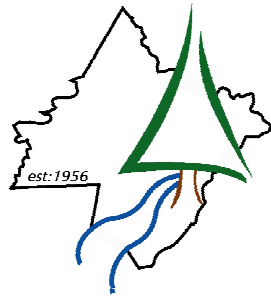


September 30, 2009



Conservation Horizons

Pike County Conservation District

Put a “LID” on it

Adapted from “Urban Development: Put a “LID” on it”, NACD, *The Resource*, Fall 2009

For years, urban sprawl and infill have reshaped the nation’s landscape. And while current economic conditions may have slowed the development, they have not stopped it. Conservation Districts provide a wide range of services aimed at reducing the impact of development on communities’ natural resources. According to an inventory conducted by the National Association of Conservation Districts (NACD) in 2007, two-thirds of districts across the country focus on soil interpretation and protection, and more than half provide assistance with tree planting, invasive species management and small acreage farming. Fifty percent also address stormwater management, including the 26.5 percent of districts, including Pike County Conservation District, that promote low impact development (LID).

The U.S. Environmental Protection Agency (EPA) defines low impact development as an approach to land development that works with nature to manage stormwater as close to its source as possible. In essence, LID treats stormwater as a resource rather than a waste product. The principles and practices can be applied to new development, ranging from high density ultra-urban settings to low density rural areas. Overall, LID helps improve water quality and reduces damaging peak discharges of stormwater runoff from developed lands.

LID is seen as a more natural resource-friendly alternative to conventional stormwater management practices, which quickly move water away from developed areas, usually changing the natural drainage patterns. Streams and waterways can be eroded by the runoff volume and velocity resulting from conventional practices and groundwater reservoirs can become depleted. Large areas of land must be allocated as storage ponds, which can cause safety and health problems and often are aesthetically unappealing. And the costs of inspecting and maintaining these ponds can be high. While LID requires a more detailed site design, greater construction oversight and increased landowner education, it offers numerous environmental and economic benefits, as outlined below.

Environmental

- Preserves integrity of ecological and biological systems (i.e. hydrologic cycles, soil health, stream channels, etc.)
- Protects site and regional surface and ground water quality and recharges aquifers
- Reduces impact on native plants and animals
- Reduces potential for health issues (i.e. West Niles virus)

Economic

- Lowers costs of development, such as land clearing, grading and infrastructure
- Reduces municipal infrastructure and utility maintenance costs
- Reduces liability and safety concerns
- Increases development and community marketability

Conservation Districts and LID

Districts are known for championing conservation efforts on private lands that don't just solve, but also prevent natural resource problems. Low impact development fits right into that philosophy because LID prevents environmental damage by enabling a developed site to maintain its ecological and biological functions. In fact, private landowners and developers often voluntarily implement LID practices, recognizing that the benefits of LID outweigh the costs.

Pike County Conservation District is promoting the use of low impact development practices in a number of ways. The District has worked closely with the County Office of Community Planning and local municipalities to promote municipal comprehensive plan and ordinance updates to improve environmental resource protections. There are numerous educational programs on related topics sponsored each year by the District for municipal officials and the general public. The District is currently coordinating a county-wide stormwater management planning effort which includes a strong focus on LID as a tool for managing stormwater runoff. As District staff review land development plans and conduct site inspections for compliance with state erosion control and stormwater management requirements, LID design is a crucial tool for reducing impacts of development activities on the County's valued water resources.

Five Key Elements of LID

1. Conserve land resources and natural site assets, such as hydrologic functions. This can be done by directing development away from sensitive environmental areas, preserving native vegetation and soils and maintaining existing drainage courses.
2. Minimize the impact of any changes, using methods such as directing runoff through natural areas and using alternatives to pavement.
3. Decentralize water flow. This is accomplished through a system of small-scale controls located near sources of runoff that will store, infiltrate, filter and release water in a natural way. Examples include disconnecting impervious surfaces, reducing curbs, and minimizing road and sidewalk widths.
4. Create “storage” in the landscape where water can infiltrate. Bioretention areas, revegetation, soil amendments and green roofs are effective ways to create storage areas. This can also be accomplished by minimizing impervious surfaces.
5. Provide necessary maintenance. Outreach and education must be available for government officials to help them understand the importance and value of LID practices. Similarly, homeowners must be taught how to protect and maintain LID. Without this support, LID measures can lose their effectiveness.

August Question: True or False: A forested area provides as much as 40 times the water storage capacity of a crop field and 15 times that of grass turf.

August Answer: True