

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*TM practices.



*iSWM*TM: 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*[™] storm water management practices

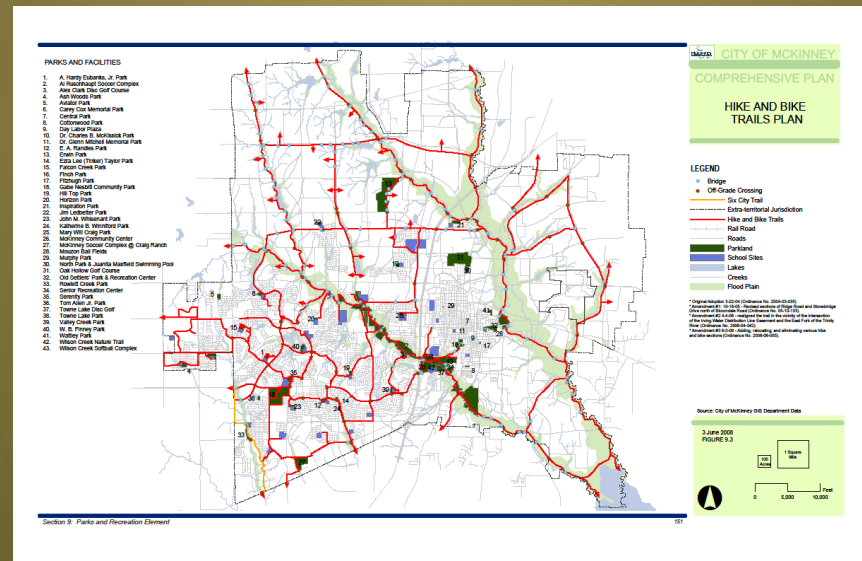


How can SWAT help with the *iSWM*[™] requirements?

- 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

