

GREEN INFRASTRUCTURE INSPECTION WORKSHOP

Forsyth County Engineering and Planning staff participated in a Green Infrastructure Inspections workshop in March to better understand how these stormwater management practices are installed and maintained. As these practices become more widespread across the County, staff will know what to look for to ensure everything is working correctly to protect and improve water quality. Workshop learning included:

- » *Best Practices for protecting infiltration zones during construction activities*
- » *The materials traditionally used in green infrastructure, such as geotextile liners and engineered soils*
- » *How to read and follow planting plans – green infrastructure plants need to be resilient in wet and dry conditions*
- » *Key inspection points for green infrastructure practices*
- » *Typical maintenance practices for green infrastructure – a lot of them actually overlap with existing maintenance*



GREEN INFRASTRUCTURE ISN'T ALWAYS "GREEN"!

Some green infrastructure practices rely on layers of soils and rock to filter pollutants and sediment from stormwater. These "infiltration" practices can also provide storage to recharge groundwater!



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THE RESOURCE
UNDERSTANDING OUR WATER

GOING GREEN FOR WATER QUALITY

"Green infrastructure" is a way to improve water quality by combining engineering and nature to better manage stormwater. What looks like a landscaped garden actually hides the different methods used to slow the flow and filter water. Plants soak up and filter pollutants, while layers of rock and sand also filter and slow down the water. Green infrastructure can also be used with traditional "grey" infrastructure, such as grated stormwater inlets and underground storm pipes. This provides a way to move stormwater away from an area or hold it temporarily until the ground can better absorb it.



Green Infrastructure Benefits:

- » Reduces volume and flow of stormwater
- » Removes pollution and sediment from stormwater
- » Recharges groundwater by letting stormwater slowly infiltrate
- » Improves aesthetics of landscape
- » Enhances biodiversity
- » Improves air quality

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The Department of Engineering publishes The Resource on a regular basis to build community knowledge and understanding of our shared water resources.

GREEN INFRASTRUCTURE AT WORK IN FORSYTH

Green infrastructure practices are already making a difference at a number of locations in Forsyth County. These include Enhanced Dry Swales, Bioretention Areas, and a Stormwater Wetland.



In 2012, Forsyth County installed a series of Bioretention Areas at Kelly Mill Elementary School. During rain events, the stormwater flows off of the pavement and into vegetated areas where the water is taken up by plants to filter out pollutants. Excess water overflows into pipes that carry it away from the site, and the “ponded” water is slowly absorbed recharging the groundwater.

WEED OR WORKING PLANT?

Plants play a key role in green infrastructure, so it’s important to know which ones belong and which should be pulled.



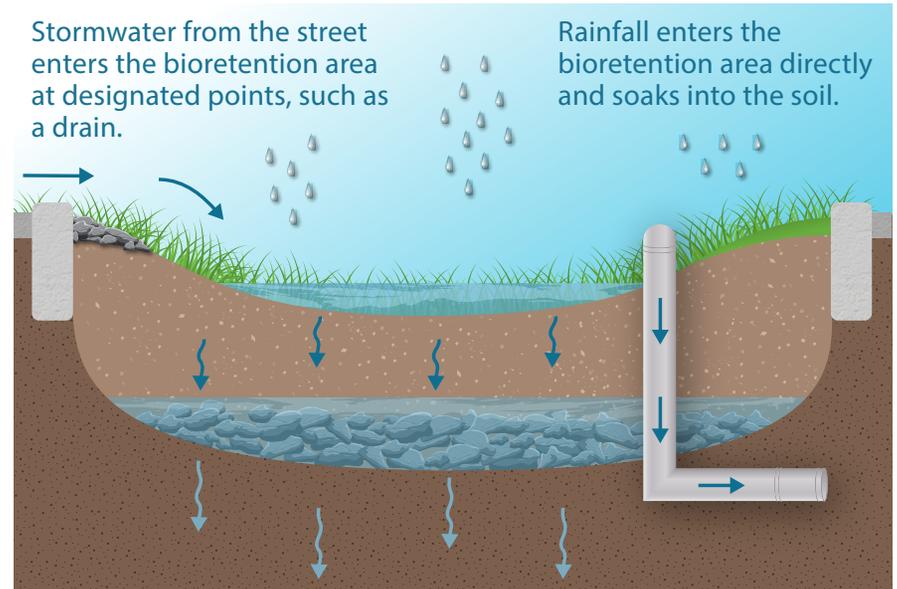
Green Infrastructure Planting: Juncus
Type of rush that favors low, moist areas.



Weed: Johnson Grass Invasive plant that can push out other vegetation.

BREAKING DOWN BMPs – BIORETENTION

Best Management Practices (BMPs) are methods or structures that protect or restore water quality by preventing pollution.



Bioretention systems slow the flow of water letting it infiltrate through the soil to help recharge groundwater.

Bioretention areas are planted with plants that can grow in both wet and dry conditions.

In heavy storms with large volumes of fast-flowing stormwater, the water can bypass the bioretention system and continue into the traditional pipe network.