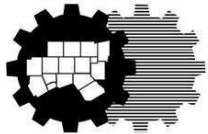




Introduction to iSWM™



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Terms you will hear



iSWM™ – *integrated* Stormwater Management

MS4 – Municipal Separate Storm Sewer System

LID – Low Impact Development

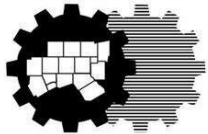
BMP – Best Management Practices

- *integrated* Site Design Practices
- Stormwater Controls
- Post-Construction Controls





Program Essentials and Drivers



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What is iSWM?



- A regional cooperative program to assist local governments:
 - Manage development-related stormwater impacts
 - Meet federally mandated MS4 Permit requirements

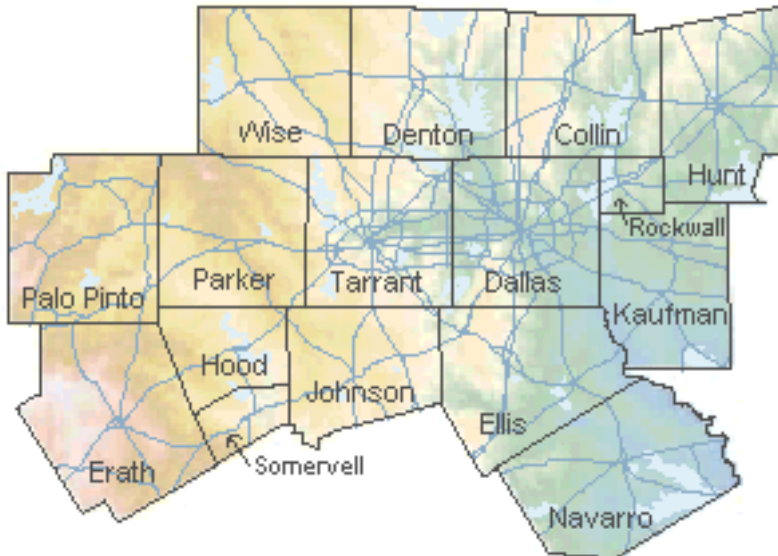


- Developed through the participation of over 65 local governments
 - Oversight and approval by iSWM Committee & Regional Public Works Council
 - Consultant team of local and national experts led by Freese and Nichols

Why iSWM?



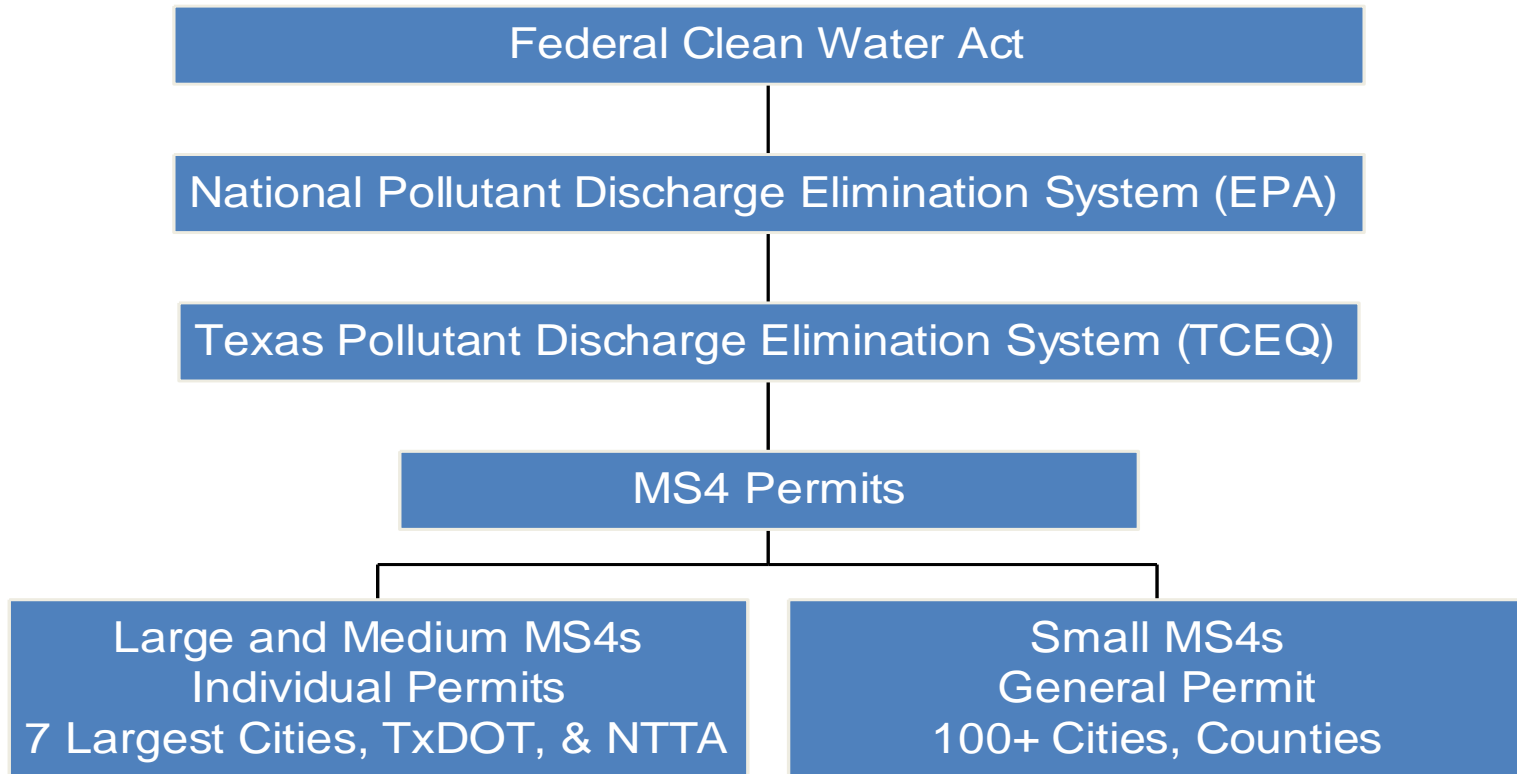
- EPA expanding & updating MS4 regulations
- Cities facing flooding, streambank erosion, and water quality problems resulting from development



- Common standards attractive to private sector
- Creates level playing field among cities



Issue: MS4 Regulations



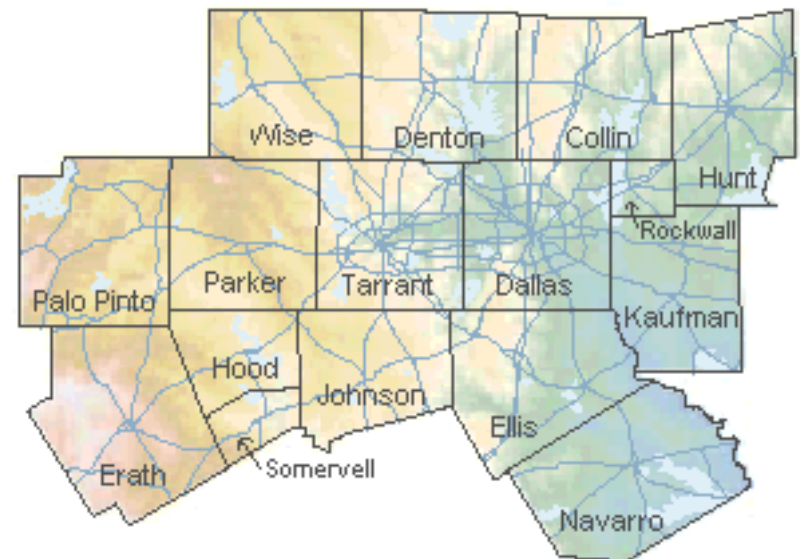
- Cities are required to regulate development activities
 - Must address the quality of stormwater runoff from developments
- EPA & TCEQ developing additional requirements



Issue: MS4 Regulations



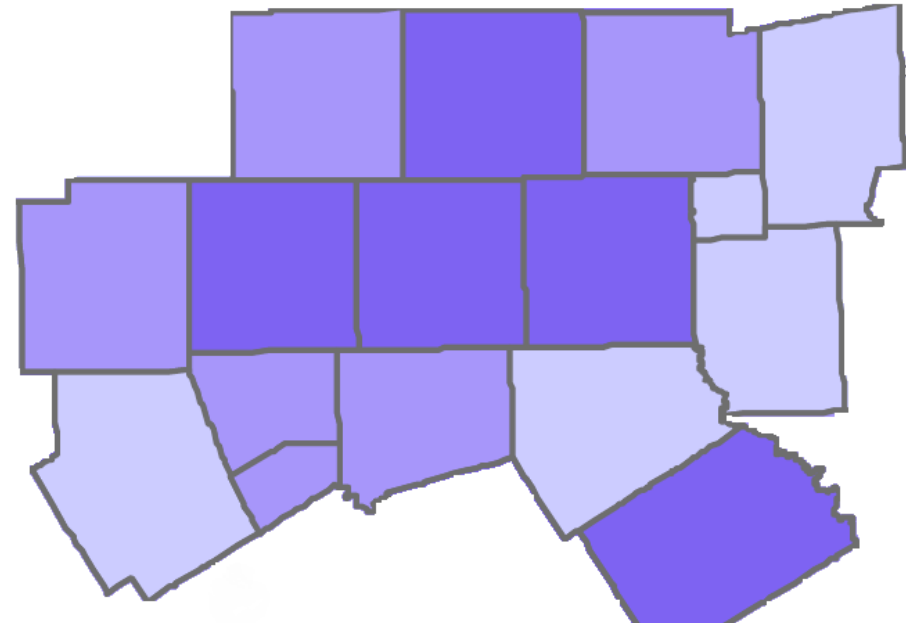
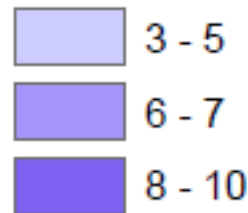
- **iSWM Helps Comply with Stormwater Regulations**
 - iSWM developed to be compatible with state & federal regulations
 - It will be updated as new regulations come out
- **A Regional Program with Regional Recognition**



Issue: Public Safety



- Flooding is the most destructive natural disaster in terms of economic loss to Texas.
- Texas has the most flood related deaths in the nation in the past 36 years.
- By reducing flooding, iSWM design saves lives & property and reduces demands on public safety personnel & budgets.



Presidential Disaster Declarations 1964-2007

Issue: Streambank Erosion



- Erosion creates safety concerns for residents and communities.
- Damage to property reduces private property value and increases public costs and liability concerns.
- iSWM designs reduce erosion, protecting property values and reducing demands on local governments.



Issue: Water Quality



- Texas has 651 impaired water bodies
 - Including segments of major rivers in North Texas
- Effects of low water quality
 - Higher costs for water treatment of reservoirs.
 - Recreational opportunities and quality of life are reduced
- iSWM means cleaner water coming into reservoirs, lower water treatment costs and more inviting recreational choices.



Issue: Use of Resources



- Key resources are limited:
 - Developable land
 - Water for community uses
 - Funding for capital & operations
- Need to use resources efficiently & effectively while meeting today's needs and planning sensibly to meet the needs of the future.
- iSWM designs can reduce costs for major capital project construction and operations & maintenance.
- It's a better return on investment.



Issue: Quality of Life

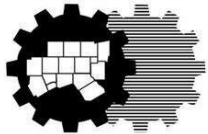


- Using a site's natural features creates neighborhoods with distinctive character.
- Places with green spaces appeal to a growing market of residents & businesses.
- Designing with nature means higher property values and long-term desirability.
- iSWM design offers quality of life people want.





Change in Practices Due to iSWM



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What's Different?



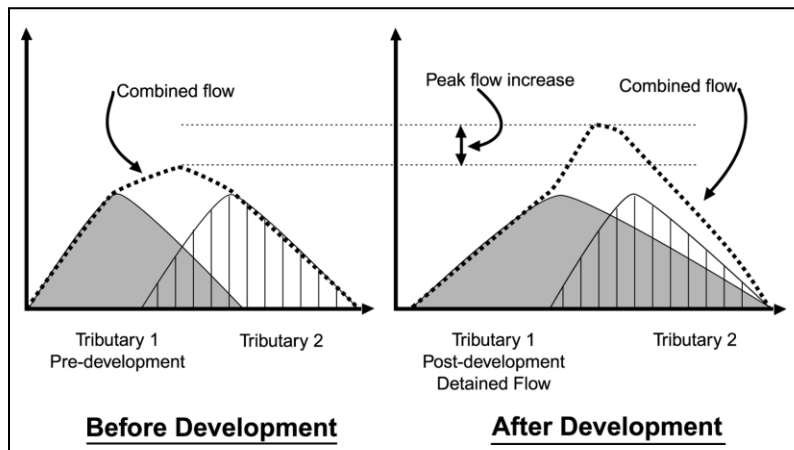
1. Development Process

- Stormwater - early and often
- Get the right people involved



2. Downstream Assessments

- Detention not always the answer
- See what downstream can handle first



What's Different?



3. Water Quality

- Options to meet TCEQ MS4 Requirements



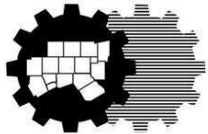
4. Flooding & Erosion Protection

- Options to reduce problems downstream





Why Consider iSWM?

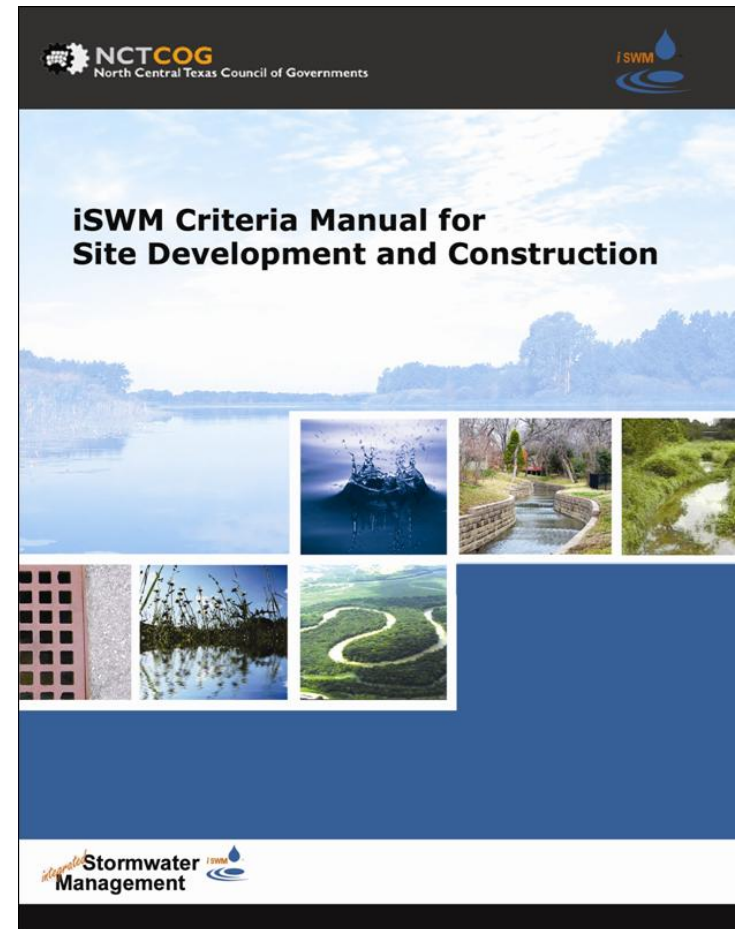


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iSWM Benefits

- The municipality benefits from iSWM because:
 - It reduces costs, safety issues & liability concerns.
 - A greener community is likely to be more desirable over time.
 - Consistent approaches within a watershed will be more effective.



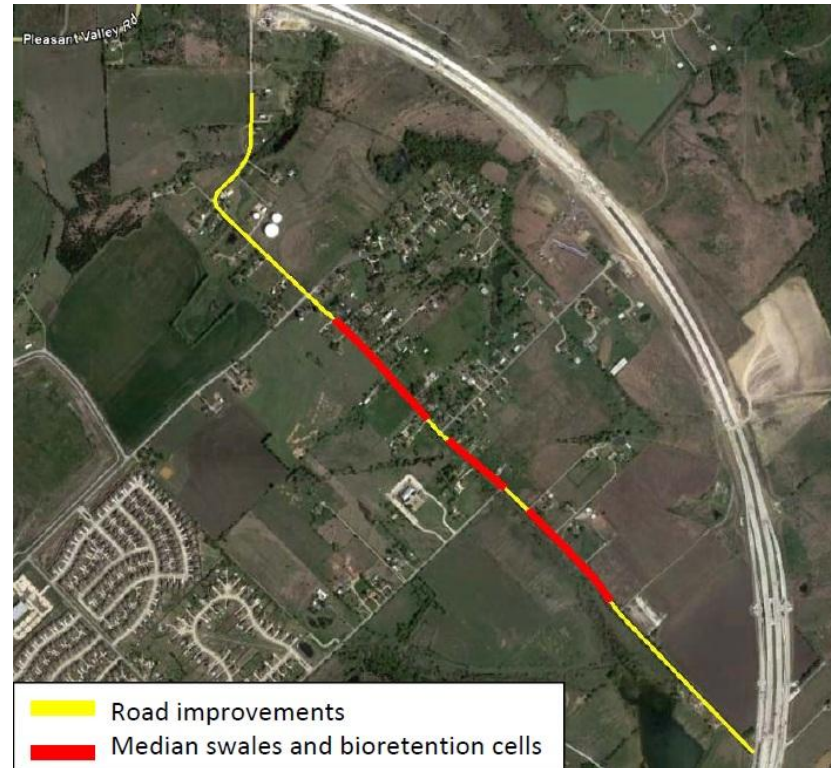
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iSWM Benefits



- **Local government staff benefits from iSWM because:**
 - iSWM provides a consistent framework that is customizable for each jurisdiction.
 - Lessons from all jurisdictions are shared and used to improve the program.
 - NCTCOG provides training for staff and developers.
 - NCTCOG manages & updates necessary support data.



Cost Effectiveness



- EPA: “Reducing Stormwater Costs through Low Impact Development (LID) Strategies & Practices”
- Evaluated 17 case studies; concluded that:
 - LID practices can reduce project costs & improve environmental performance.
 - Cost savings generally ranged from 15 to 80%
 - In all cases, LID provided other benefits that were not monetized, including:
 - Improved aesthetics
 - Expanded recreational opportunities
 - Increased property values & # of units
 - Increased marketing potential & faster sales



Other Cities are Doing It



1. Cities that have implemented iSWM

- Benbrook, Dallas (voluntary), Duncanville, Fort Worth, Glenn Heights, Grand Prairie, Lakeside, Mansfield, Northlake, Roanoke, Southlake, University Park

2. Cities that may implement in the future

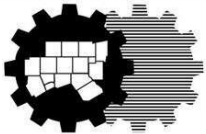
- Allen, Azle, Arlington, Bedford, Cedar Hill, Colleyville, Coppell, Denton, DeSoto, Hurst, Murphy, Plano, Rockwall, Terrell, Wylie, Others?



integrated Stormwater Management



Summary



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In Summary ...



- iSWM helps keep people safe.
- iSWM protects property values.
- iSWM improves water quality.
- iSWM helps meet state & federal regulations.
- iSWM benefits you, your community's residents, property owners and professional staff.



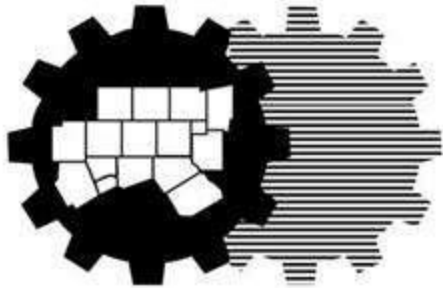
BMPs Around the Region



- To see BMPs around the region visit COGs website <http://iswm.nctcog.org/tools.asp>



QUESTIONS?



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