



Clean Water. Healthy Life.

BEST PRACTICES *for* STORMWATER MANAGEMENT IN METROPOLITAN KANSAS CITY

WET POND | STREAM RESTORATION

St. Paul's United Methodist Church, 7740 Lackman Drive, Lenexa, Kansas

Goals

To improve water quality, restore habitat, and create an aesthetic spiritual focal point for the site while protecting future structures from flooding and maintaining peak discharge of water leaving the site.

Description

The primary objective was to retrofit a stock pond as a wet pond and wetland and restore an ephemeral stream channel with a series of pools and waterfalls. The ephemeral stream channel pools were planted with wetland vegetation, and the riparian buffer restored with native canopy trees, shrubs, and wildflowers. A pump-back system has been installed to recirculate stream water and feed two waterfalls on the left bank of the channel.

Work already accomplished includes renovation of an existing stock pond and deepening by about ten feet. The permanent pool has been lowered to increase overall capacity. A principal spillway pipe and riser now impound stormwater and release it at a controlled rate to provide twenty four hours detention for the water quality storm, while the detention pond allows pollutants to settle. Wetland plantings along the shoreline create a natural treatment medium. Flood-tolerant wildflowers, sedges, low shrubs, and trees were planted around the wetland. Short grasses and wildflowers were planted on the dam with a trail of buffalo grass surrounding the pond.

Community Benefits & Lessons Learned

St. Paul's intends for the wet pond and stream to be attractive examples of water quality improvement in a suburban setting and water quality design for a site expansion. Sidewalks and a buffalo grass path provide public access to the stream, pond, and a prayer garden. The pond treats off-site runoff from an adjacent neighborhood improving water quality in the watershed. The neighbors have become advocates after the church educated them about the project, thus proving even good projects don't "sell themselves."

Funding Sources and Partnerships

St. Paul's United Methodist Church, Kansas Alliance for Wetlands and Streams
Kansas Department of Health and Environment, Kansas Water Office
U.S. Environmental Protection Agency (EPA) Region 7, Patti Banks Associates

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A mowed buffalograss path winds through the native plants around the wet pond.



Wet pond with native plant edge treatments.



Step pools within the stream provide habitat for frogs and other wildlife.



Natives at Saint Paul's.

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