

FUNCTIONAL GARDENS, HEALTHY WATER

Water is the foundation of life. Without it, we would not have life or the wondrous natural world around us. Yet, every day as a society we dump countless fertilizers, pesticides, herbicides and other water-quality-damaging chemicals onto our gardens, lawns and landscapes – usually as a result of poor design. Many people simply don't understand the consequences of our garden care and design on our water supply.

The neighborhood sits on rock and clay. The rain garden helped with drainage issues and was planted simply with *Equisetum* and iris among the shade garden. ▽

All water drains to or runs off into our local watersheds: for most of us in Kentucky, it's into the Kentucky and Ohio Rivers. These watersheds provide us with the water we use to sustain life. The water that flows over our land, parking lots and streets picks up motor oil, fertilizers and many other toxic pollutants on its way to the storm sewer. All of this water ends up in our creeks and rivers and affects the water ecosystems we use for bathing, drinking and playing. Lawns and gardens usually require chemicals, so gardeners and homeowners can make a significant change in water quality by starting in their own yard.

We, as gardeners, can help by applying

safe practices and solutions in our own lawns and gardens by using good design. The proper selection of plant material and hardscape materials can provide aesthetically pleasing and functional solutions. You can implement any of these ideas as part of your lawn maintenance or design solutions for your yard:

- Install landscapes that don't need chemicals: Use native varieties or non-native hardy varieties, and plant the right plant in the right place.
- Use earth-friendly lawn care by using organic yard-care solutions such as bone meal, mulch, cottonseed meal, compost and manure. Corn gluten is an all-nat-





◁ Before: This area that held the rain-water was covered with invasive honeysuckle and euonymus. These were cleared out and the space was excavated to create the rain garden.



Diagram courtesy of the Arkansas Department of Environmental Quality. Photos courtesy of Andrea Mueller.

ural weed preventative and an effective combatant for dandelions and other broadleaf weeds.

- Install a green roof to help absorb extra storm water runoff.

- Install a rain garden to redirect storm water runoff from your roofs, patios, porches, driveways and other impervious surfaces and help to solve on-site drainage issues. Having a rain garden helps reduce the amount of storm water by holding the water in the garden and allowing the water to soak into the soil through deep-rooted plants, which also recharges the groundwater supply. The soil and plant roots use natural processes to improve water quality by filtering pollutants and reducing the amount of storm water runoff.

- Replace lawn areas and extra land with trees or prairie because the roots will be deeper and more water will saturate to recharge the groundwater supply. This is especially beneficial for oversized lots with wasted lawn space. You can plant a micro forest in your yard or a prairie planting to attract birds, butterflies and a variety of other wildlife.

- Utilize alternative fertilizers and landscape care products that are eco-friendly or organic and reduce nitrogen and phosphorous input. Synthetic fertilizers kill the soil microorganisms that help fight pests and disease.

- Apply fertilizers at the right time when there is less chance of runoff.

- Establish fertilizer-free areas for landscapes near waterways with at least a 60-foot setback.

- Utilize hardscape or paver materials that are eco-friendly and permeable. These materials are great for driveways, patios and sidewalks and help to reduce storm water runoff.

- Talk to your landscape and lawn providers and ask them about organic options and application standards. Ask them what chemicals they are spraying and how often. For example, make sure they aren't spreading fertilizer and pre-emergent all

This diagram shows how a watershed works. The water which flows over the land ends up in our rivers, and therefore our water supply.▷

This rain garden helped to solve a major drainage and water runoff issue. Plants used were liatris, blue flag iris, coneflower, prairie dropseed, redbud dogwood and reed grass, providing a mixture of bloom, form and year-round interest.▽



over the street while treating your lawn, and make sure they do not apply fertilizer near waterways.

- Always be part of the design process and let your designer know your goals for your garden.

Many more benefits of these great, water-quality-serving ideas include conservation design, water quality volume, improvement of habitat and biodiversity, less drug-dependant turfgrass to mow, and of course, the joy of gardening. These appli-

cations also provide low-maintenance solutions and many of them solve drainage issues. By using proper design, materials and product selections, you can have a beautiful and functional landscape with a higher purpose.🌿

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