

# How Trees Can Retain Stormwater Runoff



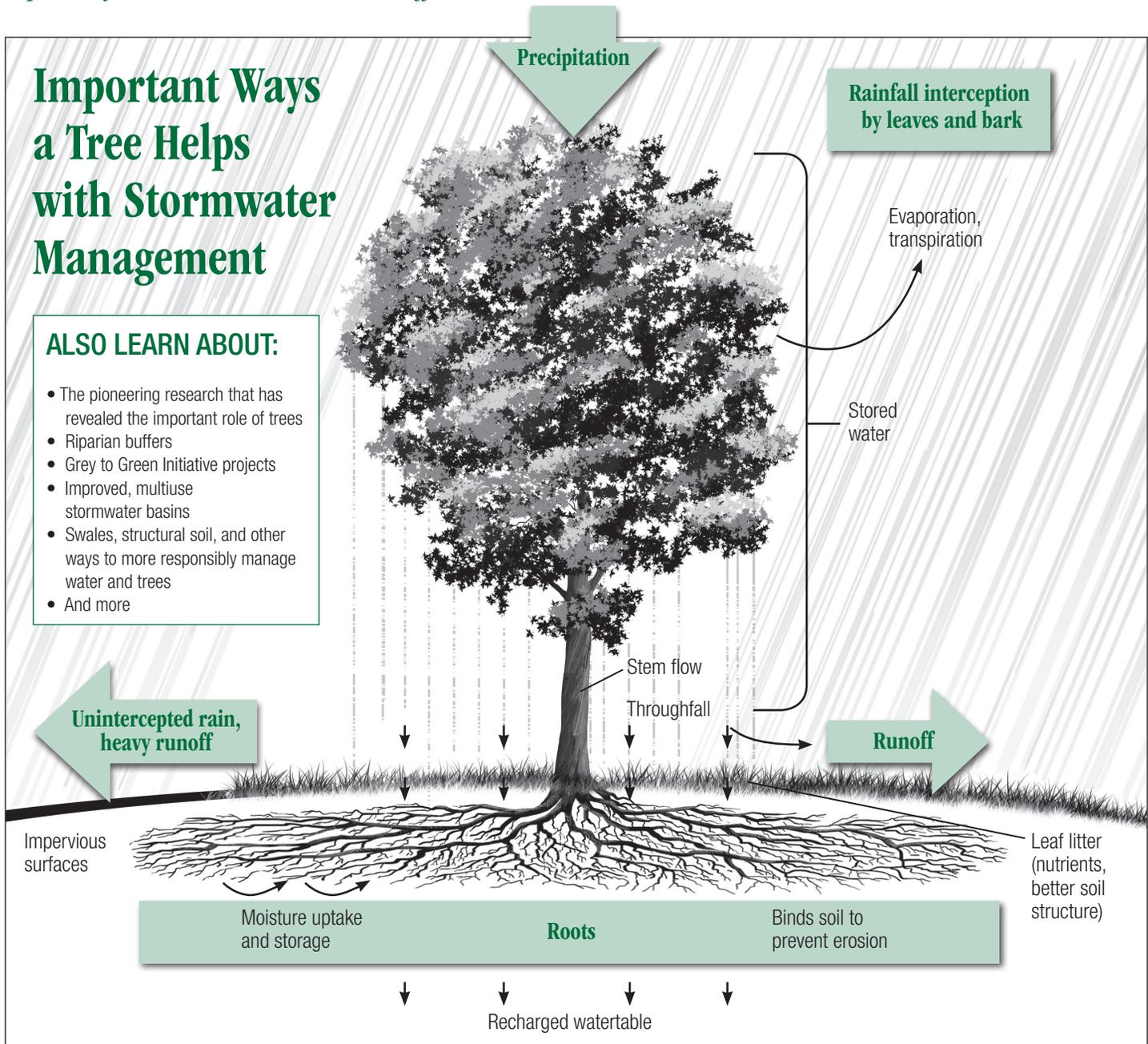
from the **TREE CITY USA®  
BULLETIN**

*Trees in our communities provide many services beyond the inherent beauty they lend to streets and properties. One of the most overlooked and underappreciated is their ability to reduce the volume of water rushing through gutters and pipes following a storm. This means less investment in expensive infrastructure and — importantly — cleaner water when the runoff reaches rivers and lakes.*

## Important Ways a Tree Helps with Stormwater Management

### ALSO LEARN ABOUT:

- The pioneering research that has revealed the important role of trees
- Riparian buffers
- Grey to Green Initiative projects
- Improved, multiuse stormwater basins
- Swales, structural soil, and other ways to more responsibly manage water and trees
- And more



Trees help reduce stormwater runoff in several ways. One is to intercept falling rain and hold a portion of it on the leaves and bark. Part of this intercepted water will evaporate and part will be gradually released into the soil below. At the surface of the soil, fallen tree leaves help form a spongy layer that moderates soil temperature, helps retain soil moisture, and harbors organisms that break down organic matter and recycle elements for use in plant growth. This important layer also allows rainwater to percolate into the soil rather than rushing off carrying with it oil, metal particles, and other pollutants. Below ground, roots hold the soil in place and absorb water that will eventually be released into the atmosphere by transpiration.



**Arbor Day Foundation®**  
100 Arbor Avenue • Nebraska City, NE 68410