Volume 2 Issue1 Spring 2007

Ripple Effects

Eagle Creek Watershed: We're All in It Together

Mission Statement

To utilize a holistic approach to watershed management with the ultimate goals of improving water quality, increasing public awareness of watershed water quality, and encouraging stewardship of the watershed's resources.

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Inside *Ripple Effects*

Quarterly meeting
Rain Gardens
No-Till Benefits
Guiding Principles
What Can You Do?

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CALENDAR

4/3 ECP Headquarters

9 a.m. ECWA Highway sign Committee

10 a.m. Education Committee

11 a.m. Water Quality Awareness Day Committee

For information about the above meetings, contact Eileen Hack hacke@iupui.edu

4/28 Celebrate Earth Day

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JOIN US!

We welcome your participation. Should you have an interest in joining the ECWA, please contact John Ulmer at remlu@tds.net.

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Rain Gardens to be Featured at ECWA Meeting

The quarterly meeting will be
Monday, March 26
6:30 p.m.
at the
Hussey-Mayfield Memorial Public Library
250 N. 5th St., Zionsville IN

The use of rain gardens to manage storm water runoff will be addressed by Myrene Brown. While presenting 'how to' create a rain garden, she will point out the ways in which rain gardens process runoff from suburban lawns, driveways, and roofs and explain how that benefits our streams and rivers. Brown, a Zionsville resident, has worked in promoting "wildlife habitats" locally as well as presenting at the state Master Gardener Conference.

Try Landscaping that Supports Water Quality

urbanwaterquality.org

If you want to spruce up your yard this spring, the installation of a rain garden might be the perfect project for you and our watershed.

A rain garden can play an important role in reducing potentially polluted storm water runoff from our sidewalks, roofs and driveways. The components of a rain garden serve as natural filters that clean the water before it eventually enters our groundwater supply, rivers and lakes. Designed with a slight dip in the center, rain gardens capture storm water runoff and allow it to seep naturally in the ground. The gardens consist of plants and flowers that are native or found naturally in Indiana, and that are acclimated to Indiana's rain and weather patterns. As an added bonus, many are attractive to butterflies, birds and other wildlife.

There are hundreds of Web sites, books and other publications with ideas and designs for rain gardens. The Indiana Association of Soil and Water Conservation District's Web site, which offers a resource library of online sources for rain gardens, is a great place to start (www.iaswcd.org).

ECWA Concerns

- Lawn chemicals, particularly nitrogen and phosphorus, and resultant algal blooms.
- Degradation of aquatic habitats as a result of increased sedimentation.
- Nutrient loading; harmful levels of herbicides and other chemicals.
- High levels of *E.coli* and other pathogens.
- The public's level of understanding of the watershed and its value as a natural resource.

What Can You Do To Keep Our Watershed Healthy?

- Reduce the use of fertilizers and pesticides on your lawn and garden.
- Use non-toxic alternatives to home cleaning chemicals.
- Wash your car at a car wash where water is recycled.
- Clean up pet waste and dispose of it in the garbage or toilet.
- Avoid disposing of lawn and yard clippings into storm drains.
- Plant trees, shrubs and plants that filter pollutants and reduce runoff.
- Conserve water. Fix leaking faucets and running toilets.

No -Till and Water Quality

by John Bush, ECWA Farm Promoter

No-till is an agricultural practice of planting this year's crop into the undisturbed residue of last year's crop. Why is this important? The obvious answer is erosion control.

John Bush

Erosion is the process of moving soil from its original location to someplace else. By keeping soil in place, streams and lakes do not fill up as fast with silt, and drinking water does not require as much work or money to purify. By keeping soil in place, fertilizers and chemicals that are attached to the soil particles are also kept from entering our water supply.

New corn crop emerges through residue from last year's corn crop. Two rows of the new crop can be seen - one near the left side of the picture and one near the right side – with just a small percentage of the area residue disturbed by the planter. *Photo courtesy of John Bush*

Erosion can happen anytime bare soil is exposed to rainfall. Each raindrop strikes with enough force to cause soil particles to break apart and move. This force also places these small soil particles into suspension. Until flowing water becomes concentrated in a channel, its ability to break up soil is minimal. However, the ability of water to transport even small soil particles is great even at very low flow.

By keeping the soil surface covered, the ability of a raindrop to break up soil particles is greatly reduced. No-till leaves most of the surface covered by disturbing only a narrow strip where the planter runs. With residue cover present, raindrops strike the residue first, greatly reducing their energy. The water then gently runs off the residue onto the soil surface. At this point flowing water does not have the power to dislodge soil particles. The residue also slows the speed of water flowing off the field. This allows many soil particles that are suspended in the water time to settle out before they reach any major water courses. Consequently, water quality throughout the entire watershed is greatly improved.

While agricultural soil erosion in Eagle Creek Watershed may not be considered a major problem, no-till is one way to protect the water quality by reducing any erosion occurring.

ECWA Guiding Principles

To help achieve its mission, the Eagle Creek Watershed Alliance established guiding principles. These principles provide a framework for how ECWA views its role in serving as a resource for watershed protection and restoration. They focus on broad principles of water quality protection while being as specific as possible. This is an important step in framing how ECWA can become involved in land development and land use discussions. The next seven quarterly meetings will take one of the principles and either use it as a theme or explain it during the meeting.

1. The overall ecological health of the Eagle Creek Watershed includes physical, chemical, biological and aesthetic aspects of the aquatic resources. All have equal value and cannot be considered separately. Most human activities in the watershed impact one or more of these aspects to varying degrees.

2. Water quality and aquatic life are linked to and dependent upon the surrounding landscape.

3. To protect water resources, it is necessary to maintain or restore natural surface water flow paths, minimize stormwater runoff volume and increase infiltration and ground water recharge.

4. All types of land uses and changes to them must be carefully managed to protect watershed ecological health.

5. Headwaters, other tributary streams and the various segments of Eagle Creek, itself, all function differently from one another and require different techniques for their protection. Further, each stream's functionality steadily changes along its length. Therefore, maintaining the natural continuity of each stream corridor is an important determinant of stream health.

6. Headwater streams (the smallest starting points) and the wetlands that often form them, are critical to watershed health, and must be preserved and/or enhanced.

7. Various water contaminants are known to be present in the watershed. Efforts should be undertaken to reduce or eliminate existing contamination – and to prevent any increases.

New Watershed Brochure Now Available

Featuring a colorful map, interesting facts and important tips on maintaining a healthy watershed, the "Get to Know Your Watershed" brochure is now available through ECWA. As ECWA continues to tackle a variety of topics that relate to the overall health of our watershed, the distribution of the brochure will help raise awareness and broaden our reach in promoting responsible stewardship.

For more information or to receive a brochure, please contact Eileen Hack, ECWA Watershed Coordinator, at 317-278-8585 or hacke@iupui.edu.