

Cedar Creek Watershed Plan

Lenexa, Kansas

The Cedar Creek Watershed is comprised of four major drainage basins in a largely undeveloped section of Lenexa, Kansas. The City of Lenexa commissioned the Cedar Creek Watershed Study to optimize the location of stream interventions and future joint-use stormwater detention basins, and to protect the natural resources within the watershed. The study included a geomorphic analysis, as well as a hydrologic and hydraulic model and habitat assessment.



Intuition & Logic collected geomorphic field data on more than 62,000 linear feet of channel. The purpose of the geomorphic investigation is to evaluate the physical stability of the stream under current and past conditions, to make reasonable predictions about how the stream will change under future conditions and, to make concept-level design recommendations for managing the stream.



The geomorphic analysis, coupled with a hydrologic model developed by Camp Dresser & McKee, enabled us to produce an erosion hazards map analogous to a flood map. The erosion hazards map allows us to determine resistance of the stream to channel adjustment and anticipate likely locations and extent of erosion. Based on our analysis of existing geomorphic conditions and application of the erosion hazards map, stream interventions and management strategies were developed to maintain long-term stream stability and health.