

# **Phase II Municipal Separate Storm Sewer System (MS4) Permits**

**Texas Commission on Environmental Quality**

# Authorization of TPDES Permitting

- September 14, 1998 – TCEQ Received Full Authorization for TPDES Program
- Phased Approach for Storm Water Permitting
  - Existing Permits – TCEQ Will Renew Upon Expiration
    - Individual Industrial Storm Water (WQ#)
    - **Phase I MS4 (WQ#)**
    - Multi Sector General Permit (MSGP), TXR050000
    - Phase I Construction Activities (CGP), TXR150000
  - New Permits – TCEQ Will Issue
    - Phase II Construction, TXR150000 (*Draft renewal is in development*)
    - **Phase II MS4, TXR040000 (Issued August 13, 2007)**

# Legal Authority

- Texas Water Code
  - Section 26.121, No person may discharge waste without a permit or other authorization (storm water is considered an “other waste” in Water Code)
  - Section 26.027, TCEQ has authority to issue permits
- Memorandum of Agreement – EPA and TCEQ (September 1998)
  - *<http://www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/municipal/c1.pdf>*
  - Authorizes TCEQ to write NPDES permits (“TPDES”)
- TCEQ Rules:
  - 30 TAC Section 281.25 adopts EPA’s Storm Water Regulations: 40 CFR Sections 122.26 and 122.30 – 122.37
  - 30 TAC Chapter 205, related to General Permits
  - 30 TAC Chapter 305, related to Permit Processing

# What is an MS4?

“A conveyance or system of conveyances...owned by the U.S., a state, city, county, town, or other public entity that discharges to waters of the U.S. and is:

- Designed / Used to Collect or Convey Storm Water
- Not a Combined Sewer
- Not Part of a POTW”

*(An MS4 is a publicly-operated storm water drainage system, and can include pipes, curbs/gutters, ditches, etc.)*



# Difference Between Phase I and Phase II MS4s

- Phase I MS4s – “Medium” and “Large”
  - Municipal Population 100,000+ (1990 Census)
    - e.g. City of El Paso
  - EPA Issued Individual NPDES Permits
  - TCEQ Renewing as TPDES Permits
  
- Phase II MS4s – “Small”
  - MS4s Serving a Population <100,000 (1990 Census)
  - Phase II General Permit (TXR040000)

# Regulated Small MS4s

- Small MS4s Located in an Urbanized Area (UA)
  - **Only Regulate Portion of MS4 Inside of UA**
  - *“UA” - central place(s) with a residential population of  $\geq 50,000$  people, and  $\geq 1,000$  people/square mile (500 people/square mile at the boundary)*
  - Federal Register Definition of UA:  
<http://www.census.gov/geo/www/ua/uafedreg031502.pdf>

# UA Maps

EPA Maps and List of Texas UAs:

*[cfpub1.epa.gov/npdes/stormwater/urbanmapresult.cfm?state=TX](http://cfpub1.epa.gov/npdes/stormwater/urbanmapresult.cfm?state=TX)*

# National Pollutant Discharge Elimination System (NPDES)

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## Urbanized Area Map Results for Texas


[Texas Overview](#) [PDF Format] - This file contains two tables:

- **Urbanized Areas** - Provides detail on the places (towns, suburbs, other incorporated areas, etc.) that are included in each urbanized area. (This table updates Appendix 6 of the Preamble to the Final Phase II regulations.)
- **Areas Outside Urbanized Areas** - Contains a list of areas outside the designated urbanized areas which meet the Phase II population and density qualifications. (This table updates Appendix 7 of the Preamble to the Final Phase II regulations.)

Below lists all the cities in **Texas** which contain urbanized areas. For each urbanized area, two maps have been developed:

- **Overview** - Provides a general outline of the urbanized area, including incorporated areas or areas of a county that are included within the urbanized area.
- **Detailed Map with Roads** - Adds street level details so that the exact boundaries of the urbanized area can be determined. **Note:** This file may appear black when first opened. Use the zoom tool in Adobe Acrobat (5.0) to clearly view the street level detail. If you need assistance accessing the urban area maps and PDF files, please contact 202-564-9545.

Texas Urbanized Areas	Overview Map [PDF Format]	Detailed Map with Roads [PDF Format]
Ahilene	<a href="#">Ahilene Overview Map</a>	<a href="#">Ahilene Detailed Map</a>



Construction Activities  
-2003 Construction General Permit  
-Oil and Gas

Industrial Activity  
-Multi-Sector General Permit

Municipal MS4s  
-Large & Medium  
-Small

Stormwater Outreach Materials

Phase I & Phase II  
-Menu of BMPs  
-Urbanized Area Maps

Stormwater Home



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# UA Maps (continued)

TCEQ Map Viewer of Texas UAs:

*[gis3.tceq.state.tx.us/website/irwwp0/viewer.htm](http://gis3.tceq.state.tx.us/website/irwwp0/viewer.htm)*

# Regulated Small MS4s (continued)

- “Designated” Small MS4s
  - Any MS4 Designated by TCEQ Based on Certain Criteria
  - TCEQ Considered for Designation a List of Cities Outside of UAs with Population over 10,000 and Population Density of at least 1,000 people /square mile
  - None Currently Designated

# Designation Criteria

- TCEQ May Consider One or More of the Following Criteria:
  - Source water protection of public drinking water resources.
  - Protection of sea grass areas of Texas bays as delineated by the Texas Parks & Wildlife Department.
  - Protection of receiving waters designated as having an exceptional aquatic life use.
  - Compliance with an approved total maximum daily load implementation plan.
  - Significant contribution of pollutants to an adjacent regulated small MS4. TCEQ would make this determination after receiving a written request by a regulated adjacent MS4 operator.
  - Additional factors relative to the environmental sensitivity of receiving watersheds.

# Obtaining Authorization – TPDES General Permit Number TXR040000

- TXR040000 issued August 13, 2007 - effective for 5 years
- Application must include a Notice of Intent (NOI) and a Storm Water Management Program
  - NOI and SWMP Due by Monday, February 11, 2008
- Public Notice by MS4 Operator
  - Will receive instruction to publish notice in newspaper
  - Possible public meeting requirement
- TCEQ will Review NOI and SWMP
  - Approve with or without changes, or deny application
- **Full Implementation of SWMP Required by August 13, 2012**

# Waiver Option from Permitting Requirements

## ■ *“Waiver 1”*

- Small MS4s Serving a Population <1,000 in a UA
- Discharge Not Contributing Significantly to Interconnected Regulated MS4
- If Discharging Pollutant of Concern to Impaired Water, TMDL WLA Does Not Require Additional Controls
- List of Populations Within UAs is Available on EPA Web Site:  
*<http://www.epa.gov/npdes/pubs/texas.pdf>*
- Waiver Form is Available – TCEQ web site
- Conditions may change over time as TMDLs are developed

**El Paso, TX-NM Urbanized Area (UA)**  
**El Paso County, Texas**

<b>Place / City Name</b>	<b>Population Within UA</b>
<b>Anthony</b>	<b>3,542</b>
<b>Canutillo</b>	<b>5,037</b>
<b>Clint</b>	<b>851 (possible waiver)</b>
<b>El Paso (Phase I MS4)</b>	<b>557,459</b>
<b>Fort Bliss</b>	<b>8,052</b>
<b>Homestead Meadows North</b>	<b>2,160</b>
<b>Homestead Meadows South</b>	<b>6,798</b>
<b>Horizon City</b>	<b>5,233</b>
<b>Morning Glory</b>	<b>618 (possible waiver)</b>
<b>San Elizario</b>	<b>10,649</b>
<b>Socorro</b>	<b>26,930</b>
<b>Sparks</b>	<b>2,974</b>
<b>Vinton</b>	<b>1,753</b>
<b>Westway</b>	<b>3,776</b>
<b>El Paso County (unincorporated)</b>	<b>12,633</b>

*Table Adapted from "Storm Water Entities as Defined by the 2000 Census,"*  
<http://www.epa.gov/npdes/pubs/texas.pdf>

# New Mexico Portion of UA

- Anthony
- Santa Teresa
- Sunland Park
- Unincorporated Dona Ana County
- *Permitting Authority is U.S. EPA*

# Technical Requirements - SWMP

- Develop and Implement Comprehensive Storm Water Management Program (**SWMP**):
  - Reduce Pollution in Storm Water to the Maximum Extent Practicable (**MEP**) – federal standard
  - Protect Water Quality
  - Meet Water Quality Requirements of Clean Water Act and Texas Water Code
  - *Required inside of UA only*
- Include Six Minimum Control Measures (**MCMs**):
  - Programs and Controls
  - Best Management Practices (**BMPs**)

# What are BMPs?

- Mechanisms to Prevent or Reduce the Discharge of Pollutants, such as:
  - *Schedules*
  - *Prohibitions*
  - *Maintenance Procedures*
  - *Structural Controls*
  - *Ordinances*

# Six Minimum Control Measures (MCMs)

1. **Public Education and Outreach**
2. **Public Involvement/Participation**
3. **Illicit Discharge Detection and Elimination**
4. **Construction Site Storm Water Runoff Control**
5. **Post-Construction Site Storm Water Management for New Development and Redevelopment**
6. **Pollution Prevention/Good Housekeeping for Municipal Operations**
7. ***Optional – Include Municipal Construction***
  - *Available for regulated area*

# General SWMP Requirements

- For each **MCM**:
  - Establish *Measurable Goals*
  - Evaluate / Assess Efforts to Meet Goals
  - Maintain Records
- **Full Implementation Required by August 13, 2012 - 5 Years from Permit Issuance Date**
- For Designated MS4s, Full Implementation Five Years from Designation
- Meet *MEP* Standard (“maximum extent practicable”)

# SWMP Implementation

- Share Program Elements with Other Regulated MS4(s)
  - Phase I Existing Programs
  - Phase II Developing Programs
  - *Each MS4 Responsible for Own Compliance*
- Contract out a Portion of SWMP
- Fully Implement 5 Years from Permit Issuance
  - Develop a Schedule

# 1<sup>st</sup> MCM

## Public Education & Outreach

### Requirements:

- ***Distribute educational materials*** to the community, or conduct equivalent outreach activities
- ***Inform Public*** about the Water Quality Impacts of Storm Water, Hazards Associated with Illicit Discharges, and Available Actions to Reduce Storm Water Pollutants
- ***Document*** Activities and Materials

# 1<sup>st</sup> MCM – Who Must Be Included?

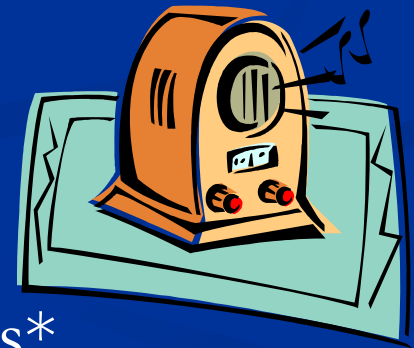
## Requirements (continued):

- Must Consider the Following Groups:
  - Residents
  - Visitors
  - Public Service Employees
  - Business
  - Commercial/Industrial Facilities
  - Construction Site Personnel
- Justify Any Group Not Included



# 1<sup>st</sup> MCM – Guidance

- Use Available Materials from Other Sources
  - EPA, State, Local Resources
- Target Specific Audiences and Communities\*
- Distribute Fact Sheets
- Conduct Speaking Engagements\*
- Air Public Service Announcements
- Establish Storm Drain Stenciling Programs\*
- Develop Classroom Education\*



*\*Some programs may be used for other MCMs as well*

## 2<sup>nd</sup> MCM

# Public Involvement / Participation

### Requirements:

- Program Must Comply with State and Local *Public Notice* Requirements
  - N/A for Correctional Facilities
- Separate from Requirements for Public Notice of NOI

# 2<sup>nd</sup> MCM – Guidance

- Include Public in SWMP Development
- Involve Public in Reducing Storm Water Pollution\*
  - Storm Drain Stenciling
  - Stream Monitoring and Cleanup
  - Household Hazardous Waste Collection Events
  - Wetland Plantings
  - Watershed Organization
  - Stakeholder Meetings
  - Community Hotlines
  - Adopt-A-Stream

*\*Possibly incorporate some into other MCMs as well*



# 3<sup>rd</sup> MCM

## Illicit Discharge Detection & Elimination

### Requirements:

- ***Establish Program*** to Detect and Eliminate Illicit Discharges
  - “Illicit” is Unpermitted, Non-Storm Water to MS4



- ***Describe*** How Illicit Discharges will be Eliminated
- Establish a ***Regulatory Mechanism*** to Prohibit and Eliminate Illicit Discharges

# 3<sup>rd</sup> MCM

## Requirements (continued):

- **List Sources** that are Not Illicit
  - Based on Nature of Source
  - Based on Controls Required by MS4 Operator

*MS4 Operator or TCEQ Can Identify a Non-Storm Water Flow as Significantly Contributing Pollutants*

# 3<sup>rd</sup> MCM

## Allowable Non-Storm Water Discharges

- Water Line Flushing
- Uncontaminated Groundwater
- A/C Condensation
- Individual Residential Car Washing
- Street Wash Water
- Dechlorinated Swimming Pool Water
- Fire Fighting Water
- Similar, occasional, incidental, non-storm water discharges



# Additional Allowable Non-Storm Water Discharges

- Non-Storm Water Discharges Listed in MSGP (TXR050000) and CGP (TXR150000):
  - fire hydrant flushings
  - water used to wash vehicles, external buildings, and pavement (without detergents or soaps)
  - dust suppression water
  - potable water sources
  - lawn watering and similar irrigation drainage
  - compressor condensate and steam condensate
  - foundation or footing drains

# 3<sup>rd</sup> MCM - continued

- *Develop Storm Sewer Map*
  - **All Outfalls**
  - Names and locations of **all waters of the U.S.** that receive discharges from the outfalls
  - Additional Information Needed to Implement SWMP
- *List Information* Used to Develop Map



# 3<sup>rd</sup> MCM – Guidance

## Examples of Illicit Discharges to Address:

- Failing Septic Systems
- Industrial Wastewater Connections to Storm Drains
- Sanitary Sewer Overflows (SSO)
- Illegal Dumping
- Non Storm Water Discharges that are determined to be contributing significant levels of pollutants
  - May include those in “allowable” list (e.g., pavement washing could be considered illicit unless BMPs are in place)
- Illicit Connections to Storm System
  - Identify and Prohibit

# 3<sup>rd</sup> MCM – Additional Resources

- “Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments,” by the Center for Watershed Protection
  - [www.cwp.org/IDDE/IDDE.htm](http://www.cwp.org/IDDE/IDDE.htm) or
  - [cfpub.epa.gov/npdes/docs.cfm?program\\_id=6&view=allprog&sort=name#iddemanual](http://cfpub.epa.gov/npdes/docs.cfm?program_id=6&view=allprog&sort=name#iddemanual)
- **EPA IDDE Webcast Archive**
  - [cfpub2.epa.gov/npdes/outreach.cfm?program\\_id=0&otype=1](http://cfpub2.epa.gov/npdes/outreach.cfm?program_id=0&otype=1)
- EPA Fact Sheet ([www.epa.gov/owm/mtb/nonstorm.pdf](http://www.epa.gov/owm/mtb/nonstorm.pdf))
- Other Public Entities (COG, States, EPA, Phase I MS4s, etc.)

## 4<sup>th</sup> MCM

# Construction Site Storm Water Runoff Control

### Requirements:

- ***Develop, Implement, and Enforce*** Program to Reduce Pollutants in Storm Water from Regulated Construction Activities ( $\geq 1$  acre)
  - Regulatory Mechanism (e.g., Ordinance) to require Erosion and Sediment controls
- ***Establish Sanctions***
- Develop Procedures for ***Site Plan Review*** by MS4
- Consider ***Public Input***
- Perform ***Site Inspection*** and ***Enforcement of Controls***

# 4<sup>th</sup> MCM – Guidance

## Possible Program Components:

- Require Compliance with TPDES CGP, TXR150000
- Require Specific Best Management Practices (BMPs):
  - ***Runoff Control:*** Land Grading, Preservation of Natural Vegetation, Compost Filter Berms, Riprap
  - ***Erosion Control:*** Mulching, Chemical Stabilization, Sodding, Seeding, Geotextiles, Vegetated Buffer, Dust Control, Sequencing
  - ***Sediment Control:*** Perimeter Control (e.g. Silt Fence), Sediment Trapping (e.g. Basins, Filters), Storm Drain Inlet Protection
  - ***Good Housekeeping:*** Waste Management, Vehicle Maintenance, Education and Awareness

# 4<sup>th</sup> MCM – Guidance (continued)

- Inspect Construction Sites
  - Inform dischargers of requirements
  - Issue violations/assess fines
  - Coordinate with other MS4 operators
- Educate construction site operators
- Coordinate with other MS4 operators
  - May be useful for MS4 operators with limited enforcement

## 5<sup>th</sup> MCM

# Post Construction Site Storm Water Management for New Development and Redevelopment

### Requirements:

- ***Develop, Implement, and Enforce*** Program to Address Storm Water from New Development and Redevelopment Projects  $\geq 1$  acre
- ***Ensure Controls*** to Prevent or Minimize Water Quality Impacts

## 5<sup>th</sup> MCM

### Requirements (continued):

- *Structural and Non-Structural Controls*
- *Regulatory Mechanism* to Address Post-Construction Runoff from New Development and Redevelopment Projects
- Ensure Adequate *Long-Term* Operation and Maintenance of BMPs

# 5<sup>th</sup> MCM - Guidance

- Choose BMPs Appropriate for Community
- Attempt to Maintain Pre-Development Runoff Conditions
- Involve Stakeholders\*
- Assess Existing Ordinances
- Ensure Proper Implementation of BMPs
  - Non-Structural – Management and Source Controls (e.g., Buffer Zones), Education for Developers and Public
  - Structural – Storage Practices, Filtration, Infiltration, Sedimentation Ponds Transferred to Homeowner's Association

# 6<sup>th</sup> MCM

## Pollution Prevention / Good Housekeeping for Municipal Operations

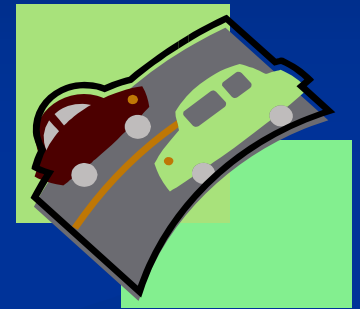
### Requirements:

- Establish an *Operation and Maintenance Program* to Prevent or Reduce Pollutant Runoff from Municipal Operations
  - Must Include Employee Training
- Establish *Good Housekeeping* and BMPs
- Address *Waste Disposal*
- *List* Municipal Operations
  - Separate List for Operations Subject to TPDES Permitting (e.g., Landfills, Power Plants, WWTPs)

# 6<sup>th</sup> MCM

## Examples of Municipal Operations

- Parks and Open Spaces
- Streets, Roads, and Highways
- Municipal Fleets and Buildings
- Storm Water System
- New Construction and Land Disturbances
- Municipal Parking Lots
- Vehicle and Equipment Yards
- Waste Transfer Stations
- Salt/Sand Storage
- Golf Courses



# 6<sup>th</sup> MCM – Guidance

- Evaluate Maintenance Practices, Schedules, and Long-Term Inspection Procedures
- Establish/Maintain Controls to Reduce Pollutants from Streets, Parking Lots, etc.
- Evaluate Waste Disposal Procedures
- Assess Water Quality Impacts for New Flood Control Devices

# 6<sup>th</sup> MCM – Examples of Areas to Address

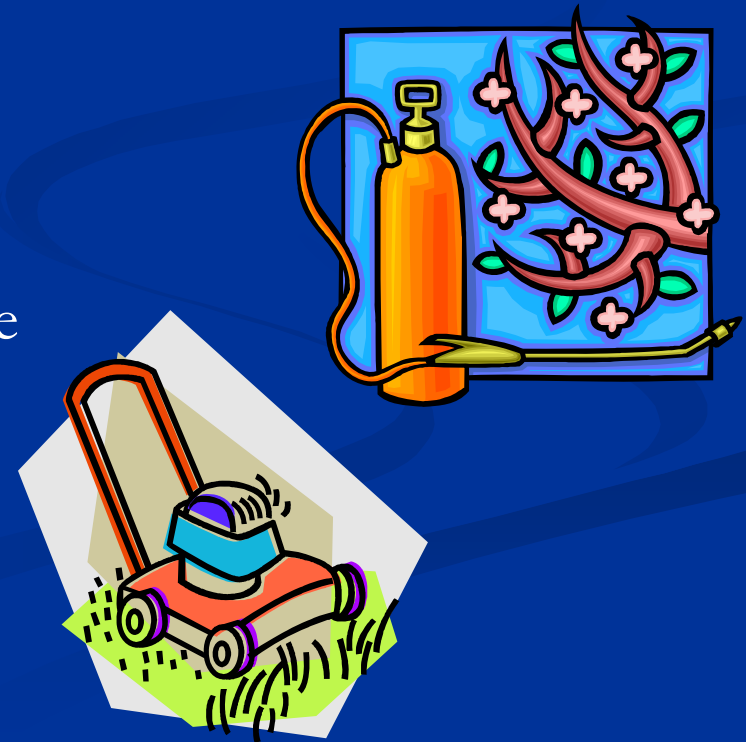
## ■ Source Controls\*

- Pet Waste Collection
- Automobile Maintenance and Washing
- Landscaping and Lawn Care
- Pest Control
- Storm Drain Cleaning



## ■ Materials Management\*

- Hazardous Materials Storage
- Road Salt Application and Storage
- Spill Prevention and Response
- Used Oil Recycling



## 7<sup>th</sup> MCM (*Optional*)

### Authorization for Municipal Construction Activities

- Indicate on MS4 NOI
  - After NOI submittal, can include on NOC
- Authorization Under TXR040000 Rather Than TXR150000
- Authorization Only for MS4 Operator
- Authorization Only for Regulated Area (UA)
  - *Entire MS4 May Be Authorized If All MCMs Are Implemented for Entire MS4*
- Special Site Notice
- Compliance Considerations

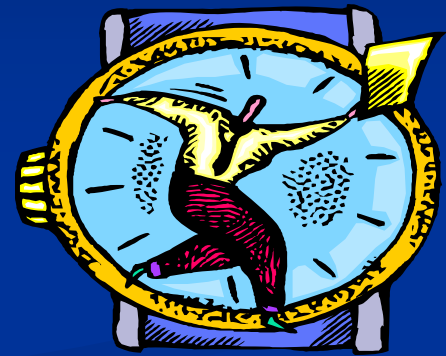


# 7<sup>th</sup> MCM - Resources

- TPDES Construction General Permit (CGP) Requirements Included in Phase II MS4 Permit
- TCEQ Storm Water Permitting Web Site
  - *[http://www.tceq.state.tx.us/nav/permits/wq\\_construction.html](http://www.tceq.state.tx.us/nav/permits/wq_construction.html)*
- CGP Guidance Developed by TCEQ's Small Business & Local Government Assistance
  - *[www.sblga.info](http://www.sblga.info)*
  - Draft Q&A Document
  - SWP3 Worksheets and Instructions

# Deadlines to Apply

- Small MS4s within UAs:
  - Within 180 Days of Permit Issuance:  
*February 11, 2008*
- Designated MS4s:
  - Within 180 Days of Written Notification from TCEQ



# Additional Guidance and Resources

TCEQ Small Business & Local Government Assistance - [www.sblga.info](http://www.sblga.info)

- Links to EPA Outreach and Guidance
- Non-Point Source Education Information
- Storm Water Manager's Resource Center
- Links to City Contacts
- Link to TCEQ Permitting Information

# Additional Guidance and Resources

## Menu of BMPs

- TCEQ Adopted EPA's National Menu of BMPs
  - *<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/menu.cfm>*
- Storm Water Case Studies - Grouped by MCM
- Menu Includes Lists of BMPs for Each MCM
  - Model Ordinances
  - Innovative BMPs
  - Links to Additional Internet Resources

# Additional Guidance and Resources

## EPA Information

- List of Storm Water Resources  
*[http://www.epa.gov/npdes/pubs/sw\\_resource\\_list.pdf](http://www.epa.gov/npdes/pubs/sw_resource_list.pdf)*
- Phase II Compliance Assistance  
*<http://www.epa.gov/npdes/pubs/comguide.pdf>*
- Phase II MS4 Web Page  
*<http://www.epa.gov/earth1r6/6wq/npdes/sw/ms4/>*
- Link to SWMP Evaluation Guide - Phase I and II  
*<http://cfpub.epa.gov/npdes/stormwater/munic.cfm>*

# TCEQ Web Links

## Storm Water Home Page:

- *[http://www.tceq.state.tx.us/nav/permits/sw\\_permits.html](http://www.tceq.state.tx.us/nav/permits/sw_permits.html)*

## Small Business and Local Government Assistance:

- *[www.sblga.info](http://www.sblga.info)*
  - *Link to “Assistance Tools for Storm Water Permitting”*

# For Additional Information

- Storm Water & Pretreatment Team
  - [SWGPA@tceq.state.tx.us](mailto:SWGPA@tceq.state.tx.us)
  - (512) 239-4671
  - Storm Water Staff: Cindy Hooper, Hal Bailey, Gordon Cooper, Korey Sykes
  - Team Leader: Kimberly Wilson