PLANTING TREES

Green Infrastructure For Stormwater Management

Rainscaping Iowa
Landscapes for clean water

TREES IN OUR COMMUNITY

The value of trees is immeasurable to our community. They provide shade on a hot summer's day, they clean the air we breathe, they provide habitat and food for wildlife and with their deep roots, they play an important role in managing urban stormwater.

Trees are mini-reservoirs for rain and reduce **urban stormwater runoff** at the source by:

- Intercepting and holding rain on leaves, branches and bark
- Increasing infiltration and storage of rainwater through the tree's root system
- Reducing soil erosion by slowing rainfall before it strikes the soil

IOWA STORM WATER ISWEP EDUCATION PARTNERSHIP

Urban stormwater runoff (or "non-point source pollution") contains a brew of chemicals (oil, gasoline, salts, etc.) and trash washed off impervious surfaces, such as roadways and parking lots into creeks, streams and rivers. To improve and protect water quality our community is working hard to reduce urban stormwater runoff.

NATIVE plants

Iowa was once a land covered with a network of vast prairie and thick woodlands - these woodland trees of the past are “native” plants too! When selecting native it means selecting the right plant ideal for your soil type, topography and climate of our four seasons.

There are three woodland types in Iowa, which means all tree have a favorite growing spots - upland, bottomland and savannah. Taking into account growing conditions when planting, even if just one tree, makes for one happy native.

Woodland types provide great guidance when selecting trees to plant in your own yard.

Upland , sunny, dry and on a hill . Bottomland, shady, damp and in the valley. Savannah, out in the open..

TREE diversity

American Elms were a popular shade tree back in communities for decades. Since 1956, when Dutch Elm disease was first detected in Iowa, approximately 95 percent of Iowa’s elms have been killed.

Sixty years later and urban tree inventories are often dominated by two species of tree - Maple and Ash. Both may face the same fate as the American Elm and fifty-four percent of our urban trees in Iowa could disappear in a blink of an eye due to wilt disease and insects like the Emerald Ash Borer.

“The best way to prevent a devastating loss of a single species, like maple or ash, is to concentrate on diversity in your yard, neighborhood and community.”

Paul Tauke, DNR Forestry Bureau Chief.

Tree diversity in a neighborhood park.

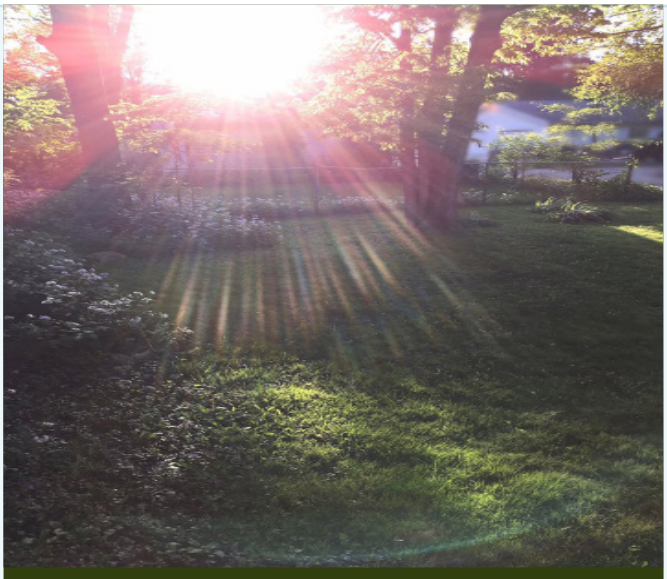


Photo Credit: Louis A. Collins, Cedar Rapids, IA

CARBON sink

Breathe in, breath out. Through photosynthesis (which starts with the sun) native plants, including trees “breathe” out oxygen that humans breathe in. WE wouldn’t be here without our native plants, including TREES.

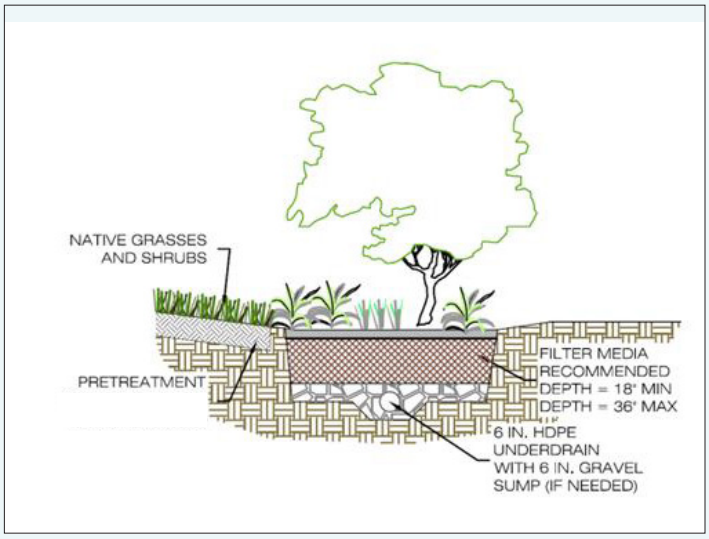
During this process the carbon, in carbon dioxide (CO2), is used by the native plants for growth. Native plants (and soil too!) “sink” carbon into the ground or into their trunks, branches, leaves and roots.

More carbon in the ground and absorbed by plants, means less CO2 in the atmosphere. It’s better to have oxygen in the air (the stuff we need) than CO2! Plant a tree and breathe easy.

STORMWATER bmps

Plant and plant roots absorb thousands of gallons of rain. **Each mature tree, depending on its size, absorbs between 400 and 6,000 gallons of rainwater each year!** Which make trees a perfect candidate for stormwater bmps or Best Management Practices. One bmp is the stand-alone stormwater tree filer and others, like rain gardens and bioretention cells work together, in tandem, with other plants to reduce urban stormwater runoff and prevent water pollution.

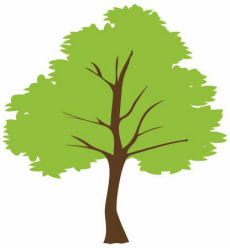
Stormwater Tree Filters, an "in-street" practice integrated into the storm drain inlet and a last line of defense to runoff control.



Trees are a welcomed addition to a rain garden or bioretention cell.

SMALLISH TREES who love "wet feet" (on occasion)

Species	Height / Width	Sun / Shade
American Hazelnut	18' x 12'	Full to Partial Sun
Amur Chokeberry*	25' x 25'	Full Sun
Blackhaw Viburnum	15' x 10'	Shade
Flowering Crab-apple*	25' x 15'	Full Sun
Flowering Plum*	25' x 25'	Full Sun
Rough leaf Dogwood	25' x 15	Full to Partial Sun
Japanese Tree Lilac*	25' x 15'	Full Sun
Nannyberry	18' x 12'	Partial Sun



*Source: Iowa State University
Low Growing Trees for Urban and Rural Iowa
PM1429d Revised March 2008

PUTTING DOWN ROOTS IN THE NEIGHBORHOOD

Six things you should know when planting a tree.

1. **Call Before You Dig** – Several days before planting, call the national 811 hotline to have underground utilities located.

2. **Handle with Care** – Always lift tree by the root ball. Keep roots moist until planting.

3. **Digging a Proper Hole** – Dig 2 to 5 times wider than the diameter of the root ball with sloping sides to allow for proper root growth.

4. **Planting Depth** – The trunk flare should sit slightly above ground level and the top-most roots should be buried 1 to 2 inches.

5. **Filling the Hole** – Backfill with native soil unless it's all clay. Tamp in soil gently to fill large air spaces.

6. **Mulch** – Allow 1 to 2 inch clearance between the trunk and the mulch. Mulch should be 2 to 3 inches deep.

For more tree-planting tips and information, visit **arborday.org.**

Source: Arbor Day Foundation™

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Rainscaping Iowa
Landscapes for clean water
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