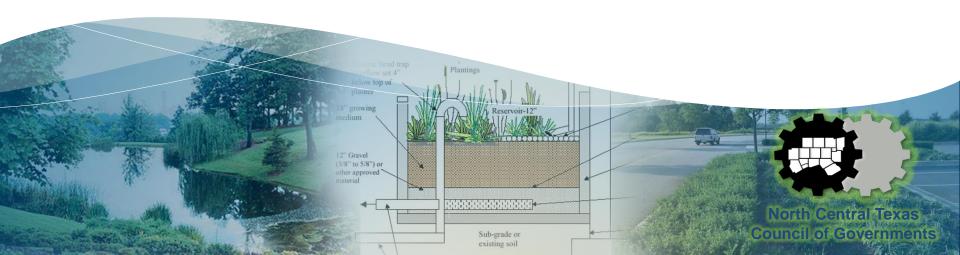
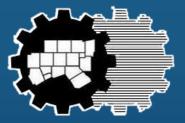
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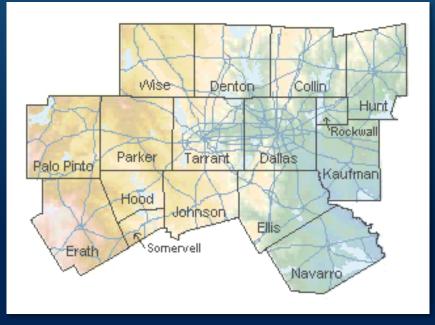


What is iSWM?

- A regional program to assist local governments:
 - Manage stormwater impacts
 - Meet MS4 Permit requirements

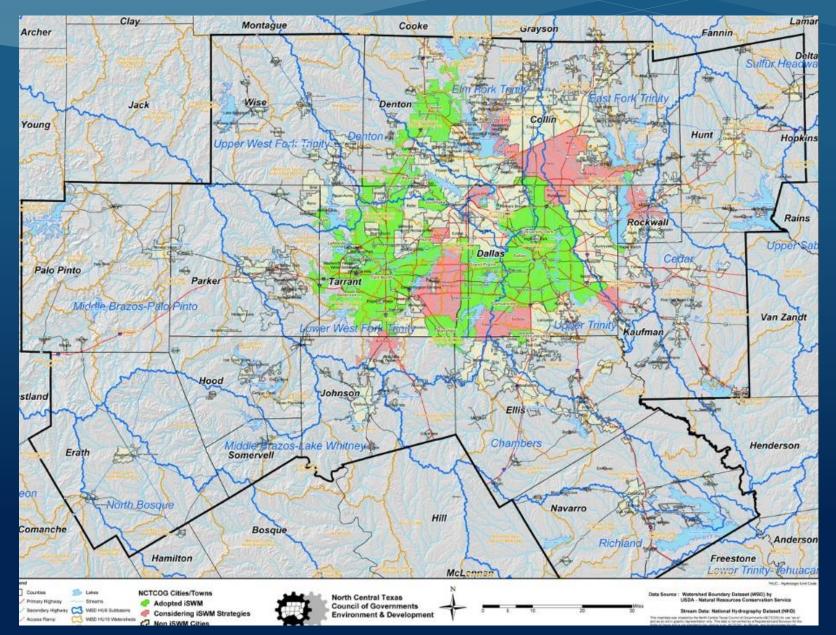


North Central Texas Council of Governments



- Collaborative effort between:
 - 60+ local governments
 - iSWM Committee
 - Regional Public Works
 Council
 - Consultant team led by Freese and Nichols

iSWM in the Dallas Fort Worth Region



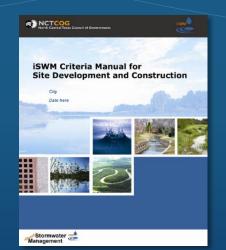
iSWM Criteria Manual

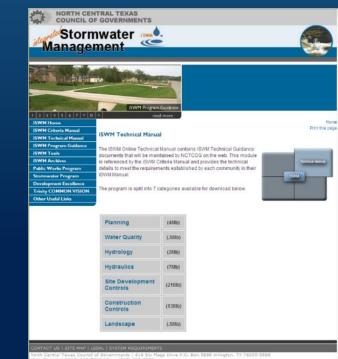
What's in the Criteria Manual?

- Ch. 1: Overview of iSWM Criteria Manual
- **Ch. 2:** *integrated* Development Process
- **Ch. 3:** *integrated* Design Criteria
- Ch. 4: integrated Construction Criteria

Technical Manual:

- Technical and design information
- Online resource for use by local governments and design community
- Separate volumes for easy download and use





Outcome Focused Implementation

North Central Texas Council of Governments iSWM PROGRAM IMPLEMENTATION TIERED MEASUREMENT

SUBMITTING COMMUNITY:

Requirements for Implementation Levels								
Outcome Category	Gold	Silver	Bronze					
Mandatory	10 full application	10 full or partial application	10 full or partial application					
Recommended	7 full application	7 full or partial application	4 full or partial application					
Optional	3 full or partial application							

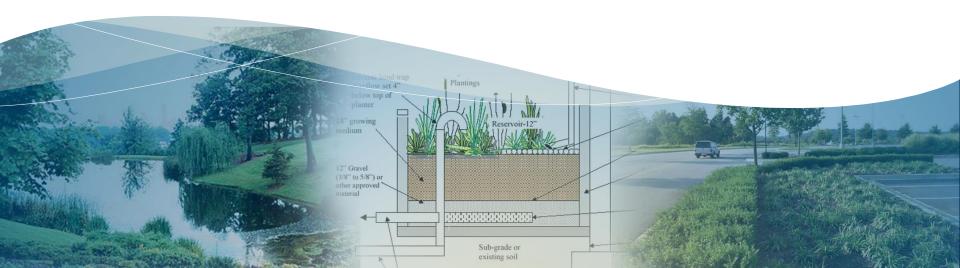
Note: The following outcomes apply to land disturbing activities of 1 acre or more for water quality and streambank protection, and apply to all

#	Outcome	CHECK COMMUNITY'S LEVEL OF APPLICATION				iSWM Criteria	Equivalent Local
"		N/A	Partial	Full	Full Application	Manual Ref.	Criteria/Ordinano Reference
MA	NDATORY OUTC	OMES					
1	Site Plan Review				Stormwater requirements discussed at a pre-	Section 2.2,	
	Applicability				development/pre-application meeting or equivalent (Concept iSWM)	Step 3	
2	Land Use Conditions				Design stormwater infrastructure to fully-developed (built-out) land use conditions	Section 3.6.1	
3	Hydrologic Methods				Limit Rational Method applicability to drainage areas of 100 acres or less and utilize frequency factors (per TM HO Table 1.4); Limit Modified Rational Method applicability to drainage areas of 200 acres or less; For larger areas, require Unit bid acress the table actions of the state of th	Section 3.1 Table 3.2; TM* HO** Section 1.2	
4	Open Channel Velocity Criteria/Energy Dissipation				Hydrograph methodology Require maximum permissible channel velocity criteria be met and/or use erosion control measures for 1-, 25-, and 100-yr or similar storm events to protect receiving drainage element from erosion	Section 3.6.3, Table 3.10 and 3.11	
5	Detention Structure Discharge Criteria				When a detention structure is utilized, design facility for fully-developed 1, 25, and 100-yr or similar storm events matching pre-development peak flows and velocities; Provide emergency spillway with 6 inches of freeboard to convey fully- developed 100-yr storm event assuming outlet blockage	Section 3.6.3, Detention Structures	
6	Streambank Protection				Require downstream stabilization to prevent erosive velocities; maintain existing downstream velocity conditions with on-site controls; and/or control fully-developed 1-yr, 24-hr storm event release over 24 hours to prevent erosive velocities	Section 1.3, Table 1.3; Section 3.4	
7	Flood Mitigation				Require adequate downstream conveyance for peak discharges; maintain existing downstream peak discharge conditions with on-site controls; and/or provide detention to pre-development peak discharge conditions	Section 1.3, Table 1.3; Section 3.5.2	
8	Construction Controls				Limit erosion and the discharge of sediment and other pollutants from construction sites by adhering to the integrated Construction Criteria or Construction General Permit	Section 4.0	
9	Operations and Maintenance				Define responsible party and requirements for operation, maintenance, frequency of inspection, and enforcement of temporary and permanent stormwater controls and drainage facilities	Section 2.2, Step 5	
10	Downstream Assessments				Confirm no negative impact or mitigate negative impacts of peak discharges and velocities for 1-, 25-, and 100-yr or similar storm events	Section 3.3; TM* HO** Section 2.4	

North Central Texas Council of Governments iSWM PROGRAM IMPLEMENTATION TIERED MEASUREMENT

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iSWM Certified Communities



City of Denton



Founding memberSilver Status







City of Fort Worth



- Founding member
- Applied for Gold Status
- Application currently under review

CITY OF FORT WORTH

STORMWATER CRITERIA MANUAL



City of Kennedale



- Applied for Bronze Status
- Application currently under review

The head loss for each structure shall be computed as:

-	$\frac{V_2^2}{2g} - K_i \underline{V_1^2} = h_i$	where;
V ₁ = g = K _j =	Outflow velocity inflow velocity 32.2 ft./sec2 head loss coefficient head loss (minimum = .2 ft.)	
Head L	_oss Coefficients (Kj)	
Manho Manho Lateral Enlarg	0.50 0.25 0.75 0.30	
h _i for b	eginning inlet is <u>1.25V2²</u> 2g	

Contacts

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Sub-grade or existing soil



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