



Clean Water. Healthy Life.

# BEST PRACTICES *for* STORMWATER MANAGEMENT IN METROPOLITAN KANSAS CITY

## STORMWATER TREATMENT UNITS (PROPRIETARY)

Drainage Improvements, Vicinity of 65th St. and Parkhill, Shawnee, Kansas

### Goals

To utilize existing technology to reduce the sediment and trash accumulation in Waldon Pond, a residential lake downstream from the project.

### Description

The project was originally conceptualized as a residential sewer system retrofit aimed at upgrading the storm sewer system to prevent home and street flooding. The enclosed storm sewer system concerned residents because noticeable amounts of sediment and trash were accumulating in the lake. Although there was little room for traditional sediment basins or pretreatment of stormwater, viable stormwater treatment options were identified for the project.

This project presented the opportunity to look at stormwater treatment options in an established neighborhood. The Vortech Vortcapture VC-70 and Hancor Stormwater Quality Unit were selected to be installed at different locations on the project and will be monitored by the Johnson County Stormwater Program to evaluate and compare long-term performance. The units were sized to treat the water quality storm peak flow as determined from the APWA Best Management Practices (BMP) Manual. The units are rated to remove up to 80% of the total suspended solids for sediment down to a 110-micron size.

### Community Benefits & Lessons Learned

This project demonstrates that stormwater quality measures can be incorporated even in fully developed residential areas. The project is expected to reduce the sediment and trash entering Waldon Pond. Test data will be used to evaluate the effectiveness of these systems.

Constructing structural BMPs adds some cost to a project so, innovative funding mechanisms will need to be developed for the practice to become more widespread. Also, not all proprietary systems fit every situation, therefore each site and stormwater treatment unit needs to be evaluated based on flow capacities, physical site constraints, and budget. Test data will provide the true lessons.

### Funding Sources and Partnerships

City of Shawnee

Johnson County Stormwater Management Advisory Council

Olsson Associates

### Contact

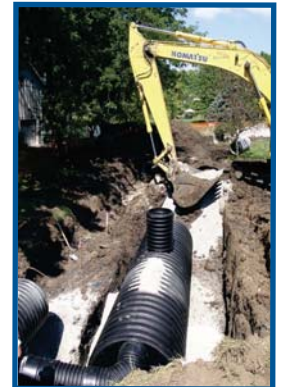
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Installation of the Hancor Stormwater Quality Unit.



Installation of the Vortcapture VC-70.



Temporary stormwater sampling box.