Spring 2015

Volume 1, Issue 4

Watershed Update

Fourteen Mile Creek
Goose Creek-OH River
WATERSHED
Improvement Project

Clark County Soil and Water Conservation District

Partners helping to make our project happen:

- Clark/Jefferson/Scott County Health Departments
- Jefferson and Scott County SWCDs
- IDNR Division of Nature Preserves
- Chicks on the Farm
- Indiana State Department of Agriculture
- Natural Resources Conservation Service

Water Quality and Gardens

It's hard to believe that spring is upon us after experiencing the frigid temperatures and snow storms of the last two weeks of February, but come March 20th, it will be here! It's time to start thinking about what new varieties, or old standbys, of plants will populate your garden. As you do so, also take time to consider how your gardening practices can help improve water quality.

Generally, we view gardening as a wholesome activity that enhances our environment. However, pesticides, fertilizers, and erosion from gardens and landscapes can contaminate streams and groundwater. The quality of our water resources affects our quality of life, we must learn how our gardening practices can contribute to water contamination and what we can do to reduce the threat to water quality.

Each garden may contribute a relatively small amount of runoff containing soil, chemicals, and fertilizers that flow into our surface water. Nitrates and certain pesticides may leach through the soil contaminating our groundwater. Added up, the small contributions form a sizable problem. Only when individuals take responsibility and make wise choices can we control nonpoint source contamination.

Topics in this issue will discuss ways to help protect water quality in the traditional garden, as well as some new concepts such as rain gardens, rain barrels, and green roofs.

Inside this issue:

Healthy Lawns

Although lawns are not gardens, a properly maintained lawn also helps to protect water quality. Healthy grass needs less pesticide and will take up fertilizer better, reducing the chance of pollutants washing through the soil and reaching water. Create conditions for grass to thrive and resist damage by working with nature. Think about lawn care as a preventive health care program, where the object is to prevent problems from occurring so you don't have to treat them.

Mow high and often to make your lawn more resistant to drought and disease. Set your mower to the highest recommended level for your grass type. Longer grass shades the soil surface keeping it cooler, helping it retain moisture, and making it difficult for weeds, like crabgrass, to germinate and grow.

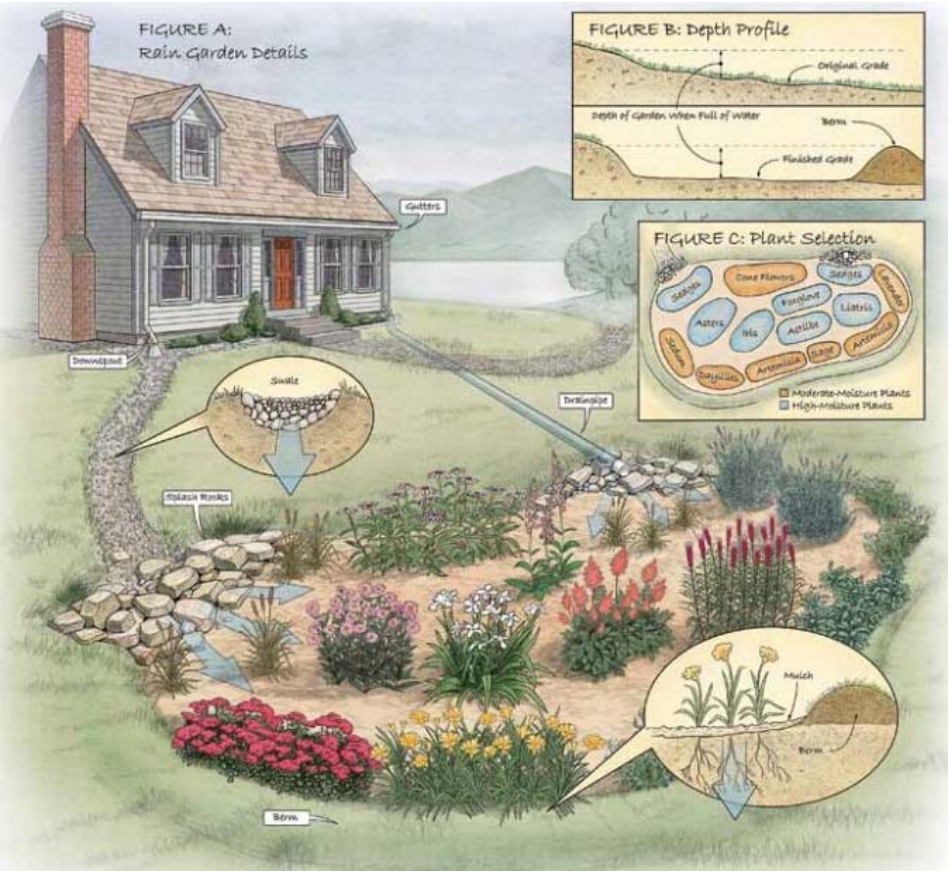
Leave grass clippings on the lawn. They add nutrients to the soil, lessening the need for commercial fertilizer. The added organic matter provided by the clippings helps reduce runoff.

Rain Gardens

A rain garden is a planted area constructed in an ideal area of your yard to capture the first flush or runoff from a rain event. The garden is designed to catch and filter the runoff created from sources such as rooftops, lawns, driveways and patios. The gardens fill with a few inches of water and then allow that water to slowly filter into the ground rather than running off to storm drains. Compared to a patch of conventional lawn, a rain garden allows about 30 percent more water to soak into the ground.

A rain garden can be your personal contribution to cleaner water, heathier fish and wildlife populations, and a greatly improved environment. Rain gardens offer many benefits:

- ◊ *Increases the amount of water filtering into the ground, which recharges groundwater and helps reduce the amount of pollutants washing off to lakes and streams*
- ◊ *Helps sustain adequate flows in streams during dry spells*
- ◊ *Rooted plants stabilize soil and prevent erosion during large storm events*
- ◊ *Requires little mowing, weeding or chemical application once established*
- ◊ *Provides valuable wildlife habitat*
- ◊ *Enhances the beauty of your yard and the neighborhood*
- ◊ *Helps protect communities from flooding and drainage problems*



The rain garden does not require much space and can fit into existing landscapes, and can be made into any shape. Rain gardens should be placed in a location to collect the runoff as a rain event occurs. To make your rain garden effective, strategic placement next to hard surfaces such as alleys, sidewalks, driveways and under gutters are good choices. The location should be at least 10 feet away from your home to avoid a flooded basement or leaky foundation. You may think that a location where water already ponds in your yard would be appropriate, but it is NOT. The soil in this location does not have adequate infiltration and is not what you want. The depth should not be greater than six inches because of the possibility of retaining water longer than 96 hours, which would make the area prone to mosquito breeding. A good rule of thumb is that the garden should be at least twice as long as it is wide.

After the site is prepared, planting is the next step. Keep in mind that a rain garden is a “garden” not a prairie. The focus is on flowers, although some grasses can be used. The garden will have various zones so different kinds of plants are required. For example, the center and the deepest part of the garden will support the wet to dry plants, and upper rim of the garden will support the drier types of vegetation. It is always recommended to use native plants. Native plants are best because they are adapted for the local climate and once established, do not need extra water of fertilizer. Many are deep rooted, allowing them to survive droughts. They also provide habitat and food for native wildlife and they attract diverse pollinators. Each rain garden may seem small, but collectively they produce substantial environmental benefits.

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Rain Barrels

During the summer and estimated 40 percent of household water usage goes toward watering lawns and gardens. The increased water usage stresses local ecosystems through the increased runoff it produces and increased consumption of local water resources.

Rain barrels do exactly what their name implies—a barrel that collects rain, specifically from impervious surfaces, particularly roofs, and holds it for later use. Benefits include:

* *Redirecting rain water from a roof to a lawn or garden*
* *Collecting and storing water for times when its needed most—during the dry months*
* *Rain is naturally soft and devoid of minerals and harmful chemicals*
* *Easy to make*

Although untended barrels can breed bacteria, mosquitos, and algae, this can easily be prevented if the water if used frequently and not left to stand for months. It is best if the top is covered so animals and small children can't fall into it.

The benefits to the environment and the savings they can produce make rain barrels a worthy investment!

Rooftop Gardens

Here is an idea that might be over some of our heads, that is not for everyone, but that is gaining popularity in urban areas—rooftop gardens. Over 75 percent of most cities are covered with buildings, sidewalks and parking lots. All that pavement has turned urban areas into smog-filled heat islands that channel millions of gallons of polluted water into rivers and lakes. In Kentuckiana we see this problem every summer. Green roofs can help solve this problem. A green roof is a roof that is also a garden. It can be as simple as a container garden or a roof covered with several inches of soil (on top of a waterproof barrier) and a meadow. An excellent example of a green roof is the Ford building in Detroit, which covers ten acres. Some cities are giving tax incentives and technical help to people that plant gardens on their roofs.

Green roofs help moderate temperatures, improve air quality, reduce stormwater runoff and create habitat for birds and butterflies. Increasing the number of green plants in a city actually lowers the temperature. Plants transform heat and soil humidity through evapotranspiration, thereby cooling the air and decreasing pollution. An extensive green roof provides 25% more insulation in the winter than a regular roof. Heat loss due to wind can also be reduced by 50%. When rain falls on a forest or meadow, the water goes through its natural cycle and there is virtually no surface runoff! In a city about 75% of the rainwater becomes surface runoff! Green roofs can help significantly. On average, 75% of rainwater is retained on a roof that is covered with soil and plants. The soil also traps sediments, leaves, and particles helping to clean the water even before it reaches the sewer system. They also create a garden refuge in a sea of concrete, which may be the greatest benefit of all.

Clark County Soil and
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For additional information or details on the Fourteen Mile Creek/Goose Creek Watersheds Improvement Project, contact Chelsea Tooley, Watershed Coordinator, at 14mile.watershed.outreach@gmail.com

Gardener's Responsibility—Environmentally Sound Gardening

Good gardens thrive with good water quality practices. The same simple, practical techniques that improve soil, beautify the landscape, reduce maintenance, and enhance plant health can also protect the quality of our water.

Gardeners can use these keys to protect water quality:

1. Reduce the amount of potentially dangerous substances introduced to the environment. Minimize applications by using only what is needed at the proper time and in the correct amounts.
2. Minimize the amount of water that runs off your property.
3. Use native plants—they will be adapted to the environmental conditions of your site and will ensure healthy plants and reduce maintenance.
4. Use porous paving materials instead of impermeable concrete or asphalt.
5. Replace turf with plants, mulches, or paving materials that require less irrigation, fertilizer, and pesticide.
6. Allow roof runoff to spread over well-drained soil where infiltration will occur.
7. Experiment with some new ideas such as rain gardens and rain barrels.

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