



Green Infrastructure

As our population has grown, natural landscapes, prairies and forests have been replaced by agricultural land and sprawling cities. Stormwater, once easily absorbed, now flows as runoff across the ground and over hard surfaces. Stormwater runoff occurs when precipitation from rain or snowmelt flows over hard surfaces unable to absorb it, like driveways, roofs, sidewalks and streets. The hard surfaces increase the speed and volume of water that reaches the stream and causes stream bank erosion. In extreme cases, this could result in property loss.

Untreated stormwater runoff can be harmful when discharged into the water bodies we use for swimming, fishing and as a source of drinking water. Stormwater picks up chemicals, nutrients, debris, sediment and other pollutants. It can also increase temperature as it is carried by sewers directly into lakes, streams, or rivers.

To counter the effects of excessive stormwater runoff, we can manage stormwater differently with green infrastructure. Green infrastructure involves the use of soils, plants, and land features in an effort to preserve, interconnect, and mimic natural processes that slow, sink, and spread stormwater where it first falls. This reduces the volume of runoff and the amount and type of pollutants entering our waterways. Using green infrastructure to manage stormwater, we can prevent untreated water from affecting our environment and reduce the amount of water we use on our lawn and landscaping. Common strategies include the collection and conveyance of stormwater runoff from roofs, driveways and other surfaces so that rain is absorbed or is collected for re-use. Selecting plants for landscaping that have deep roots that promote infiltration and only need rainfall to thrive.

By using green infrastructure on your own property, you can realize the many benefits it provides.



Description:

Stormwater that runs off your roof often flows untreated into the city storm sewer and local waterways. Why not put it to another use? A rain barrel can capture some of that rainfall for later use on your property. Rain barrels come in a wide variety of materials, designs, and colors and are simply a container that capture and store rainfall from a roof downspout for non-potable uses such as irrigation. Capturing and reusing rainwater from your roof reduces demand on the sewer system and protects the quality of streams and groundwater.

Considerations:

In the summer, lawn and garden watering accounts for 40% of average household water usage. By installing a rain barrel, the need for municipal water is reduced. A rain barrel can potentially save homeowners about 1,300 gallons of water during the peak summer months. Rain barrels cost anywhere from \$20 to \$300. It is also fairly easy to build and install your own rain barrel.

- Install the barrels based on where you will use the water in your yard.
- Consider multiple rain barrels based on the size of your roof and reuse needs.
- Make sure your rain barrel has an overflow to a safe location.
- Secure your rain barrel on a firm, level surface. A full 55-gallon rain barrel weighs more than 450 lbs.
- Rain barrels must be structurally sound. Containers such as trash cans are not designed to withstand great water pressure and should not be used.
- Larger and more complex rainwater collection systems like cisterns have a larger storage capacity and many use pumps. It's best to consult a professional to help design and construct a large collection system.

To learn more about this and other Green Infrastructure strategies, visit:

www.OmahaStormwater.org