

Jackson County Stormwater Study

Jackson County
 Jackson County, Missouri
 Project Initiation Date: June 2003
 Project Size: 15,000 acres

Project Goals

- Reduce runoff downstream of impervious areas and stabilize incised streams
- Protect and prevent further degradation of ecological habitat
- Define appropriate areas for development, stormwater management and protection
- Define BMP installation sites on a watershed scale, integrating GIS, ecology and engineering

Project Results

- Defined specific BMPs that are applicable and feasible in each of three watersheds
- Integrated GIS with ecology and engineering to quickly identify potential BMP sites
- Provided conceptual designs and cost estimates for three specific BMP demonstration projects

Project Statement

Jackson County is committed to protecting its natural resources, restoring its waterways and improving water quality through effective stormwater management. Due to increased development activity, this effort requires careful planning, new policy, regulatory refinements, public education and incentives. Jackson County retained Applied Ecological Services, Inc. (AES) and Shockey Consulting Services, LLC to explore water resource protection and restoration strategies in three county watersheds: Round Grove Creek, Burr Oak Creek, and Little Cedar Creek.

During 2003, AES conducted field investigations in these watersheds and mapped the natural resources of the entire County as part of a region-wide inventory project for the Mid-America Regional Council (MARC). AES used this data to identify opportunities to implement effective natural resource and stormwater management strategies in Jackson County. AES provided the county with standard unitized costs—on a per-acre-foot detention scale—for selected stormwater BMPs. Then AES examined the three watersheds and determined which BMPs were applicable and feasible within each watershed, based on ecological habitat, existing spatial information, parcel availability and BMP effectiveness.

By integrating GIS with ecological and engineering concerns, the vast quantity of spatial information was processed quickly and BMP sites were efficiently identified. These were field-checked by AES ecologists and engineers to further define and recommend demonstration sites. Finally, AES provided conceptual designs and cost estimates for three specific BMP demonstration projects—one in each of the three pre-selected watersheds.

Current Status

BMP demonstration sites are awaiting approval and funding.

