



2019 UK Alumni Drive Stream Restoration and Bioswale



Project Alumni Drive, Lexington, KY.

To combat a storm water problem on University of Kentucky's campus, the Stantec / Ridgewater / Bell Engineering / EcoGro team designed and then EcoGro was hired as a subcontractor to construct a bioswale and stream restoration project to improve water quality, focus on area beautification, and create an outdoor learning laboratory for UK students. It all started when UK's physical plant division presented a water drainage issue and an area of grass to wet to be mowed. Teaming up, the

College of Agriculture, Food, and Environment and the UK's Office of Sustainability, acquired funding from the Lexington-Fayette Urban County Government's Water Quality Management Fee and the Stormwater Quality Projects Incentive Grant Program.



The project that was designed and built included the construction of a bioswale and restoration of an unnamed tributary to Hickman Creek. The bioswale was about 2,000 square

feet in a preexisting median ditch. The swale was designed knowing that it would need to drain and filter stormwater runoff from approximately 50 acres of UK athletic fields and parking lots. A three-foot deep layer of amended soil was created from sand, topsoil, and compost; giving the bioswale the ability to filter and promote high rates of infiltration. This layer was then planted with native wildflowers and grasses. The bioswale is designed to reduce the amount of water carrying pollutants and the amount of water that resurfaces.

The stream restoration portion of the project was about 550 linear feet long and used three different techniques. The variety of stream features provide an educational opportunity for students studying in related fields to see different restoration techniques and how each function in regards to water quality, plant development, and habitat. The three techniques used included a regenerative (self-forming) design, a single thread channel, and a braided channel with connected and off-channel wetlands. The site was planted with native wildflowers and bareroot trees, creating a 100-foot riparian buffer. In addition, access paths and stream crossings were added to promote community and student involvement. The final touch to the whole project was the creation of a stone outdoor classroom to teach the next generation of engineers, landscape architects, scientists, and conservationists.

www.EcoGro.net

(859) 231-0500

P.O. Box 22273, Lexington, KY 40522