

WATERSHED CHAMPIONS: INFORMATION AND RESOURCES

The West Fork River and its creeks are polluted, but provide our water supply, recreation, and fish and wildlife habitat. We need to improve the quality of our waters, and that is a goal of the Guardians of the West Fork River. We advocate for better management of our waters, work to restore the river and creeks, and work to educate people about the opportunities and the challenges related to water quality and the environment. The Watershed Champions program is a way for each community member to help improve our watershed and our waterways.

A watershed is the area of land that channels or “sheds” rainfall and other water runoff into a particular body of water. The West Fork Watershed is all of the land where the creeks run into the West Fork, from the headwaters near Rock Cave in Upshur County to where it joins the Tygart to make the Monongahela in Fairmont. Major creeks are Booths Creek, Ten Mile, Simpson Creek, Limestone, Elk Creek, Lost Creek, Hacker’s Creek, Stone Coal, and Polk Creek. It has 881 square miles of land, over 1800 miles of streams, and is home to more than 105,000 people.

We need to understand the connections among our own yards and land and the water that flows into the West Fork to make our creeks and river healthy again. Every single person, young and old, can make a difference, often in simple ways in your own yards and gardens. If everyone takes a few simple steps, we can help clean our waters and improve our environment and our health, making a healthy, rich, and beautiful landscape that wildlife and people enjoy.

The Watershed Champions program will recognize you for your efforts to improve your yard and garden and help restore water quality in the West Fork Watershed. By completing the steps explained below and informing the Guardians of your efforts, you can be certified as a Guardians Watershed Champion. The Guardians also recognize that children are our future, and these resources include specific suggestions for children to take part. If you have children in your life, we encourage you to include them in as many of these certification steps as possible.

WHAT IT’S ABOUT

The Watershed Champions program will help you use and care for your property in ways that help to enrich, protect, and sustain our watershed and all the life it supports.

Champions will:

1. Understand the relationship of their land to the watershed.
2. Learn how to minimize stormwater runoff and pollution, improving water quality in the West Fork and its tributaries.
3. Create a healthy, diverse garden and yard or woods and fields ecosystem on their property.

When you have completed the steps below, you should be able to:

1. Understand more about how water from your property can affect the quality of water in our creeks and rivers.
2. Improve quality of the water moving over and through the soil on your property by understanding how residential hard surfaces (roofs, driveways, patios, etc.) and unpaved driveways and roads change the amount and quality of water in our community storm drains, creeks, and the river, and understanding what is particularly harmful to our water and how to prevent it getting in.
3. Use native plants or garden and lawn designs or rural property management that create habitat for native wildlife that benefit your property and the watershed.

STEPS FOR CERTIFICATION

To become a certified Guardians Watershed Champion, you must complete the three steps below. Each of these three steps contain possible things to do, and you only need to do a few to meet the requirements for certification. However, the more you do, the more you will improve our environment. If you have not yet taken enough actions to qualify, look at what else you can do. We encourage including the whole family in this program. (See Step 3 for activities for kids.)

It is important to note that any links provided and or blue cited words will lead you to credible information or how to complete the desired task. Links and information is tailored to the West Fork River community in where resources are located and facts.

STEP 1 – Know where the rain and snow that lands in your yard or property goes

How does the way we maintain our yards, garden, farm, or maintain our rural property affect the quality of the river water far away? The water in a flowing system, like West Fork, comes from a variety of sources, including rain and irrigation runoff from properties, roads, and streets, and from undeveloped land, as well as local springs. The area of land where the water flows into a stream is called a “watershed.” Those collective drainage paths that define the boundaries of the West Fork Watershed. As the water finds its way from its source to a creek or river, it is picking up and carrying some of the materials it encounters along the way.

What is the path for water from your yard or property as it finds its way to the West Fork? For many residents it will be through the storm drain system. Those storm drains along streets are collecting runoff from excess irrigation and rain, and taking it directly to a body of water, usually without treatment to remove harmful substances. For rural property to lakes or streams, runoff can go directly into the water. What paths does the water from your property take to find its way into the West Fork? Or does it actually stay within your or nearby properties through soaking into the soil? The water that soaks into the ground provides water for the plants and organisms that live in the soil, and some may also go deeper and help restore groundwater supplies. What are the possibilities?

Identify your watershed and subwatershed.

This map from the Environmental Protection Agency allows you to see your watershed.

[How's My Waterway? https://mywaterway.epa.gov/community/](https://mywaterway.epa.gov/community/)

It will also show you the health of all the nearby creeks – whether they are safe for drinking, swimming, eating fish, and aquatic life – and if not, why not. Sadly, most of our water that has been checked is not healthy for one or more of these uses. While our watershed is full of abandoned coal mines and gas wells which affect the watershed, the largest sources of pollution in our streams are sewage and sediment – from both town and country.

Just type your address in the search box – or you can zoom and scroll around the map to look at different places.

You may live in a different watershed, and we are not limiting this program to residents of the West Fork Watershed. Anyone can be certified a Watershed Champion if they take the Steps for certification, which apply to watersheds in general. All water from the West Fork Watershed eventually drains into the Monongahela River, the Ohio, and the Gulf of Mexico. Other nearby watersheds also drain into the Monongahela, or on the west and south, into the Little Kanawha.

Know the destination of rainfall that lands in your yard. To complete this Step, observe what is

going on in your yard during a heavy rain to determine where that water is going. Then check off all of the following destinations that apply.

1. Remains on my property and percolates into the soil or is retained by a water feature or reservoir, such as a pond, rain garden, or rain barrel.
2. Runs off into neighboring properties.
3. Runs off into a nearby water body, such as a stream or lake.
4. Runs off into a nearby storm drain.

STEP 2 – Improving or Sustaining Our Water Quality

Too much fertilizer, pesticides, herbicides, dog waste, sediment, oil, other chemicals, and trash get carried off our land by rain storms or heavy irrigation. When these pollutants get into water bodies, living organisms (fish, insects, algae, plants, etc.) are affected in our streams, rivers, and lakes. In our watershed, sewage and pasture runoff put bacteria in our water. Here are some things you can do to help minimize the pollutants from your property that reach your nearest storm drain or water body.

You will need to do **at least 5** of these to meet certification requirements.

A. Reduce the Use of Chemical Fertilizers, Insecticides, and Herbicides.

Fertilizers are often applied in amounts and places where they are not needed. Resulting in excess washing away. Consider whether you really need fertilizer? You can determine this by having your soil tested by your local extension agent or using an at [home soil test](#). A soil test will make sure your plants are receiving enough nutrients through strategic planting and use of compost. If fertilizers are needed, ensure proper measurements are taken and do not over-fertilize. Over fertilization contributes harmful amounts of nitrogen and phosphorus into waterways. These nutrients can fuel algal blooms, which will die, and the decay of the algae will use dissolved oxygen in the water, thus harming wildlife. Algal blooms are prone to releasing toxins into water that harm humans, pets, and wildlife.

B. Dispose of Pet Waste from Your Yard

When pet waste is left on the ground, it can be washed into storm drains and waterways. Not only does [dog waste contain bacteria, viruses, and parasites](#), but it also contains three times as much bacteria as human waste. When waste decays in waterways oxygen is used up, producing ammonia, and leading to algal blooms, and becoming dangerous for those using the water for recreation, especially in warm weather. Livestock in the creek not only contribute manure, but break down banks and churn up sediment. A way to prevent this is fencing off creeks and waterways to livestock.

C. Properly Dispose of Used Oil, Unused Medications, and other Waste

Any oil used in the home from cooking oil to motor oil will cause major harm to water ways. If it is not disposed of properly its chemical toxins can leach into soil and gain access to your ground water.

Adopting these practices can keep harmful substances out of the water and protect the environment.
Oil:

Cooking Oil:

1. Cool it down: Let the oil cool completely.
2. Container it: Pour the cooled oil into a non-breakable container with a lid (like a plastic bottle).
3. Trash it: Seal the container and throw it in the trash.

Motor Oil:

1. Collect it: Pour the used motor oil into a clean, leak-proof container.
2. Recycle it: Take it to a local recycling center or an auto shop that accepts used motor oil.

Unused Medications:

Drug Take-Back Programs:

1. Find a location: Look for a local pharmacy or community program that accepts unused medications.

Household Trash:

1. Mix it: Remove the medications from their original containers and mix them with something undesirable like used coffee grounds or cat litter.
2. Seal it: Put the mixture in a sealed plastic bag or container.
3. Trash it: Throw the sealed container in the trash.

Other Waste:

Recycling:

1. Sort it: Separate recyclables like paper, plastic, glass, and metal.
2. Clean it: Rinse out any food residue from containers.
3. Recycle it: Place the clean recyclables in your recycling bin.

Composting:

1. Collect it: Gather food scraps, yard trimmings, and other organic waste.
2. Compost it: Add these to a compost bin or pile to create nutrient-rich soil for your garden.

D. Maintain your Septic System and or Public Sewer Lines.

Proper [maintenance of septic systems and public sewer lines](#) is essential for preventing health risks, costly repairs, and environmental damage. Regular inspections, proper waste disposal, and efficient water use are key practices to keep these systems functioning well.

Maintaining Your Septic System at Home:

1. Inspect and Pump Frequently:
 - Inspection: Have your septic system inspected by a professional every 3-5 years.
 - Pumping: Pump the septic tank regularly to remove sludge and scum.
2. Use Water Efficiently:
 - Fix Leaks: Repair leaky faucets and toilets to reduce water usage.
 - Spread Usage: Avoid using large amounts of water at once; spread laundry and dishwashing throughout the week.
3. Proper Waste Disposal:
 - Avoid Flushing Non-Flushables: Do not flush items like diapers, feminine products,

- or grease.
 - Dispose of Chemicals Properly: Avoid pouring chemicals down the drain.
4. Maintain Your Drain field:
- Protect the Area: Do not drive or park vehicles over the drain field.
 - Plant Grass: Plant grass over the drain field to prevent erosion.

When poor maintenance of septic tanks is practiced it can lead to costly repairs on average. Repairing or replacing a malfunctioning septic system can cost between \$5,000 and \$15,000. Poorly maintained systems can contaminate groundwater with harmful bacteria and viruses. Contaminated water can cause diseases in humans and animals. Malfunctioning systems release pollutants into local waterways, harming ecosystems.

Maintaining Your Public Sewer Line:

1. Regular Cleaning:
 - Enzyme Cleaners: Use enzyme cleaners to break down organic matter in the sewer lines.
 - Baking Soda and Vinegar: Flush lines with a mixture of baking soda and vinegar to remove grease.
2. Prevent Blockages:
 - Avoid Flushing Non-Flushables: Do not flush items like wipes, paper towels, or grease.
 - Tree Roots: Regularly check for tree roots near sewer lines and remove them if necessary.
3. Routine Inspections:
 - Professional Inspection: Have a plumber inspect the sewer line periodically to identify potential issues.

Poor Maintenance of your public sewer line is bad and leads to blocked sewer lines. That causes sewage backups, leading to unpleasant odors and health hazards. Repairing damaged sewer lines can be costly and disruptive. Blocked or damaged sewer lines can release untreated sewage into the environment, causing pollution.

E. Reduce the Need for Watering by Increasing Native Plants.

Lawns are biological deserts, don't tolerate drought well, and are poor at absorbing water from rain storms (heavy rainstorms tend to cause water runoff from lawns). A way to better your lawn quality, reduce the need for watering, irrigation, and chemical fertilizers is to adopt native plants. Native plants do not need fertilizer, need little or no watering, and do a good job of absorbing stormwater (native trees especially). If you do have grass here are some ways to properly maintain your lawn!

[Maintaining Grass!](#)

[What and how to plant?](#)

F. Use Native Ground covers that Stabilize to Prevent Erosion.

Bare soil, unprotected by ground covers and mulch, can be washed away and enter nearby waterways. Water polluted with this sediment becomes murky, which prevents animals from seeing food and keeps natural vegetation from growing in the water. Sediment accumulation in stream beds disrupts the natural food chain, reducing fish and other stream life, by destroying the habitat where the smallest stream organisms live and can cause large declines in fish populations.

For more information see:

[Ground Covers: Protect Your Soil – Mother Earth Living](#)

[The West Virginia DNR Wild Yards Program](#) has information about creating a natural environment and wildlife habitat on your property, including landscaping advice, that will also protect the watershed. All of this information is on native facts to West Virginia.

G. Regularly pick up human-made trash in and around your yard and near your storm drains and properly dispose of it.

Recyclables can be placed in recycle carts, and any other waste goes in your trash bin. Lightweight cans, plastic bottles, straws, and bags are easily washed into storm drains by heavy rains and become the source of much of the litter in our waterways.

H. Help to keep the storm drain closest to your home clear of debris and trash.

[Drains Aren't Dumps!](#) You'll need a shovel, wheelbarrow or cart, a trash bag, and a pair of gloves. Dispose of human-made garbage in a bag (that will go in your trash bin), and you can put the organic debris in a compost pile or garden border. Involving neighbors and community members will make this clean up fast and social. [Streamside Homeowners Packet.](#)

I. Harvest Rain Water with a Rain Garden or Rain Barrels.

1. [Rain gardens](#) capture water and allow it to filter slowly through the ground. They are placed in yards to help capture runoff from roofs, driveway, sidewalks, or a lawn. They can be as simple as adding attractive vegetation to low spots in your yard, or as involved as directing downspouts to a shallow depression that you excavate and fill with appropriate soil, plants, and mulch. They do not hold standing water for very long and do not attract mosquitoes. They support [water-loving](#) native plants that also tolerate drought, so that, once established, you will never need to water the rain garden!

2. [Rain barrels](#) fill up in minutes in heavy rainstorms and are best used in our area to direct water to rain gardens or other garden beds that need irrigation. Rain barrels will save money on water bills, because the water can be used for household chores; such as, watering lawns, washing cars, cleaning outdoor areas, mopping floors, etc. Reduction of stormwater runoff takes place reducing water pollution and clogged storm drains.

K. Reduce Hard Surface Construction.

If you are making outdoor changes that commonly involve addition or renovation of hard surfaces, such as patios, driveways, or concrete paths, think about using porous materials instead. Impervious surfaces are those through which water does not penetrate, and instead flows over the surface and moves downhill. These surfaces will let water into the ground materials; such as gravel or planted beds. More hard surfaces in our communities mean more water enters local streams and at a faster rate and higher temperature. Heavy rain brings local flooding and causes erosion. Picking up more surface debris and dirt, which can make water quality much worse.

[What can you do to reduce impervious surfaces?](#)

Click the link above to learn more!

STEP 3 -Enriching Our Ecosystem

As we plan our yards and gardens, we want them to be beautiful, neat, and convenient, without thinking about how biodiversity – the variety of life – can help. Native plants support the complex web of soil organisms, plants, insects, birds, and other animals that enrich our environment. There are many choices home landscapers can make to provide habitat for wildlife and retain sufficient water for the

property. These include use of native plants, rain barrels, rain gardens, composting, and mulching, among others. As we do that and see the good results, we can share our experience with others and grow our community of Watershed Champions.

You will need to do **at least 3** of the following actions to meet certification requirements.

A. Plant Native Plants

Most plants commonly carried in nurseries and promoted for homeowners are not native to the region. These plants include trees, shrubs, grasses, and more; thus reducing lawns and non native plants. Native plants are more available than they used to be. Learn about what is native and what is not, and ask for native plants when you visit a nursery. Remove any invasive plants that are non-native and aggressively overwhelm growth of natives.

[Nursery locations and native plant tips!](#)

“If each American landowner made it a goal to convert half of his or her lawn to productive native plant communities...[we could] collectively restore ecosystem function to more than twenty million acres....” That is larger than the combined areas of most of our major national parks![\(From Nature’s Best Hope, by Douglas Tallamy, 2019, p 62\).](#)

For more ideas and help go to:

[West Virginia Planting Tool](#)

[Audubon Society Native Plants Database](#)

[Central Appalachia Selecting Plants For Pollinators](#)

[Xerces Society Pollinator Plants](#)

B. Buffer Zone

A buffer zone is an area along a pond or a creek that borders appropriate native plants along the water's edge. This will help prevent pollutants and sediment from washing into the water, while adding beauty and interest, as well as wildlife habitat. Stream bank repair can be vital for property owners to repair bank erosion and degradation. Rural property owners are susceptible to this and can find more information at [Stream Bank Repair](#).

C. Retain Yard Waste!

Yard waste is not as nasty as it may sound! Yard waste is grass clippings, natural tree litter, fallen leaves, branches, and etc. They retain the nutrients in your yard and build good soil. You can let the leaves stay where they fall over winter, and they will provide protection for those insects that overwinter in plant debris and soil (such as many pollinators). In other terms yard waste becomes free mulch and compost! You can also mulch your beds with the leaves and debris, or build a compost pile, which can include vegetable kitchen scraps as well.

For more information try:

[Composting At Home | US EPA](#)

[The Absolute Beginners Guide to Composting – Compost Magazine](#)

[Composting | Home & Garden Information Center](#)

D. Water Source for Wildlife.

Water is essential for all life forms. From insects and reptiles to birds and mammals. Water sources could be a bird bath, a small pond/water garden, or an adjacent stream or pond. A simple way you can create a safe place for butterflies and other pollinators to drink is by placing small stones or marbles in the bottom of a shallow dish and filling it with water. Just be sure to keep such water supplies clean to prevent the spread of disease and growth of mosquitoes.

For more information try:

[Splish, Splash: Why Do Birds Take a Bath?](#)

E. Inform the Landscaping and Lawn Care Industry.

Share the ideas and lawn/garden ethic presented in Watershed Champions with a landscape maintenance person or company. If we can begin to promote the capacity of landscapers to create an ecologically healthy garden and lawn environment, we make even more headway in promoting water quality and ecological health to our yards and watersheds.

F. Help get Neighbors Involved.

Share the Watershed Champion ideas and information you have learned with your neighbors, family and friends. Tell them about your successes and alert them to efforts that may not have worked so well in your property. The more extensive the area included in the “Champion” approach, the greater the impact on the watershed.

G. Engage with children and have them complete at least one of the activities below.

Children have been increasingly disconnected from the natural world. Creating a rich ecosystem in your own yard gives them the opportunity to enter and learn about the natural world every day. It can instill in them a sense of wonder, awe, and stewardship.

Some activities are listed here, and you may think of others.

[Build a Birdhouse](#)

[Make a Bird Feeder](#)

[Make a Toad House](#)

[Pollinator Garden](#)

[Pollinator Journal](#)

[Build a Watershed](#)

[Experiment with Water Runoff](#)

[Go on a Stormwater Walk](#)

Read [“A Fish’s Wish: A tale of polluted runoff and how to prevent it”](#)

Complete the [“Be a Drain Ranger”](#) coloring and activity book.

[Be a “biodiversity detective”:](#)

Ready to Apply for Certification?

Submit your completed Application for Watershed Champion Certification, showing the specific actions under each step that you have taken. You will receive a certificate, a decal, and an opportunity

to obtain a Watershed Champions yard sign. Your accomplishment may also be recognized on our website, and in our annual report, and at West Fork Watershed Day.

<https://guardiansofthewestfork.org/watershed-champions/>

Or contact us at admin@guardiansofthewestfork.org