



Clean Water. Healthy Life.

BEST PRACTICES *for* STORMWATER MANAGEMENT IN METROPOLITAN KANSAS CITY

CONSTRUCTED WETLANDS | FOREBAYS

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 a lake with forebays and wetlands that treat runoff from upstream development 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, a 4-lane, divided, major arterial street which serves as the dam to the lake. A sediment forebay and wetland were placed at each channel entering the lake. The wetlands are immediately downstream and one foot lower than the sediment forebays. The water enters the sediment forebay where most of the large sediment and particles are deposited as the water spills over a weir into the constructed wetland. The water is stripped of pollutants and nutrients as it flows through the wetland and comes in contact with the plants and biological components. The filtered water is controlled and released slowly through an Inline Water Level Control Structure which has stop logs that can be adjusted to different water levels. A stacked stone weir was installed at the downstream end of the wetlands for flow rate control.

Community Benefits & Lessons Learned

Using the combination of sediment forebays and constructed wetlands to treat the water before it enters the lake will provide the community with better water quality and the opportunity for citizens to understand the water treatment processes as they pass by and through the wetlands on a multi-use trail and boardwalk.

Situating the wetlands below the forebays allow the forebays to be maintained with less effort on a regular basis and provides a longer, functional life for the wetlands.

Control structures were installed to easily regulate water levels. These proved to be a great investment for establishing the wetland vegetation which requires a strict variation of water levels while planting each progressively higher plant zone. Animal fences made with chicken-wire were successfully placed around the wetland areas so the plants could establish without harm by geese and other animals.

Funding Sources and Partnerships

Lenexa, Kansas Public Works Department, Watershed Division
HNTB-Design Team

Contact

Michael Beezhold, Watershed Manager
City of Lenexa
12350 West 87th Street Parkway
Lenexa, Kansas 66215-2882
(913) 477-7680
mbeezhold@ci.lenexa.ks.us



Animal fencing installed to keep the geese from eating the wetland plants.



Wetland vegetation established – August 2004