

# Urban Solutions Center Future Tasks Proposal

September 7, 2010



# A Brief History

April 1, 2007

City of McKinney and Urban Solutions enter 6-year MOA , renewable annually by the Council at \$100,000/year



# Accomplishments



Urban Solutions designed and developed, in conjunction with the Public Works and Parks Departments, the McKinney Green Gardens.

# Low Water Plant List and Water Conservation Videos

Desert Willow

*Chilopsis linearis*

Native Ornamental Tree

15' Wide, 20-25' Tall

Flower Color White, Pink, Burgundy

Blooms May thru October

Deciduous

Full Sun

Low Water

Wildlife Value - Hummingbirds, Birds,  
Butterflies



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# Environmental Education Outreach



# Expand Focus of Contract

- Permits the City of McKinney to take advantage of the scientific expertise US can offer related to water resources assessment and storm water management;
- Enables McKinney to efficiently meet federal storm water permitting requirements; and
- Assists in the development of strategies to protect and conserve water supply, water quality, and our stream system.



# Federal and State Requirements

McKinney's Storm Water Management Program (EPA-mandated and TCEQ-approved) requires fiscal participation in, and consideration of the NCTCOG *iSWM*<sup>TM</sup> practices.



# *iSWM*<sup>TM</sup>: Integrated Storm Water Management



Water quality improvement practices focused on development means and methods

# How can Urban Solutions help us improve our Program and meet requirements?

- Utilize Soil and Water Assessment Tool (SWAT)
- Stream Stabilization/Restoration demonstration
- City Staff Training

# Soil and Water Assessment Tool (SWAT)

Software program which analyzes existing conditions and potential future developed conditions to determine future flows/flooding, water quality and stream stability.



# SWAT

Considers benefits/detriments to water quality and stream stability based on:

- Implementation of current storm water practices
- Implementation of the NCTCOG *iSWM*<sup>™</sup> storm water management practices

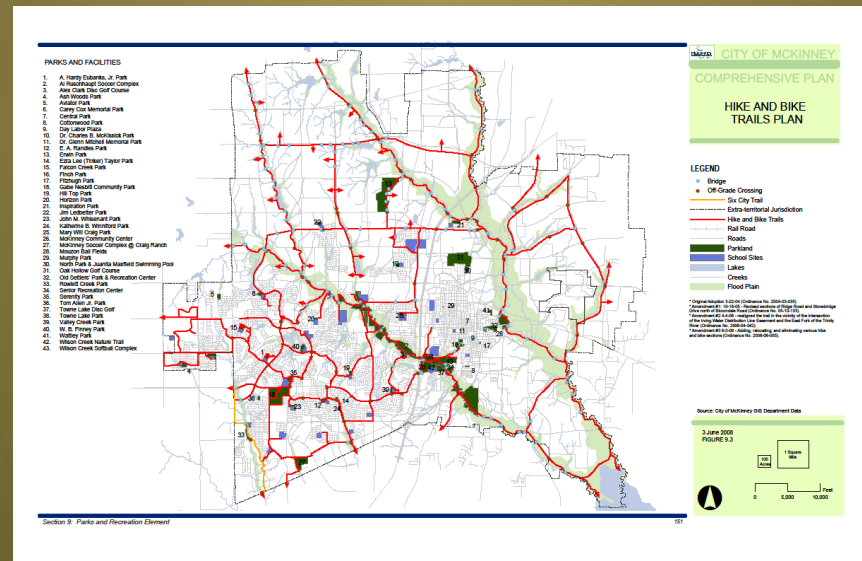


# How can SWAT help with the *iSWM*<sup>™</sup> requirements?

- SWAT can help identify which practices make the most sense and where in our stream system.
- May ultimately demonstrate the most cost effective development practices, while providing a more natural solution to storm water concerns.
- Benefits to the developer and improved water quality and stream stability.

# SWAT

- Urban Solutions will run the model based on various growth scenarios to determine related impacts.



# Stream Stabilization/Restoration Demonstration

- City currently relies primarily on structural (stone) stream bank armoring, which may not be best suited for all stream instability situations.



# Natural Restoration

- Urban Solutions has extensive experience in bio-engineered stream stabilization which utilizes a more “natural” approach.



# City Staff Training

- Urban Solutions will train staff to use the SWAT software and model.
- Urban Solutions will train and work with City staff in planning and creating a bio-engineered stream stabilization/restoration demonstration site

# Reporting/Deliverables

Urban Solutions will provide:

- Quarterly Electronic Updates beginning November 2010
- Two City Council Presentations (February/May 2011)
- Final Report Presentation September 2011