff, adding impervious surfaces without infrastructure to mitigate storm water can increase the severity of flooding events as more water runs off the landscape and does so at a faster rate. This can result in costly damage to homes, businesses, and roads.



## USE LOW-IMPACT DEVELOPMENT TECHNIQUES TO CURB RUNOFF

**Low-Impact Development (LID) techniques manage stormwater runoff** by imitating the natural movement of water in the environment and providing places for water to soak into the ground. In this way, using LID practices when building can help slow the rate of runoff, reduce flash flooding, and prevent costly storm-related damages.

**The goals of LID techniques when building are to:**

- Capture and/or filter stormwater
- Protect natural systems and processes
- Incorporate natural features into site design
- Minimize land disturbance and preserve open space
- Limit and offset impervious surface coverage

**Low-impact development design features include:**

- Rain gardens, bioswales, and riparian buffers
- Rain barrels and cisterns
- Permeable (or porous) pavers
- Infiltrations trenches and galleries

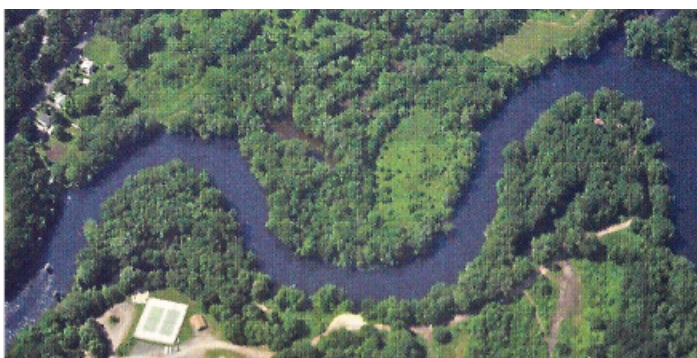


# HOW BIG IS YOUR BUFFER?



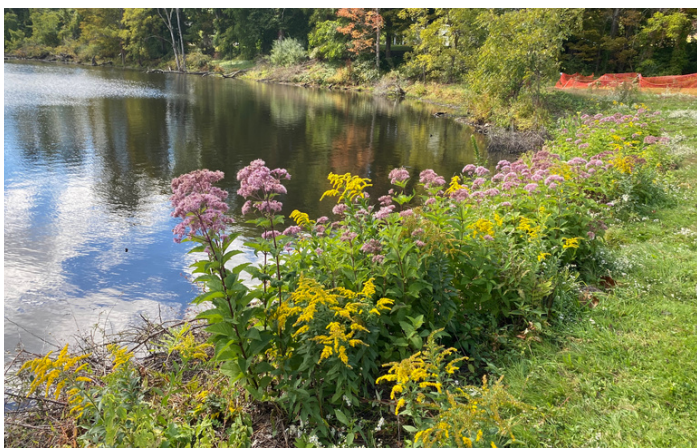
## WHAT IS A RIPARIAN BUFFER ZONE?

The EPA defines a riparian buffer zone as a vegetated area adjacent to a stream or wetland. Riparian buffer zones are comprised of a tree canopy, a shrub layer, and groundcover; their robust root systems are effective in trapping and filtering out pollutants in stormwater runoff (sediment, minerals, chemicals, and bacteria) before they enter nearby waterways.



## WHAT ARE THE BENEFITS?

By slowing down and filtering stormwater runoff, riparian buffers are essential for preserving water quality throughout the watershed. Riparian buffers can also help minimize the impacts of flooding, protect against riverbank erosion, provide shade to help keep water cool, and provide food and shelter for a number of species, including pollinators. Planting a native buffer can be a great way to promote biodiversity within the watershed while protecting your property against storm damage.



*Native riparian buffer at Lake Stibbs in Southbury, CT.*

**LET IT GROW**  
**NO MOW ZONE**

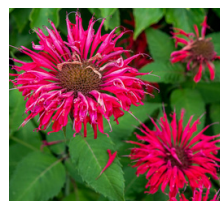
Cleans Water \* Stabilizes Bank \* Filters Pollutants  
Enhances Natural Diversity \* Creates Habitat \* Provides Food  
Deters Nuisance Waterfowl \* Low Maintenance

POMPERAUG RIVER WATERSHED COALITION

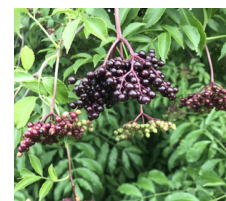
## BE RIVER SMART

Consider adding a riparian buffer to your landscaping plans! **The USDA recommends riparian buffers to extend a minimum of 35 feet from the water's edge.** If you are unable to establish new plants, consider leaving at least a 10-foot "no mow" zone instead. Any buffer is better than no buffer!

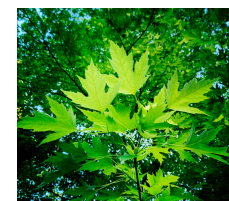
## CONSIDER PLANTING NATIVE PLANTS THAT CAN TOLERATE WET SOILS



Bee Balm



Black Elderberry



Silver Maple

**For more information** on native buffer plants and designing a backyard buffer, **check out these resources:**

### **Native Plants for Riparian Corridors in CT Guide**

<https://seagrant.uconn.edu/native-plants-for-riparian-corridors-in-ct-guide-available>

### **A Guide to Planting Your Own Riparian Buffer System**

<https://highstead.net/wp-content/uploads/2020/06/Backyard-Buffers.pdf>



# RAIN GARDEN BASICS



## WHAT IS A RAIN GARDEN?

Rain gardens, also called bio-retention areas, are depressed garden beds designed to capture a few inches of water from a rainstorm and slowly release it into the ground. They remain dry between storms.

Rain gardens are just as easy to plant as regular gardens but have added benefits, as they help to improve water quality by trapping and filtering stormwater runoff before it enters lakes, streams, wetlands, and the Long Island Sound. They also provide wonderful food and habitat for songbirds and pollinators!



## WHAT SHOULD I PLANT?

- Rain garden plants must be able to handle both wet and dry conditions. Native perennials and shrubs are ideal since they are adapted to the local climate, provide food and habitat for pollinators, and contribute to local ecological biodiversity.
- Consider planting native species like blue flag iris, purple coneflower, blue vervain, swamp milkweed, New England aster, Joe pye-weed, and boneset.
- Rain garden plants may require additional watering and weeding until their root systems are established. Following this, annual mulching and pruning will help maintain their look and functioning.



Rain garden at Community House Park in Southbury, CT.



## WHERE SHOULD I PLANT?

- Look for areas on your property where water tends to pool right after rainstorms (see above) but dries again within 24 hours after the rain stops.
- Rain gardens can be planted near driveways, roads, sidewalks, and roof downspouts to help capture and filter rain that runs off of these nearby impervious surfaces.
- Sunny locations at least 10 feet away from any buildings and away from septic tanks, wells, or areas that are permanently wet offer ideal conditions for rain gardens.
- The soil at the site must allow water to soak into the ground somewhat quickly. To test the infiltration rate, dig a small hole at least 6 inches deep and fill it with water. If the water is still there after 24 hours, the site is unfit for a rain garden.

Start Planning Your  
Rain Garden Today!

Look for this App on iTunes and Google Play



Rain Garden App

A Mobile App for designing, installing,  
and maintaining a Rain Garden

*EarthTones*  
*Native Plant Nursery & Landscapes*

212 Grassy Hill Road, Woodbury, CT 06798

**203-263-6626**

[www.earthtonesnatives.com](http://www.earthtonesnatives.com)

Native to New England & Organically Grown  
Grasses • Shrubs • Trees • Ferns • Perennials

Also offering:

- Landscape design • Installation • Consultation
  - Storm water management • Wetland enhancements
- Always focused on environmentally sound practices



# RIVER-FRIENDLY LAWNS AND GARDENS



## KNOW YOUR SOIL

A healthy lawn and garden begins with healthy soil. Knowing the composition of your soil can **help reduce the need for additional fertilizer, which saves time and money!** Soil pH, organic matter content, and nutrient and mineral levels can all affect the growth of grass and garden plants. **Get your soil tested** to find out what it needs based on what you intend to grow.

## PLAN YOUR FERTILIZER APPLICATION

Opt for **organic, phosphorus-free, slow-release fertilizers or compost** and time your lawn fertilizing right. Check your local weather reports so you never fertilize before a storm. When it rains, fertilizer from your lawn and garden can wash into storm drains that flow to lakes and streams. This causes an overgrowth of algae which (when they decompose) use up the oxygen in the water that fish need to live. For a well-established lawn or garden, fertilize just once each fall.

## USE WATER RESPONSIBLY

**Outdoor irrigation systems account for 40% of CT's residential water use** during the summer.

With today's common watering practices, **up to 50% of the water applied to lawns and gardens is not absorbed by the plants.** It is lost through evaporation, runoff, or is pushed beyond the root zone because it is applied too quickly or in excess of the plants' needs.

- Water less often by watering deeply and during a cool time of day, not during peak sunshine.
- Place a small, shallow container like a recycled tuna can in the area you are watering with sprinklers to track the amount of water being applied (aim for 1 inch).
- Build your soil with compost and mulch to hold water and reduce evaporation.
- Use soaker hoses or drip irrigation for plant beds instead of sprinklers.
- Use an outdoor water timer (available at garden stores) to water a set amount on preferred days at ideal times, not during peak sunshine.

## GET CREATIVE

To improve the aesthetics of your landscape and better manage outdoor water use, limit the use of turfgrass. Opt for native perennials, trees, and shrubs in its place and choose low-water-use plants that thrive on rainfall alone. You might also consider adding a fruit or vegetable garden so you can savor the rewards of your hard work outside! Rain gardens and pervious pathways are another great way to add interest to your landscape and they provide great ecological benefits.



# UConn

EXTENSION

## Soil Testing

Plant Science and  
Landscape  
Architecture

College of  
Agriculture,  
Health and  
Natural Resources



Litchfield County  
(860) 626-6240

New Haven  
County  
(203) 407-3161

soiltesting.cahnr.  
uconn.edu



# WATCH YOUR WATER



## CAPTURE RUNOFF TO CONSERVE WATER

- **Rain barrels** are containers that store water collected from the downspouts of roof gutters. They have a spigot at the bottom to attach a garden hose and an overflow device that directs excess water away from your foundation.
- The **collected water can be reused in a variety of ways** such as irrigating the lawn, filling outdoor fountains, washing the car (on the grass!), and watering flowers.
- If used on a large scale, rain barrels can help reduce local flooding by capturing stormwater runoff from rooftops. Even on a small scale, they are great for household water conservation.
- **Collected water should NEVER be used as drinking water!** Depending on the property, collected water may not be suitable for watering fruits and vegetables you plan to consume.



**Rain barrels** are relatively inexpensive, easy to install, hold 40 to 75 gallons of water for later use, and come in a variety of different styles, colors, and materials. You can connect multiple barrels together for extra storage!

**For more simple steps you can take to conserve water, visit:**

[WWW.RIVERSMARTCT.ORG](http://WWW.RIVERSMARTCT.ORG)

For CT Homeowners

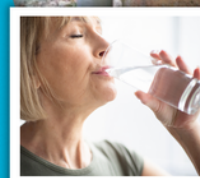
Your Well.  
Our Protection.

## Repairs Covered!

Low-cost repair and maintenance protection plans for private well water systems.

Regional Water Authority

## WellSafe<sup>SM</sup>



Call 203-401-6789

Visit [www.well-safe.com](http://www.well-safe.com)

## DID YOU KNOW?

Practicing water conservation techniques not only **saves water and energy**, it also **reduces the strain on your well**. Paired with regular maintenance, these techniques can **increase the longevity of your well water system**.

# EASTERN WATER SOLUTIONS

OVER  
**50**  
YEARS

WELLS · PUMPS · WATER TREATMENT · AQUA SURGING  
SEWAGE & INDUSTRIAL PUMPS · CERTIFIED OPERATORS  
RESIDENTIAL & COMMERCIAL

TEL. 203-264-8183, [WWW.EASTERNWATER.COM](http://WWW.EASTERNWATER.COM)

5 Benson Rd., Oxford CT 06478 · Licenses W1-115, J1-208952



# WHAT'S THE SCOOP ON ANIMAL POOP?



In the Pomperaug Watershed, ***E. coli* bacteria is a pollutant of significant concern for rivers and streams.** In-stream bacteria levels are typically highest after rainstorms. The levels become so high they are usually unsafe for swimming and boating for 24 to 48 hours after the rain stops. The bacteria come from pets, waterfowl, livestock, wildlife, and human waste. Check out Pomperaug River Watershed Coalition's online, interactive map to view local stream bacteria testing results: [www.pomperaug.org/monitoring](http://www.pomperaug.org/monitoring)

## PET OWNERS

Uncollected **pet waste is full of bacteria** that is often washed into storm drains that flow to lakes, streams, and the Long Island Sound, making them unsafe for human use.

- **Pick up all of your pet's waste** in your yard and in public spaces, even if no one is watching.
- **Seal the waste** in a compostable bag and **dispose of it in the trash.**
- Alternatively, **flush the waste** and **dispose of the used bag in the trash.**
- Remember, **NEVER flush plastic or pet litter!**

Did you know the average goose poops every 10 to 20 minutes?! That's A LOT of bacteria that can be washed into nearby waterways!



**Riparian buffers deter nuisance waterfowl and trap bacteria from their poop before it reaches the water.**

**We've got your goose **AND** your dog poop scooped!**

Keeping waterways clean and clear.

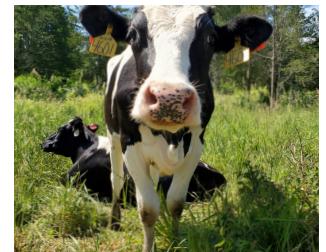


When Doody falls,  
**DoodyCalls**  
Pet Waste Management

**203-693-9523 | DoodyCalls.com**

## LIVESTOCK OWNERS

Giving livestock direct access to streambanks on grazed land can **introduce bacteria-laden manure into waterways and intensify streambank erosion.**



- Store manure at least **100 feet away from your well** and **100 feet away from the water's edge**, keep it covered if possible, and time manure spreading for dry periods so it does not run off areas where it is applied.
- Plant a **riparian buffer zone** made of native plants, trees, and shrubs along streambanks to help absorb runoff. The USDA recommends buffers to extend a **minimum of 35 feet** from the water's edge (see Page 4).
- Invest in low-cost and low-maintenance agricultural fencing to keep livestock away from waterways and establish alternate animal water stations as necessary.

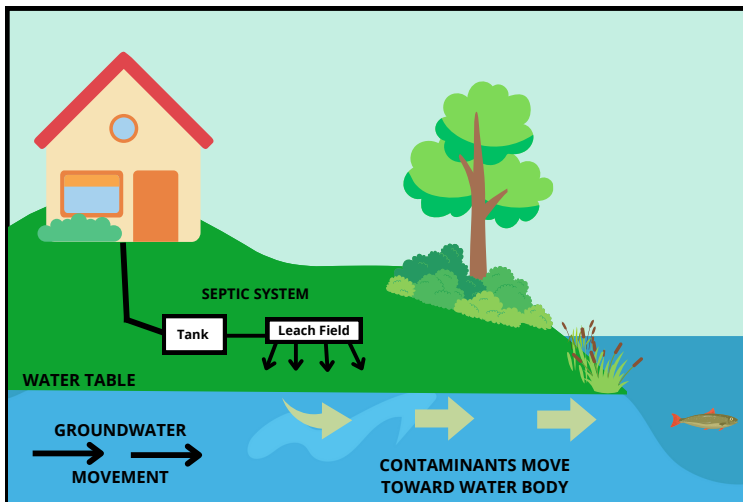


# THE DO'S AND DON'TS OF SEPTIC SYSTEMS

## DON'T FLUSH TROUBLE!



The labels on many disposable products, such as baby wipes, may say “flushable” but they can still **clog septic (and sewer) pipes, pumps, and aerators**. This can cause raw sewage to back up or overflow into homes, businesses, yards, and waterways, which is both a health hazard and **very expensive to fix!**



A **septic tank** separates solids from liquids before sending wastewater to the leach field. A layer of sludge settles at the bottom and a layer of scum forms at the top, so only the clearest wastewater goes into the ground. Solids left in the tank need to be pumped out periodically.

The **leach field** distributes the wastewater to the soil where it can be treated by micro-organisms that live in the soil before it enters the aquifer. A septic failure can release raw sewage and harmful bacteria from the tank into the leach field and groundwater supply.

In CT, nearly 40% of homes use some form of **on-site sewage disposal system** to treat and dispose of household wastewater. It is the **responsibility of the property owner** to make sure it is maintained and functioning correctly.

## IT IS A TOILET, NOT A TRASH CAN

These items belong in the trash:



Cleaners



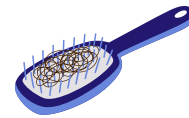
Medications



Wipes



Dental Floss



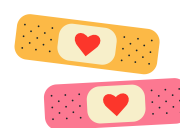
Hair



Feminine Products



Cooking Fats, Grease, Oil



Bandages



Cat Litter

## BE RIVER SMART

- Have your **septic tank pumped out and inspected every 2 to 5 years**, depending on its capacity and use.
- **Learn the location of your septic tank, distribution box, and leach field** so you **NEVER** drive, garden, or build on top of your septic components or leach field.
- **Conserve water** and fix any household leaky faucets quickly to reduce the risk of overloading the system.
- Keep an eye out for **signs of septic failure** including sluggish drains or odor, wastewater backups into your house, and squishy areas or lush grass above your leach field.
- Confirm that your **septic system** is located at least **75 feet away from your well** and 75 feet away from the water's edge.



# CARE FOR YOUR CAR AND THE ENVIRONMENT

**Washing your car** in the driveway or street can carry soap, scum, and oily grit into storm drains that flow to **lakes, streams, wetlands, and the Long Island Sound.**



When **motor oil or other automotive fluids leak** from your car into the street, they can wash into storm drains that flow, untreated, to **lakes, streams, wetlands, and the Long Island Sound.**

## WHAT CAN YOU DO?

- **Wash your car on grass or gravel** so the ground can naturally filter the water and simultaneously water the lawn.
- **Use soap sparingly** and empty soapy water buckets in the sink, not the driveway.
- If possible, **take your car to a commercial car wash** where the water is properly collected, treated, and recycled.

## BE RIVER SMART

- **Check your car for leaks often.** Use cat litter or sand to soak up any found leaks and **fix your car quickly.**
- **NEVER dump antifreeze, motor oil, or other engine fluids** down storm drains, down the sink, or onto pavement or grass.
- **NEVER mix used motor oil**, which can be reused, **with any other substance.** This contaminates the oil and can create a more hazardous chemical.
- **Dispose** of used automotive fluids properly at your community's **household hazardous-waste collection days.**



To find a Hazardous Waste Collection Event in the Greater Waterbury area, visit:  
[NVCOGCT.GOV/HOUSEHOLD-HAZARDOUS-WASTE](http://NVCOGCT.GOV/HOUSEHOLD-HAZARDOUS-WASTE)



# WHERE DOES YOUR DRINKING WATER COME FROM?



## KNOW YOUR WATER SOURCE

Households and businesses that receive water from **public supply** wells—like some in Woodbury (Aquarion Water Company), Southbury (Connecticut Water Company), and Watertown (Watertown Fire District)—can rest assured that their drinking water is being tested on a regular basis and that it meets strict public health criteria established by the Safe Drinking Water Act (regulated by the EPA). Every public water system must **provide an annual report to its customers**, which provides information on local drinking water quality, including the water's source, contaminants found in the water, and how consumers can help protect their drinking water.

Households and businesses that draw their water from **private wells** are responsible for testing their own water. Under local public health laws, new private wells must be permitted, and pass inspection and potability testing. After that, **private well owners are solely responsible for testing** the quality of their drinking water and maintaining their wells, which can be a real mystery. Therefore, those with private wells should test their water regularly through a state-certified lab.

**CT Department of Public Health recommends the following well water testing schedule:**

Basic Indicators	Tests	How often?
Total Coliform	Basic Indicators	<b>Every Year</b> Also any time there is repair work to the well, pump or water pipes, or if you well head was flooded.
Bacteria		
Nitrate		
Nitrite	<b>Lead</b> (2 samples: first draw & flushed samples should be collected when testing for lead)	<b>At Least Once</b> Also when planning a pregnancy or have a child under the age of 6 in the home; or, if you water is considered corrosive, test every 3 to 5 years
Sodium		
Chloride	<b>Arsenic, Uranium, Radon</b>	<b>At Least Once</b> Ideally repeat test every 5 years
Iron		
Manganese	<b>Volatile Organic Compounds (VOCs)</b>	<b>At Least Once</b> More often if a problem is identified or suspected
Hardness		
Turbidity	<b>Fluoride</b>	<b>Every 5 years</b> when a child under age 12 is present in the home
pH		
Sulfate		
Apparent Color		
Odor		

## Can You Trust Your Drinking Water Source?

We're here to serve our communities.



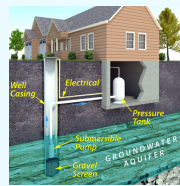
Well water or municipal water. There is widespread contamination of our drinking water sources, and it's on the rise with forever chemicals: PFAS.

Protect your health. Find out if your drinking water is safe – and take corrective measures if it's not.

Call us with questions: (203) 270-9973  
Order your test kits: [YorkLabWaterTest.com](http://YorkLabWaterTest.com)

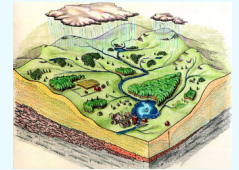
You Need to Know  
**What's in Your H2O**  
[YorkLabWaterTest.com](http://YorkLabWaterTest.com)

56 Church Hill Road, Suite #2  
Newtown, CT 06470  
[drinkingwater@yorklab.com](mailto:drinkingwater@yorklab.com)



LEARN MORE ABOUT TESTING PRIVATE WELL WATER:

[testyourwell.ct.gov](http://testyourwell.ct.gov)



Drinking water analysis

## Is it pure H2O?

Expert chemical and microbiological testing of drinking water for homeowners.



[Regional Water Authority](http://RegionalWaterAuthority.com)

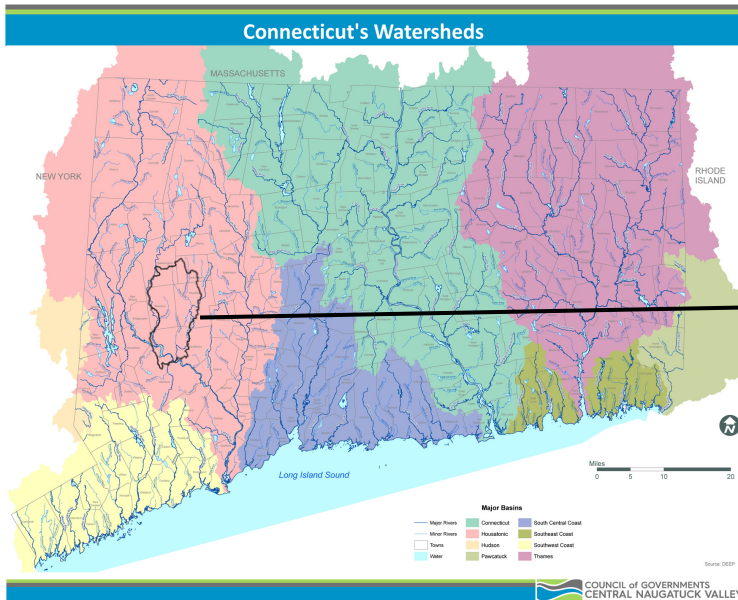
Call 1-877-894-5773  
Visit [www.RWAlab.com](http://www.RWAlab.com)



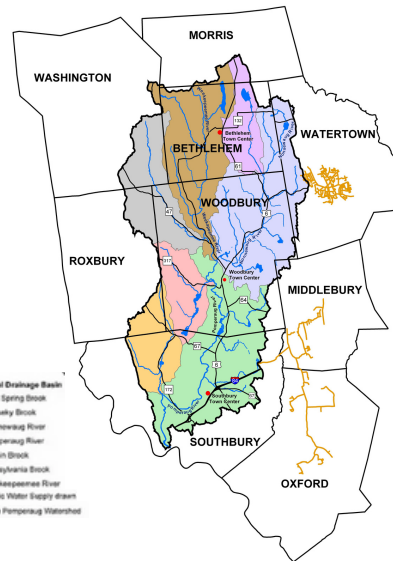


39 Sherman Hill Road, C103  
 Woodbury, CT 06798  
[www.pomperaug.org](http://www.pomperaug.org)

# It's your watershed, handle with care.



## Pomperaug River Watershed



The Pomperaug Watershed encompasses 90-square miles of land that captures and delivers rainfall from Roxbury, Washington, Morris, Bethlehem, and Watertown to the Pomperaug River in Woodbury and Southbury, which eventually drains to the Housatonic River and Long Island Sound. Portions of Oxford, Middlebury, and Watertown which are outside of the watershed are still connected to the Pomperaug Aquifer by public drinking water supply pipelines.

To learn more about your local rivers and groundwater and to support the Pomperaug River Watershed Coalition, visit [www.pomperaug.org](http://www.pomperaug.org)



This publication and distribution of this River Smart Guide (2024) was made possible in part by generous grant support from the Long Island Sound Stewardship Fund. This Guide was produced by Pomperaug River Watershed Coalition (PRWC) as part of Connecticut's River Smart program, which is led cooperatively by PRWC, Farmington River Watershed Association, Housatonic Valley Association, Kent Land Trust, Northwest Connecticut Land Conservancy, and Rivers Alliance of Connecticut.

