

## Restoration of Gypsum Creek

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City of Wichita, Kansas

In one of the first Natural Channel Design efforts by the City of Wichita, Intuition & Logic conducted fluvial geomorphic analysis of the lower 5.8 miles of Gypsum Creek with the intent of selecting sites most amenable to restoration. The stream, a secondary tributary to the Arkansas River, had previously been channelized and straightened. Flood protection, improved water quality, re-establishment of dynamic equilibrium and restoration of native habitat are all important project objectives.



Funded in part by the Environmental Protection Agency through Section 319 of the Clean Water Act, the project includes close participation of the Kansas Department of Health and the Environment and the Kansas Department of Wildlife and Parks. One of the major challenges successfully addressed here was meeting habitat restoration goals in the context of highly altered urban hydrology. By exploring the various stakeholder concerns early in the project, the City and the design team were able to develop a coherent concept-level design that improves both physical stability and biological integrity without compromising flood performance. The approach for the selected reach between Harry Street and Woodlawn Avenue included re-establishing of pool-riffle sequence, guide vanes to direct flow through the Woodlawn Avenue Bridge, and a series of restored riparian wetlands.

