RAIN GARDENS
for Healthy Water

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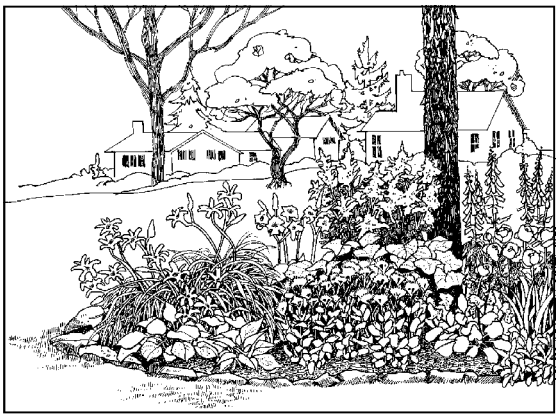

Throughout the course of human history, we have made significant changes to our land. One of the most obvious things we have done is build. Whether houses, parking lots, strip malls, or places of worship, humans have built structures, changing their environment. Traditionally, we have build things to shed water quickly. Just imagine the sound on your rooftops and in your gutters during a heavy rain. All of the water is shed from the surfaces of your home, but where does it go?

The answer is different depending on where we live. But, for many of us (especially those living in more developed areas), that water makes its way through storm drains to rivers and lakes. Now, think about all the houses near you and all of the water they shed COLLECTIVELY during a heavy rain.

With all of this water running off impervious surfaces (surfaces that do not absorb water), we are asking our waterways to handle a great deal of additional water. This can cause problems with the health and stability of our rivers and lakes. Greater amounts of water can cause more erosion. And, water can carry pollutants from many surfaces directly into our lakes and streams, since most stormwater is untreated.

One way to decrease the amount of water going directly into our lakes and streams is to retain it. If we can capture water where it falls, then we have the chance to drastically improve the quality of our water ways.

One way we can hold water is with a rain garden. Rain gardens are areas that have been dug out, creating places to collect water from impervious surfaces, such as rooftops and

pavement. The depression is filled with materials that allow water to run down into the ground. Such materials include (but are not limited to) soil mixtures, gravel, sand, and compost. During a rain event, the filled depression gathers rain. The rain is then absorbed by roots of plants or drains farther down into the ground.

Quickly becoming popular, rain gardens are being used in several locations to retain rain water. They can be found in residential yards as well as near businesses and public buildings. Because they are visually pleasing, rain gardens are used to enhance landscaping, not just to retain water.

Rain gardens vary in size and complexity. Some are small, only requiring a homeowner to perform normal garden maintenance after the garden is initially set up. Other rain gardens require engineering, such as additional drains and overflows if enough water is collected. Heavy machinery is sometimes required to dig in such situations, depending on soil conditions.

Rain gardens allow the ground to absorb water slowly. Such water might otherwise run into roads, create standing pools for days, or go directly into rivers and streams without treatment. Rain gardens perform the important function of holding water in one isolated place. The water that is retained in rain gardens does not have to go directly into a drainage system that could potentially overload a stream or lake.

If streams and lakes are overloaded with water, their banks could erode, causing a disturbance in natural shoreline vegetation. If vegetation is removed, more large particles (such as those found in soils and shoreline debris) can enter a stream or lake, making it look unnaturally dirty or muddy. Erosion like this can also cause undesirable substances to enter waterways. It can also change the natural shape of shorelines, impacting water quality and wildlife.

As water runs along surfaces like roads and lawns, it can pick up certain substances. Some of these substances, known as nutrients, are important for aquatic life like insects and fish. Healthy water for plants and animals is ultimately good for humans. However, in excessive amounts, nutrients may have negative impacts.

Along with retaining water, rain gardens have been shown to reduce certain pollutants entering lakes and streams. Therefore, they are useful in helping improve and preserve water quality. Nutrients and other substances entering rain gardens as runoff may be diluted, filtered, or used by plants.

Another benefit of rain gardens is that they can be filled with native plants. Plants that were in our area prior to European "settlement" are considered native. Such plants have adapted to their local environment over time. Because of this, they are heartier than other types that wouldn't normally be found in such locales. Native plants also benefit their immediate environment by attracting beneficial wildlife and maintaining a healthy balance of local plant species.

The Clinton River Watershed Council offers informative presentations and workshops that will help you design your very own rain garden and utilize native plants. If you are interested in how to construct a rain garden, please contact the Clinton River Watershed Council at (248) 601-0606 or ted@crwc.org. You can also visit the Clinton River Watershed Council's website at www.crwc.org.

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