Landscaping For Water Quality

Residents of Indiana enjoy a unique water environment. Carved out by retreating glaciers many thousands of years ago; the Great Lakes to our north, along with the thousands of smaller lakes, rivers and streams, were formed across Indiana. Water is an important resource for our health, economy, and ecosystem. Landscaping practices can impact the quality of our water systems. We need to landscape with an eye for water quality. Installing landscaping that doesn't require fertilizing, watering or mowing – now that's an idea worth exploring! Landscaping for water quality is a method that invites nature back into our lives and yards. In addition to being attractive, the grasses, sedges (grass-like plants that grow in wet conditions), and wildflowers require less fertilizer and water to thrive. A common misconception about native gardens is that they are unkempt and weedy. In reality, by incorporating water quality into your plans for landscaping you can produce a finely sculptured, manicured look or that countryside cottage appeal.

Why Landscape For Water Quality?

To Protect Water Quality

In nature, rainwater infiltrates into the soil almost completely. Many contaminates are filtered out before the water enters the ground or surface waters. Where development adds homes, driveways, roads, turf grass and compacted soils (impervious surfaces), infiltration is nearly eliminated. The water running off of these impervious surfaces washes soil, fertilizer, grass clippings and other contaminates into the drains. If we use landscaping for water quality practices, any water that does leave our property will be cleaner and reduced in volume.

To Capture Rainwater

The water that falls in the form of rain or snow and water you use to sprinkle, wash cars etc. is a valuable resource. Consider that in a 1" rainstorm, 13,000 gallons of water falls on a typical ½ acre lot. That's enough to fill five swimming pools! Normally about two-thirds of this amount runs off your property – meaning you lose about 8,500 gallons (*Schueler, 1994*). By designing your gardens to 'capture' this water, you retain a treasure for your own use.

To Reduce Flooding

Even if you live on a curb and gutter system, rain water eventually drains to a lake or stream. This can contribute to a water quality and quantity problem. By capturing large amounts of water on your property, storm drain limits are not exceeded and the extent of flooding within the streams and rivers is reduced. When flooding does occur upstream, plants on the stream banks intercept the floodwaters, slowing it down and reducing the extent of flooding downstream.

To Ease Soil Erosion

The loss of topsoil from stream banks, construction sites and sloped yards is significant. The problem is twofold. One, your physical property is literally washing down the drain. Two, the impact upon both surface and sub-surface waters by the resulting silt build up in the waterways chokes aquatic habitat and pollutes drinking water. While better than bare ground, the roots of turf grass are too shallow to effectively restrict soil loss from flowing water. Maintaining buffer zones of natural vegetation can abate the force of water that sweeps the topsoil into the waterways. The roots of the plants hold the soil in place, absorb some of the excess water and encourage infiltration. The deeper the roots, the more effectively slopes are stabilized. Prairie plants and flowers have roots that grow from a foot to several feet deep. These deep roots not only draw up and store water, but form channels in the earth. This naturally aerates the soil, maintaining the health of the plants. Stabilizing the soil on slopes and resisting compaction in flat areas helps prevent soil erosion.

To Increase Infiltration and Reduce Pollution through Buffer Strips

A carpet of turf grass typically has a root structure that resembles a three inch thick dense mat. This mat of material restricts water flow into the ground and actually becomes nearly as impervious as your paved surfaces. During and after a rainstorm, water rushes off paved and turf grass surfaces is significant. Buffer strips or zones are effective tools to capture the water running off your property. The plants in the zone act to slow down the water and increase infiltration. This, in turn, allows filtration of any contaminants, including chemicals, nutrients, soil, pet waste, oil, and salt. The end result is less water entering the storm drain system and eventually ending up in the nearest waterway. Remember, no matter where your home is located, the water (and the contamination) leaving your property ends up in the nearest body of water.

To Provide Wildlife Habitat

The USDA defines habitat as an environment providing the food and shelter required for an animal to make its home. Therefore, providing "natural" shelter and food would indeed improve habitat. The diversity of the plants used encourages a variety of wildlife to call the gardens home.

To Enhance Property Values

Landscaping enhancement is a proven method of increasing the value of your property. Using landscaping specifically designed for water quality results in this same value increase. Incorporating ornamental pervious paving stones for your

drive or patio adds to the value even more. Water quality gardens also save homeowners money because of the lower costs of maintaining native gardens, buffer zones, shrubs and trees. Average savings of $500/year (*U.S. EPA*) are realized through reduced water, fertilizer, herbicide and pesticide usage, along with freedom from weekly mowing. Having a water quality landscape plan can result in yearly maintenance savings along with higher property values.

Before you Start your Design:
The first step is to evaluate your property based on the following categories: Suitable Areas to Consider, Existing Plants, Sun Exposure, Soil Conditions, and Plant Hardiness Zone components. Understanding the different components will simplify the process when choosing your plants. Look for information on these categories next week or for more information, web links, etc. – contact the Hancock County SWCD!