BENEFITS

- Trees prevent sediment from entering waterways by stabilizing the soil and dispersing rain as it impacts the canopy.

- Trees break down pollutants commonly found in urban storm water runoff, such as metals, pesticides and solvents.

- Trees reduce thermal pollution in waterways protecting and supporting aquatic plants, animals and sensitive ecosystems.

- Trees reduce runoff from forested land, reducing the frequency and volume of flood events.

Studies have shown that a typical medium-sized tree can intercept as much as 2,380 gallons of rainfall per year.

GOALS

- Protect urban woodlands and edges from the impacts of land development.

- Enhance the health, condition, and function of the urban forest.

- Increase the overall watershed forest cover and increase forest canopy.

Indiana SUSI data revealed that stormwater interception by street trees alone has an economic benefit of $24.1 million dollars.

IMPLEMENTATION

- Rule 13 stormwater quality management plan All Indiana Municipal Separate Storm Sewer System (MS4) Entities are required to implement Storm Water Quality Best Management Practices (BMPs) to minimize pollutants in runoff. Urban forest management is a significant storm water quality BMP and should be a part of each plan and storm water utility budget to improve storm water quality.

- Land use planning can be used to direct development away from forested areas and create more open space as well as promote low impact development strategies; making better *cents* than cutting trees down and then constructing new stormwater management practices the replace the function that trees originally provided.

- Ordinances are a good local and county regulatory tool to protect/manage public trees and implement proper selection as well as function for new developments.

Conservation easements can be established to protect forest landscapes and riparian zones.

CHALLENGES

- There is a serious disconnect between urban foresters and development planners regarding the importance of trees and stormwater management.

- The stormwater mitigation benefits of TREES are difficult to quantify.

- Stormwater regulations do not indicate or recognize the use of trees as cost effective, natural mitigation methods.

SOLUTIONS

- Trees are considered a storm water quality BMP and should be a part of each Storm Water Quality Management Plans (SWQMP) to treat storm water to the maximum extent practicable.

- The most effective way to mitigate storm water pollution from urbanization is to implement trees as best management practices (BMPs) in order to treat, store, and infiltrate runoff before it can affect water bodies downstream.

- Tree preservation during development is a critical cost effective approach. Utilizing existing trees makes better *cents* than cutting them down and constructing new stormwater management practices to replace the functions the trees originally provided.

- Consider passing a municipal tree preservation ordinance for new and reconstruction projects.

Humans cannot live healthy lives without clean water. This fact sheet produced by the Indiana Urban Forest Council, Inc. (IUFC) in partnership with the Indiana Department of Natural Resources, Community & Urban Forestry Program, will promote awareness that a healthy urban forest is an investment in economic health.

The IUFC is a not for profit organization dedicated to the public awareness of protecting, expanding, and improving Indiana's urban forests. It promotes public understanding of the need for trees and other natural resources in and along parks, green space areas, streets, and urban woodlands. The IUFC assists Hoosier communities in protecting, expanding and improving their urban forests.

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RESOURCES
- USDA Forest Service, *Urban Watershed Forestry Manual*; parts 1-3, NA-TP-04005.

- Indiana DNR, Division of Forestry; SUSI Project, 2008-09.

INDIANA URBAN FOREST COUNCIL

Urban Trees: The Ultimate Stormwater Treatment Plant