

Urban Hydrology-The Problem

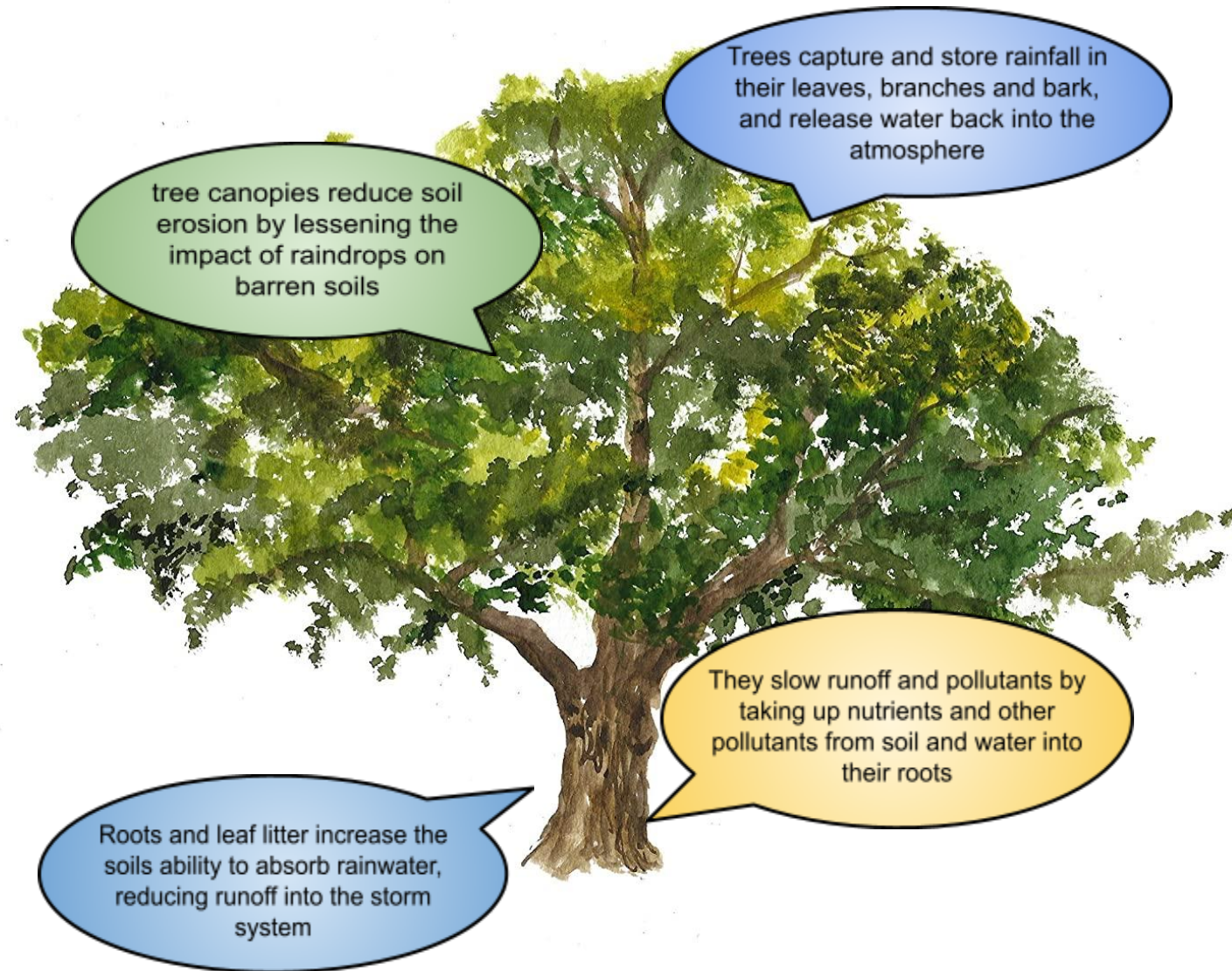
As we build and grow our communities, considerable landscapes are converted to things such as roads, parking lots, driveways, and buildings. Drainage systems such as sewers and storm drains are used to move water through these communities and into drainages and natural waterways.

However, as stormwater flows over streets, sidewalks, and parking lots, it collects debris, chemicals, sediment, and other pollutants that lower the water quality. In a rain event, rainwater mixes in to create various pollutants that can include contaminants such as:

- Oil, grease, and coolants from vehicles
- Detergent from car and equipment washing
- Fertilizers, pesticides, and other lawn care, gardening, and home chemicals
- Accidental spills, leaky storage containers, or anything else that end up on the ground
- Bacteria from pet waste and failing septic systems
- Soil from construction sites

The Solution? Bioretainment

What is it? the storage of rainfall on leaves, branches, and trunk bark.



How do we incorporate them?

- Select tree species with features that maximize water interception; large leaf area and rough surfaces
- Plant trees in small groves wherever possible
- Improve maintenance to existing trees
- Plant more trees in areas such as parkways, boulevards, parking lots, traffic islands, swales, and residential “rain gardens”. This will aid the retention/detention and infiltration/filtration process
- Plant low-water-use tree species where appropriate and native species that, once established, require little supplemental watering
- In bioretention areas, be sure planted species can adapt to standing and fluctuating water levels

A typical community forest of 10,000 trees will retain approximately 10 million gallons of rainwater per year!

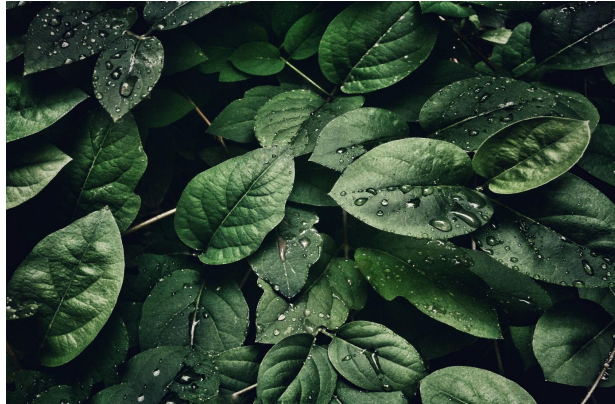
Want to learn more?

To calculate your tree’s benefits go to:

<http://www.treebenefits.com/calculator>

Also visit the USDA Forest Service to learn more about Urban forests at:

<https://www.fs.usda.gov>



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