Stay Ahead of the Storm

Actionable Insights on the New MS4 Requirements

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OBJECTIVES

- Review new menu of BMP measurable goals.
- Identify the steps necessary to submit a Notice of Intent and Annual Report.
- Understand transition strategies from the 2019 SWMP to the 2024 permit.

MS4 Permit Significant Updates

- Federal 2017 MS4 General Permit Remand Rule – Texas Phase II Small MS4 General Permit is now become more comprehensive and prescriptive.
- Removes the requirement for TCEQ approval of SWMP and public notice for permittees. Additionally, Notice of Intents will be submitted electronically via Net-MS4.
- Menu of BMPs to select from in general permit.
- Annual reporting schedule is now required to follow calendar year.
- Requires the designation coalition members responsible for submitting the annual reports in the NOI. Allows for shared annual reports to be submitted electronically.
- Split current MCM 1 into MCMs 1 and 2 for consistency with federal rules.
- Effective date of the 2024 Phase II MS4 General Permit was August 15, 2024.
- Notice of Intent to be submitted by February 11, 2025

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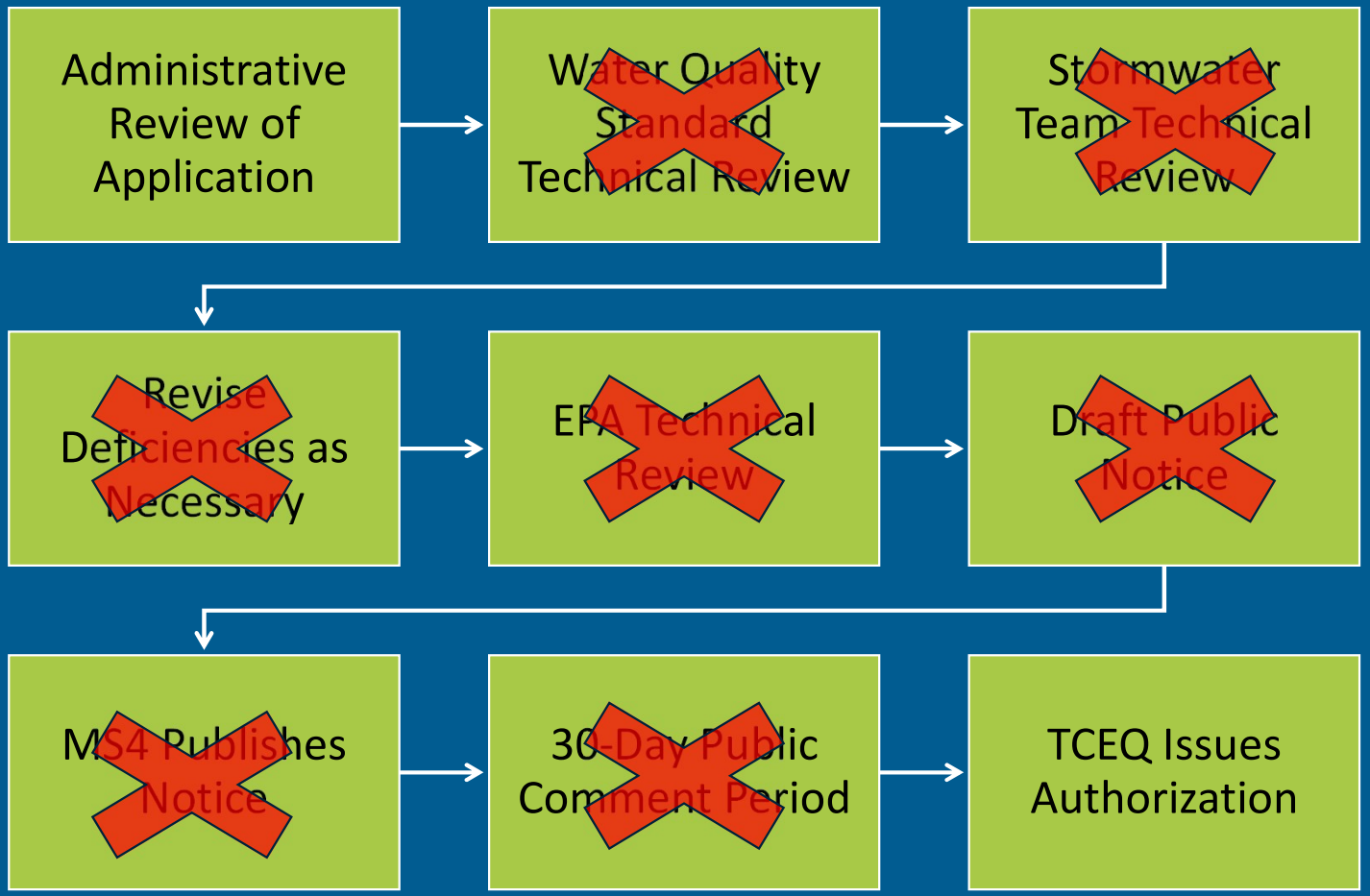
MS4 Permits – Significant Updates Continued



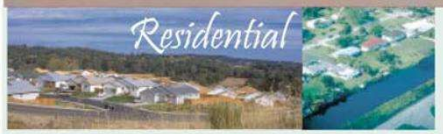

Minimum Control Measures
Public Education & Outreach
Public Involvement & Participation
Illicit Discharge Detection and Elimination
Construction Site Stormwater Runoff Control
Post-Construction Stormwater Management
Pollution Prevention and Good Housekeeping
Industrial Stormwater Sources
OPTIONAL Authorization for Permittee Construction Activities

Phase II Small MS4s

- Level 1 - Serve < 10,000 residents within an urban area (UA).
- Level 2 - Serve 10,000 to 40,000 residents in a UA or non-traditional.
- Level 3 - Serves 40,000 to 100,000 residents in a UA.
- Level 4 - Serves >100,000 residents in UA.

Stormwater Pollution Solutions

Residential



Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains.

Lawn care

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

- Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- Use pesticides and fertilizers sparingly. When use is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains or streams.
- Cover piles of dirt or mulch being used in landscaping projects.

Auto care

Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

- Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Septic systems

Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

- Inspect your system every 3 years and pump your tank as necessary (every 3 to 5 years).
- Don't dispose of household hazardous waste in sinks or toilets.

Pet waste

Pet waste can be a major source of bacteria and excess nutrients in local waters.

- When walking your pet, remember to pick up its waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Education is essential to changing people's behavior. Signs and markers near storm drains warn residents that pollutants entering the drains will be carried untreated into a local waterbody.

Residential landscaping

Permeable Pavement—Traditional concrete and asphalt don't allow water to soak into the ground. Instead these surfaces rely on storm drains to divert unwanted water. Permeable pavement systems allow rain and snowmelt to soak through, decreasing stormwater runoff.

Rain Barrels—You can collect rainwater from rooftops in mosquito-proof containers. The water can be used later on lawn or garden plants.

Rain Gardens and Grassy Swales—Specially designed areas planted with native plants can provide natural places for rainwater to collect and soak into the ground. Rain from roofs, driveways or paved streets can be diverted into these areas rather than into storm drains.

Vegetated Filter Strips—Filter strips are areas of native grass or plants created along roadways or streams. They trap the pollutants stormwater picks up as it flows across driveways and streets.

Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing, and providing drinking water.

The effects of pollution

Pollutants in stormwater runoff can have many adverse effects on plants, fish, animals and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.

- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris—plastic bags, six-pack rings, bottles, and cigarette butts—washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted stormwater often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

MCM 1 Public Education and Outreach

General Requirements

Plan	• Plan, or assist with planning, the distribution of materials.
Coordinate	• Coordinate outreach volunteers.
Contribute	• Contribute supplies, materials, tools, or equipment.
Provide	• Provide assistance from MS4 staff to distribute materials and financial support.
Partner	• Partner with other MS4 operators, as necessary.
Post	• Post SWMP and Annual Reports on website.

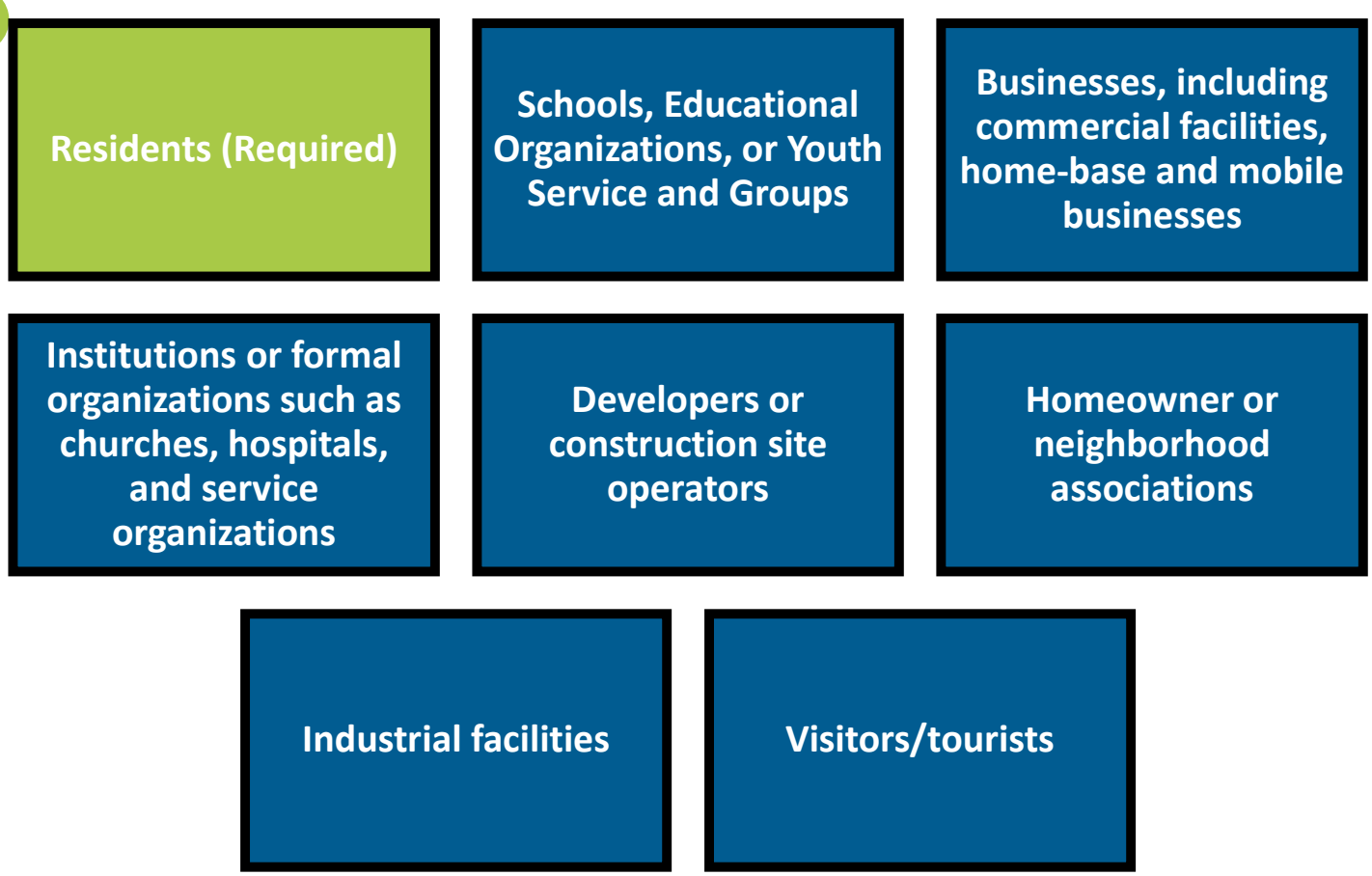
MCM 1 Public Education and Outreach

Target Audience

All Levels

Level 3
- Residents + 1

Level 4
- Residents + 2



MCM 1 Public Education and Outreach

Targeted Pollutants

Level 1 & 2
- 1 Topic
Level 3
- 2 Topics
Level 4
- 3 Topics

Grass clippings and leaf litter	Fertilizer and pesticides	Litter, trash containment, balloon releases
Dumping of solid waste	Illegal disposal of household hazardous waste	Pet waste
Failing septic systems	Swimming pool discharge, including saltwater pools	De-icing, rock salt usage and storage
Oil, grease, fluids from vehicles	Sediment runoff from construction activities	Unauthorized discharge of restaurant waste
Vehicle washing	Washwater/grey water	

MCM 1 Public Education and Outreach

Best Management Practices

Level 1
- 3 BMPS
Level 2A
- 4 BMPS
Level 3 & 4
- 5 BMPS

Information on the MS4 operator's website	**Social media posts and campaign**	**Maintain/mark storm drains and inlets with no dumping message**
Media, advertising campaign, public service announcements	**Publish articles in local newspaper or newsletter**	**Fact sheets, brochures, utility bill inserts, and door hangers**
Permanent stormwater related signage	**Promote, host, or develop educational meetings, seminar, or trainings**	**Targeted education campaign via mail, email, or in person**


Minimum Control Measure 2
Public Involvement/Participation BMPs

MCM 2 Public Involvement/ Participation

General Requirements

Plan	• Plan, or assist with planning, the event or activity.
Contribute	• Contribute supplies, materials, tools, or equipment.
Provide	• Provide assistance from MS4 staff during activities, financial support, donation of goods and services, and space for projects, as necessary.
Advertise	• Advertise the events.
Arrange	• Arrange for proper disposal of material collected.
Partner	• Partner with other MS4 operators, as necessary.
Develop	• Develop tracking systems to estimate the percentage of target audiences reached.

MCM 2 Public Involvement/ Participation

Best Management Practices

Level 1
- 2 BMPS
Level 2
- 3 BMPS
Level 3 & 4
- 4 BMPS

- Stream, lake, or watershed clean-up events
- Habitat improvement
- Volunteer water quality monitoring
- Stormwater related speaker series
- MS4 area-wide stormwater survey on program implementation
- Events to train public groups on stormwater topics
- Educational display/booth at a school or public event
- Public meeting for input on the program implementation

Land Use	Generating Site	Activity that Produces Discharge
Residential	• Apartments • Multi-family • Single Family Detached	• Car Washing • Driveway Cleaning • Dumping/Spills (e.g., leaf litter and RV/boat holding tank effluent) • Equipment Washdowns • Lawn/Landscape Watering • Septic System Maintenance • Swimming Pool Discharges
Commercial	• Campgrounds/RV parks • Car Dealers/Rental Car Companies • Car Washes • Commercial Laundry/Dry Cleaning • Gas Stations/Auto Repair Shops • Marinas • Nurseries and Garden Centers • Oil Change Shops • Restaurants • Swimming Pools	• Building Maintenance (power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing • Washdown of greasy equipment and grease traps
Industrial	• Auto recyclers • Beverages and brewing • Construction vehicle washouts • Distribution centers • Food processing • Garbage truck washouts • Marinas, boat building and repair • Metal plating operations • Paper and wood products • Petroleum storage and refining • Printing	• All commercial activities • Industrial process water or cooling water • Loading and un-loading area washdowns • Outdoor material storage (fluids)
Institutional	• Cemeteries • Churches • Corporate Campuses • Hospitals • Schools and Universities	• Building Maintenance (e.g., power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Parking Lot Maintenance (power washing) • Vehicle Washing
Municipal	• Airports • Landfills • Maintenance Depots • Municipal Fleet Storage Areas • Ports • Public Works Yards • Streets and Highways	• Building Maintenance (power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Road Maintenance • Spill Prevention/Response • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing

Minimum Control Measure 3
Illicit Discharge Detection and Elimination BMPs

MCM 3 Illicit Discharge Detection and Elimination (IDDE)

General Requirements

- All permittees shall develop, implement, and enforce a program to investigate, detect, and eliminate illicit discharges into the small MS4. The program must include a plan to detect and address non-stormwater discharges, including illegal dumping to the small MS4.

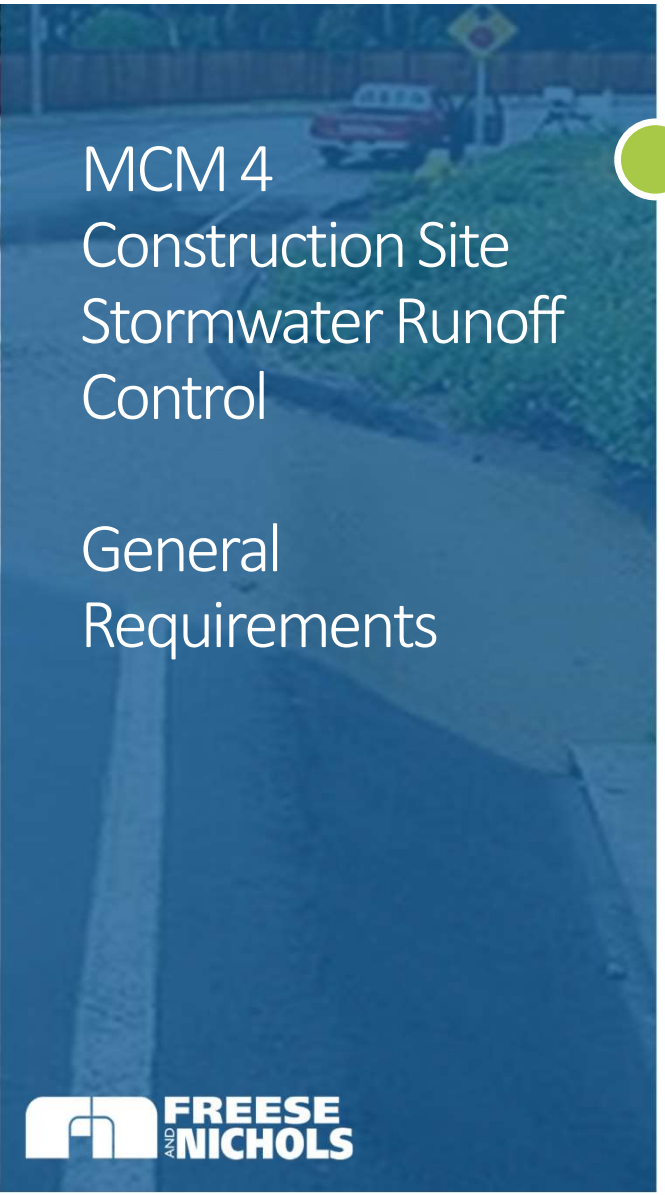
MCM 3 Illicit Discharge Detection and Elimination (IDDE)

BEST MANAGEMENT PRACTICES

All Levels
Level 3/4 Additions
Level 4 Additions

Maintain a current and accurate MS4 map	Conduct training for all the permittee's field staff	Maintain/publicize a public reporting method
Develop/maintain procedures for responding to illicit or illegal discharges, spills, and dumping	Source investigation and elimination of illicit discharges and illegal dumping	Corrective action to eliminate illicit discharges and illegal dumping
Inspection procedures	Inspection in response to complaints	Conduct Follow-up investigation/field screenings when notified that a discharge has been eliminated
Identification of priority areas	Dry weather field screenings	Floatable reduction


Minimum Control Measure 4
Construction Site Stormwater
Runoff Control BMPs



MCM 4 Construction Site Stormwater Runoff Control

General Requirements

- All permittees shall develop, implement, and enforce a program requiring operators of small and large construction activities to select, install, implement, and maintain stormwater control measures that prevent illicit discharges to the MEP. The program must include the development and implementation of an ordinance or other regulatory mechanism, as well as sanctions to ensure compliance to the extent allowable under state, federal, and local law, to require erosion and sediment control.

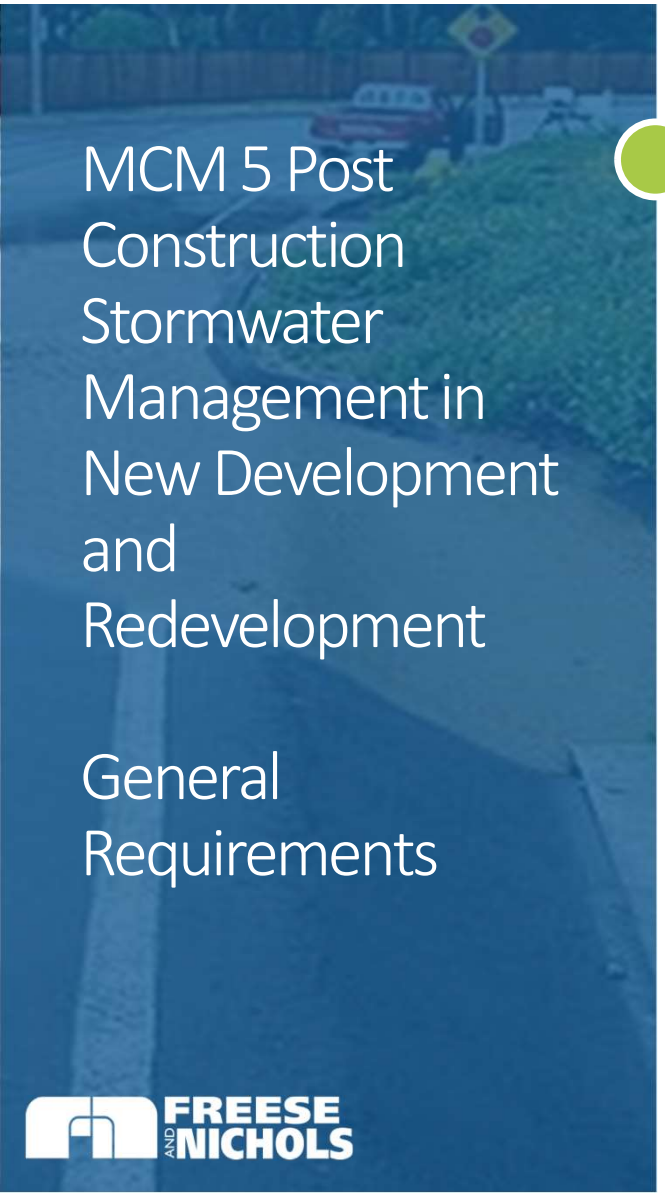
MCM 4
Construction Site Stormwater Runoff Control

Best Management Practices

All Levels
Level 3 & 4

- Develop and maintain an ordinance or other regulatory mechanism
- Prohibit discharges
- Maintain and implement site plan review procedures
- Implement procedures for inspecting large and small construction projects
- Conduct construction site inspections
- Procedures for receipt and consideration of information submitted by the public
- Train MS4 staff whose job duties are related to the construction stormwater program
- Maintain a construction site inventory


Minimum Control Measure 5
Post-Construction Management
in New Development and
Redevelopment BMPs



MCM 5 Post Construction Stormwater Management in New Development and Redevelopment

General Requirements

- Permittees shall develop, implement and enforce control stormwater discharges from new development and redeveloped sites that discharge into the small MS4 that disturb one acre or more.
- All permittees shall use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects.

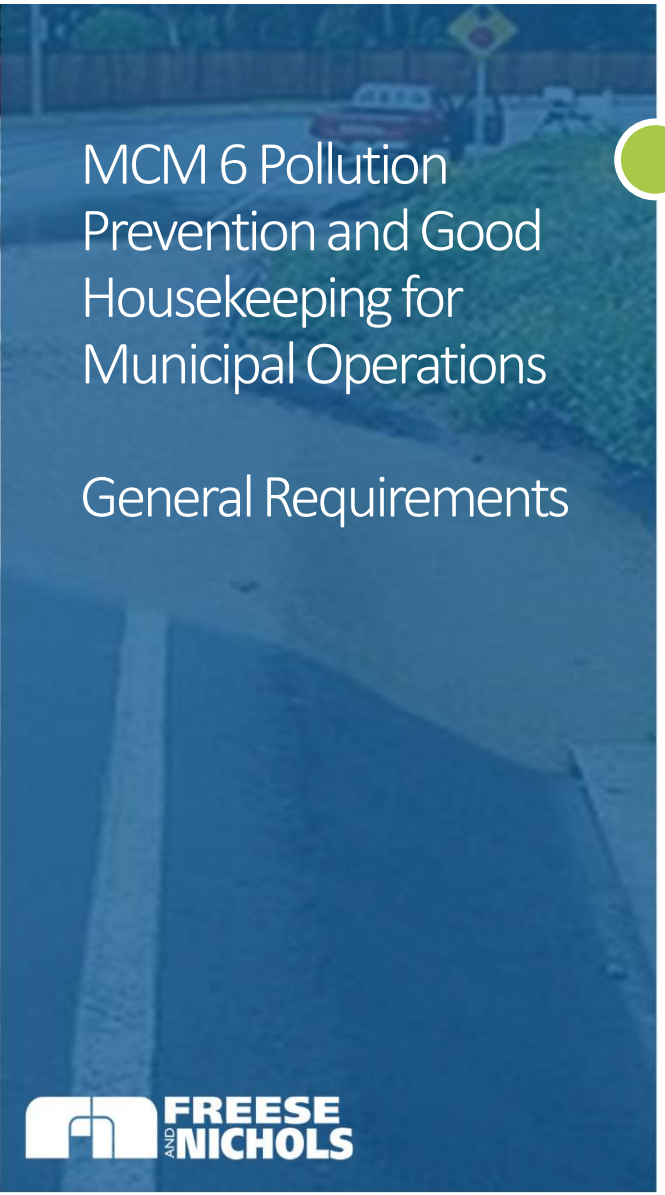
MCM 5 Post Construction Stormwater Management in New Development and Redevelopment

Best Management Practices

All Levels
Level 4

- Develop and maintain an ordinance or other regulatory mechanism
- Document and maintain records of enforcement actions
- Ensure the long-term operation and maintenance of structural stormwater control measures installed
- Develop and implement an inspection program
- Maintain inspection reports

Minimum Control Measure 6 Pollution Prevention/ Good Housekeeping for Municipal Operations BMPs



MCM 6 Pollution Prevention and Good Housekeeping for Municipal Operations

General Requirements

- All permittees shall develop and implement an operation and maintenance program (O&M), including an employee training component that has the ultimate goal of preventing or reducing pollutant runoff from municipal activities and municipally owned areas

MCM 6 Pollution Prevention and Good Housekeeping for Municipal Operations

Best Management Practices

All Levels

- Permittee-owned facilities and control inventory
- Training and education
- Disposal of waste material
- Contractor requirements and oversight
- Assessment of permittee-owned operators
- Identify pollutants of concern
- Pollution prevention measures
- Inspection of pollution prevention measures
- Structural control maintenance

MCM 6 Pollution Prevention and Good Housekeeping for Municipal Operations

Best Management Practices

Level 3 & 4

- Storm sewer system operation and maintenance program
- Storm sewer system operation and maintenance problem areas
- O&M Program to reduce discharges of pollutants from roads
- Mapping of facilities
- Assessment of potential pollutant discharge from facilities
- Identification of high priority facilities
- Documentation of assessment results
- Development of facility-specific SOPs
- Stormwater controls for high priority facilities (General Good Housekeeping)
- Stormwater controls for high priority facilities (De-icing/Anti-icing material storage)
- Stormwater controls for high priority facilities (Fueling and Vehicle Maintenance)
- Stormwater controls for high priority facilities (Equipment and Vehicle Washing)
- Inspection program

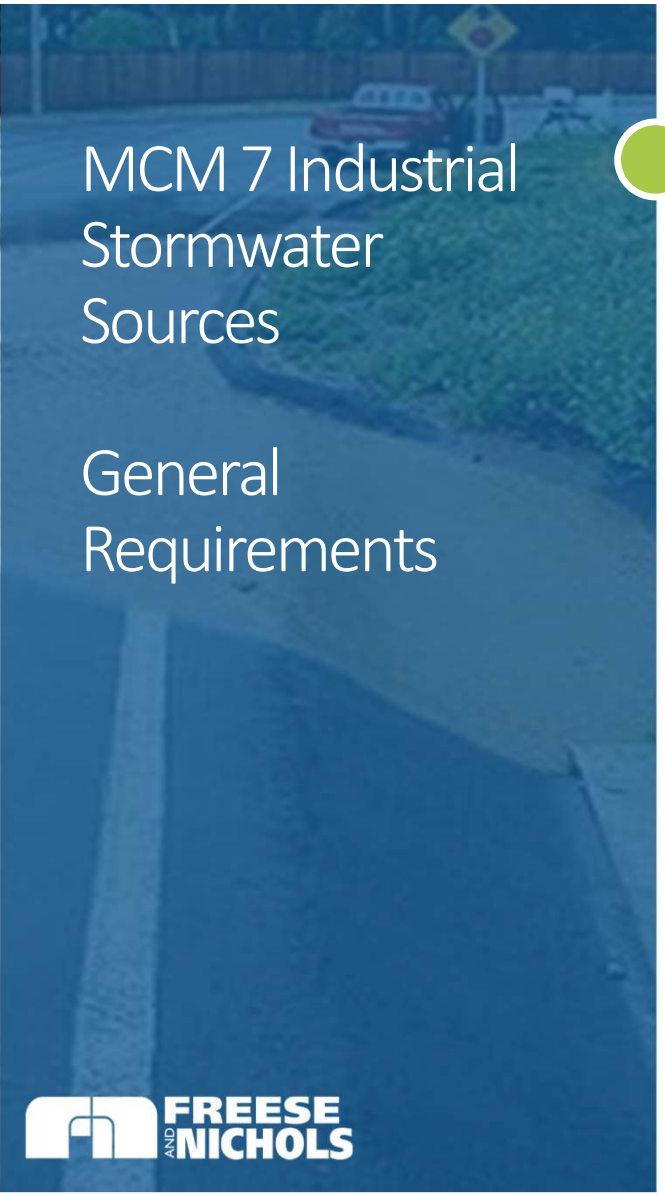
MCM 6 Pollution Prevention and Good Housekeeping for Municipal Operations

Best Management Practices

Level 4

- Pesticide, herbicide, and fertilizer applicator and distributor measures
- Landscape maintenance
- Non-chemical solutions
- Schedules for chemical application
- Collection and disposal of pesticides, herbicides, and fertilizers
- Evaluation of flood control projects


Minimum Control Measure 7
Industrial Stormwater Sources



MCM 7 Industrial Stormwater Sources

General Requirements

- Permittees who operate Level 4 small MS4s shall identify and control pollutants in stormwater discharges to the small MS4 from the permittee's landfills; other treatment, storage, or disposal facilities for municipal waste; hazardous waste treatment, storage, disposal and recovery facilities and facilities that are subject to Emergency Planning and Community Right- to-Know Act; and any other industrial or commercial discharge the permittee determines are contributing a substantial pollutant loading to the small MS4.

MCM 7 Industrial Stormwater Sources

Best Management Practices

Level 4

Permittee industrial facilities

Industrial facility inspections

Standard operating procedure development


Minimum Control Measure 8
Authorization for Construction
Activities where the Small
MS4 is the Site Operator BMPs
OPTIONAL

MCM 8 Authorization for Construction Activities where the Small MS4 is the Site Operator (optional)

- The development of this MCM for construction activities, where the small MS4 is the construction site operator, is optional and provides an alternative to the MS4 operator seeking coverage under TPDES CGP, TXR150000 for each construction activity.
- Permittees that choose to develop and implement this MCM will be authorized to discharge stormwater and certain non-stormwater from construction activities only where the MS4 operator meets the definition of a construction site operator.

MCM 8 Authorization for Construction Activities where the Small MS4 is the Site Operator Requirements

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- A description of how construction activities will generally be conducted by the permittee taking into consideration local conditions
- A description of the area that this MCM will address and where the permittee's construction activities are covered
- A description of how the permittee will supervise or maintain oversight over contractor activities to ensure that the SWP3 requirements are properly implemented; or how the permittee will make certain that contractors have a separate authorization for stormwater discharges
- A general description of how a SWP3 will be developed for each construction site
- Records of municipal construction activities authorized under this optional MCM

Bacteria Impaired Water Bodies with an Approved TMDL

Best Management Practices

Bacteria

Sanitary Sewer System

- Review 100% of system for areas of improvement located within the impairment watershed in the first 2 years.
- Initiate all feasible improvement by the end of the permit term.
- Conduct 52 (weekly) lift station inspections at 100% of the MS4 owned/operated lift stations located within the impairment watershed.
- Investigate/address 100% of SSOs reported by public.
- Annually review and/or update sanitary sewer use requirements to reduce FOG.

On Site Sewage Facilities

- Develop and implement procedures to screen 20% of the MS4 within the impairment watershed each year for failing OSSFs.
- Identify and maintain an inventory of 100% of OSSFs in the MS4. Determine whether they are failing.
- Review/update inventory annually.
- Address 100% of failing OSSFs annually by requiring responsible party to perform all corrective actions to eliminate illicit discharges.
- Investigate/address 100% of OSSF complaints reported by public.

Illicit Discharges and Dumping

- Ensure 100% of procedures and ordinances are established for BMPs in MCM 3 bacteria related illicit discharges.

Animal Sources (one of the following)

- Provide/maintain at least one pet waste station in 100% of public parks located within in the impaired watershed.
- Assess/address, if feasible, 100% of complaints received about feral hogs within MS4. Document reason, if infeasible. Prohibit the feeding of ducks and geese in 100% of parks/greenspaces within the MS4 located in the impaired watershed.
- Develop/distribute educational material related to animal sources of bacteria to reach 75% of targeted audience identified in MCM 1. Develop a tracking system to record estimate the percentage of the intended audience reached.

Residential Education

- Implement one additional BMP form MCM 1 to focus on residential bacteria sources, FOG, O&M of decorative ponds, reporting illicit discharges or illegal dumping, or proper disposal of pet waste.

EPA's Central Data Exchange (CDX) & NeT MS4 Program

CDX Requirements/Uses	NeT MS4 Requirements/Uses
EPA Reporting Site	EPA Site Specific to Texas' MS4 Program
Access & Authentication for NeT MS4 and other State Programs	Submit NOI and Waiver Applications
Designate Roles & Permissions: Signatory • View, Edit, Sign, Manage • Certifying submissions • Prepare Forms • Must submit Electronic Signature Agreement & continue with Identity Proofing Preparer: • View and Edit forms • Not authorized to sign/certify forms	Submit annual reports (March 31 each year)
1 account per person	Enter NeT MS4 through CDX site
Standalone site	TCEQ Approves through NeT MS4 and other communications
Must be set up prior to accessing NeT MS4	State Regulatory Authority approves 1st MS4 manager
Do no submit NOI	NOI delivered via email

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Thank You!

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