## inkson Creek Urban Retrofit Project Sunrise Estates Rain Garden Installation and Planting

August and September were busy months for the Hinkson Creek Urban Retrofit Project. Team members and residents installed soil amendments in six rain gardens located in the



Sunrise Estates subdivision.

During Phase I of the rain garden project, sites and cavities for the gardens on the Phillips and Watson

properties were selected and excavated according to the Hinkson Creek Urban Retrofit Grant guidelines.

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Aproperty owners were approved by the Boone County Commission, work on Phase II of the project began with the delivery of three different soil amendments and a load of hardwood mulch.



The three types of soil amendments included an 80-10-10 mixture of 80% sand, 10% compost and 10% topsoil. A 50-50 mix of sand and compost made up the second amendment while a 50-50 mix of compost and topsoil made up the third and final amendment type.

The six rain gardens were each filled with 12 inches of amended soil. Two of the rain gardens received the 80-10-10 mix; two were backfilled with the 50-50 sand and compost mix while the remaining two received the 50-50 compost and soil mix. The gardens were randomly selected for mix types based on applicable monitoring criteria. After the garden cavities where filled with the



amendments, a three inch layer of hardwood mulch was applied to each garden bringing the total material in each to 15 inches of amended soil and mulch.

Once the mulch was applied, each garden received a surrounding layer of native soil (on site soil) as a berm to increase the ponding of each garden. Berms enhance the gardens' infiltrating effects. Each berm was seeded and strawed to prevent erosion of the berms.

Some of the native plants selected for planting include: Copper Iris, Fox Sedge and Sweet Coneflower. Planting of the



rain gardens occured on September 10, just three weeks after soil amendment installation.

The grant team along with residents Janna Watson and Doug Phillips planted a variety of native Missouri plants in each garden. The benefits of planting native plants are two-fold. Deep-rooted vegetation helps water infiltration by conditioning the soil and loosening tough Missouri clay soils. Native plants can also provide forage and shelter for some of Missouri's backyard animals. While each garden received an identical number and type of native plant the planting



schematic was different for each of the six gardens. Team members layed out each garden based on property owner preference and

sun/shade exposure. By using this approach each garden became a "customized" rain garden reflecting the characteristics of each garden location.

Red Buckeye trees and Buttonbush shrubs were also planted in each garden. Native trees and schrubs also enhance the gardens' biodiversity and infiltration characteristics.

Overall, Phase III of the rain garden project at Sunrise Estates looks promising in helping

to meet some of the goals of the project. Early signs indicate property owners are satisfied with the efforts of the project team in helping address



the stormwater issues facing the subdivision.



## For more on Rain Gardens please visit:

www,raingardentnetwork.com www.moriver.org www.missouribotanticalgarden.org



## For more on Native Plants please visit:

www.mdc.mo.gov www.grownative.org www.missourinativeplantsociety.org





US Environmental Protection Agency Region VII, through the Missouri Department of Natural Resources, has provided partial funding for this project under Section 319 of the Clean Water Act