South Elkhorn Creek Feasibility Study
Lexington, KY
April - July, 2022

Following years of urban expansion in Lexington, the South Elkhorn Creek was suffering from "urban stream syndrome". In combination with more extreme hydrology and poorer water quality, banks had eroded to the point where it had become a safety concern. Those most concerned were residents who were losing their backyards to steep, vertical banks in excess of six feet height. To address increasing issues within the watershed, residents formed Neighbors United for South Elkhorn Creek (NUSEC). Although this group of volunteers were able to recognize the scale of impacts, they didn't have the capacity to address them fully with sustainable results.

NUSEC (with support from Clemens Heights Neighborhood Association) retained the design-build team of Stantec and EcoGro to prepare a feasibility study. The purpose was to evaluate various BMP's for addressing erosion, water quality, and water quantity issues as well as develop a strategy for how to utilize LFUCG stormwater grant funds to support future actions. The goals of the project were threefold: To improve the quality of the water through reduced sedimentation, to mitigate streambank loss by erosion, and to educate and involve the public in the project itself. This project was funded in part by the Lexington-Fayette Urban County Government's Water Quality Management Fee and the Stormwater Quality Projects Incentive Grant Program.

The design team worked with neighbors to discuss the pros and cons of various BMP's and specific site conditions. A conceptual plan was made with input by property owners. Eroded banks would need to be stabilized by reducing bank slopes to at least a 1:3 ratio and constructing a rock "toe" to hold the bank in place. After that, native vegetation should be planted as a riparian buffer to further increase soil retention, improve aesthetics and providing more favorable conditions for wildlife habitat. This also would have the added benefit of catching trash and other pollution before it reaches the waterway.

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