



Clean Water. Healthy Life.

BEST PRACTICES *for* STORMWATER MANAGEMENT IN METROPOLITAN KANSAS CITY

BIORETENTION CELLS

Mize Boulevard Lake, Mize Boulevard 3000-ft North of K-10, Lenexa, Kansas

Goals

To implement stormwater management techniques as outlined in the City of Lenexa's Rain to Recreation Program by creating bioretention facilities that treat runoff from the roadway before it enters the lake.

Description

The City constructed a seven acre lake with three sediment forebays, three wetlands, and two bioretention facilities along Mize Boulevard, which serves as the dam to the lake. The two bioretention cells are roughly 3,000 square feet each and accept runoff from the roadway before it enters the lake. The cells were designed to allow the runoff to filter through a 3-inch mulch layer and a 2.5-ft layer of a special bioretention soil mixture. Perforated underdrain throughout the cell collects the filtered water and transports it to the outlet pipe and into the lake.

Community Benefits & Lessons Learned

Bioretention facilities at the outlet of the roadway storm sewer system provide the community with better water quality in the public lake, along with the opportunity for citizens to understand the water treatment process.

The site must be stabilized prior to construction in order to prevent sediment build-up. Inlet inserts are a good treatment measure. The outlet structure should be designed into the embankment in order to minimize visual impact. It is also a good idea to by-pass the water in the first year in order to help the plantings become established.

Funding Sources and Partnerships

City of Lenexa, Kansas Public Works Department, Watershed Division
HNTB-Design Engineer
Rieke-Contractor

Contact

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The bioretention system consists of several materials designed and sized to maximize water filtration and plant growth.



The bioretention soil mixture is covered by a 3-inch layer of mulch and nearly 5,000 plants.



Wetland vegetation established - August 2004.