### Stormwater Pollution Prevention: Self-Audit Guidebook Template February 2015

#### **General Guidance**

The self-audit guidebook is designed to help municipal employees maintain compliance with stormwater pollution prevention requirements. Checklists are provided to help identify issues that may need further attention. The auditor (the employee performing the audit) should be familiar with the municipality's permit, site plan, and stormwater pollution prevention plan. If the auditor has not been trained in stormwater pollution prevention or is not familiar with the previously mentioned documents, the auditor should notify his or her manager.

If the self-audit reveals issues or potential violations, the auditor should immediately notify the site manager or responsible department manager.

Audits should be performed as frequently as stated in the permit requirements.

This document uses checklists to provide a common structure for assessment and documentation. Reviewers answer "Yes," "No," or "NA" to checklist questions, but a "Yes" or "No" response in the checklist does not necessarily define the condition as right or wrong. Rather, the checklist is intended to act as a guide to help ensure a thorough review of the facility. Reviewers may want to include additional comments to support their answers or provide more information. This enables other staff to have an "at a glance" understanding of the conditions, and to highlight potential topics for further discussion when on site.

#### Permit Requirements

The Texas Commission on Environmental Quality (TCEQ) small municipal separate storm sewer system (MS4) general permit TXR040000 contains the following guidelines applicable to this self-audit:

#### Pollution Prevention and Good Housekeeping for Municipal Operations Part III.B.5. (a) Program Development

(1) All permittees shall develop and implement an operation and maintenance program, including an employee training component that has the ultimate goal of preventing or reducing pollutant runoff from municipal activities and municipally owned areas including but not limited to park and open space maintenance; street, road, or highway maintenance; fleet and building maintenance; stormwater system maintenance; new construction and land disturbances; municipal parking lots; vehicle and equipment maintenance and storage yards; waste transfer stations; and salt/sand storage locations.

#### Part III.B.5. (b)(5) Requirements for all Permittees

All permittees shall include the requirements described below in Parts III.B.5.(1)-(6) in the program:

(5) Municipal Operation and Maintenance Activities

a. Assessment of permittee-owned operations

All permittees shall evaluate operation and maintenance (O&M) activities for their potential to discharge pollutants in stormwater, including but not limited to:

- (i) Road and parking lot maintenance may include such areas as pothole repair, pavement marking, sealing, and re-paving;
- (ii) Bridge maintenance may include such areas as re-chipping, grinding, and saw cutting;
- (iii) Cold weather operations, including plowing, sanding, and application of deicing and antiicing compounds and maintenance of snow disposal areas; and
- (iv) Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation.

b. All permittees shall identify pollutants of concern that could be discharged from the above O&M activities (for example, metals; chlorides; hydrocarbons such as benzene, toluene, ethyl benzene, and xylenes; sediment; and trash).

c. All permittees shall develop and implement a set of pollution prevention measures that will reduce the discharge of pollutants in stormwater from the above activities. These pollution prevention measures may include the following examples:

- (i) Replacing materials and chemicals with more environmentally benign materials or methods;
- (ii) Changing operations to minimize the exposure or mobilization of pollutants to prevent them from entering surface waters; and
- (iii) Placing barriers around or conducting runoff away from deicing chemical storage areas to prevent discharge into surface waters.

d. Inspection of pollution prevention measures - All pollution prevention measures implemented at permittee-owned facilities must be visually inspected at a frequency determined by the permittee to ensure they are working properly. A log of inspections must be maintained and made available for review by the TCEQ upon request.

#### Part III.B.5.(c) (4) Facility Assessment

Permittees who operate level 3 or 4 small MS4s shall perform the following facility assessment in the regulated portion of the small MS4 operated by the permittee:

a. Assessment of Facilities' Pollutant Discharge Potential - The permittee shall review the facilities identified in Part III.B.5.(b) once per permit term for their potential to discharge pollutants into stormwater.

b. Identification of *high priority* facilities - Based on the Part III.B.5.(c)(4)a. assessment, the permittee shall identify as *high priority* those facilities that have a high potential to generate stormwater pollutants and shall document this in a list of these facilities. Among the factors that must be considered in giving a facility a high priority ranking are the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must not be performed outside (for example, changing automotive fluids, vehicle washing), proximity to waterbodies, proximity to sensitive aquifer recharge features, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s). High priority facilities must include, at a minimum, the permittee's maintenance yards, hazardous waste facilities, fuel storage locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in stormwater.

c. Documentation of assessment results - The permittee shall document the results of the assessments and maintain copies of all site evaluation checklists used to conduct the assessments. The documentation must include the results of the permittee's initial assessment, and any identified deficiencies and corrective actions taken.

This municipality has the following additional permit requirements: [Insert your specifics here.]

#### Common Stormwater Pollutants, Sources, and Impacts

On its way to creeks, rivers, and lakes, stormwater runoff can accumulate pollutants such as pesticides, pathogens (bacteria), sediment, automotive fluids, and heavy metals. These pollutants can degrade water quality and aquatic habitat, impair ecosystem functions, and harm human health. Understanding the sources of these pollutants and the impacts of each pollutant can help an auditor understand the goals and objectives when managing stormwater. Table 1 summarizes common stormwater pollutants, their sources, and potential impacts. During self-audits, make sure to look for these potential sources of pollution.

Table 1: Common Stormwater Pollutants, Sources, and Impacts						
Pollutants	Sources	Impacts				
Sediment	Construction sites; eroding stream banks and lakeshores; winter sand and salt application; vehicle/boat washing; agricultural sites	Destruction of plant and fish habitat; transportation of attached oils, nutrients, and other pollutants; increased maintenance costs; flooding				
Nutrients (phosphorus, nitrogen)	Fertilizers; malfunctioning septic systems; livestock, bird, and pet waste; vehicle/boat washing; gray water; decaying grass and leaves; sewer overflows; leaking trash containers; leaking sewer lines	Increased potential for nuisance or toxic algal blooms; increased potential for hypoxia/anoxia (low levels of dissolved oxygen, which can kill aquatic organisms)				
Hydrocarbons (petroleum compounds)	Vehicle and equipment leaks; vehicle and equipment emissions; fuel spills; improper fuel storage and disposal; equipment cleaning; pesticides	Toxic to human and aquatic life at low levels				
Heavy metals	Vehicle brake and tire wear; vehicle/equipment exhaust; batteries; galvanized metal; paint and wood preservatives; fuels, pesticides, and cleaners	Toxic at low levels; drinking water contamination				
Pathogens (bacteria)	Livestock, bird, and pet waste; malfunctioning septic systems; sewer overflows; damaged sanitary lines	Risk to human health, leading to closure of shellfish areas and swimming areas; drinking water contamination				
Toxic chemicals	Pesticides; dioxins; polychlorinated biphenyls (PCBs); spills, illegal discharges, and leaks	Toxic to human and aquatic life at low levels				
Debris/litter	Improper waste disposal and storage; fishing gear; leaking trash containers; cigarette butts; littering	Potential risk to human and aquatic life; aesthetically displeasing.				

Source: "Guidelines and Standard Operating Procedures: Illicit Discharge Detection and Elimination and Pollution Prevention/Good Housekeeping." November 2006. Courtesy of Piscataqua Region Estuaries Partnership. Available online at http://water.epa.gov/polwaste/npdes/stormwater/upload/NH\_IDDE\_SOP.pdf

#### **Pollution Prevention**

The lists below provide more information on measures that can help prevent pollution or improve surface water quality.

#### **Best Management Practices**

- Enclosure/containment of material or potential contamination sources
- Diversion of stormwater away from areas of potential contamination
- Installation of stormwater collection systems followed by storage and reuse where possible
- Provision of oil/water separators, sediment traps, or other treatment devices
- Erosion control using diversions, re-grading, revegetation, and use of rip-rap
- Use of drip pans or dry sweep material under leaking vehicles or equipment
- Use of absorbent devices to contain and reduce releases of liquids
- Moving industrial operations, storage areas, vehicle/equipment maintenance areas, etc., from outdoors to indoors
- Good housekeeping practices (see below for examples)
- Modification/labeling of storm drains or catch basins
- Implementation of a spill prevention and response program
- Employee training program
- Preventative maintenance program
- Covered roll-offs/dumpsters

#### **Good Housekeeping Practices**

- Frequent cleaning
- Proper disposal of trash, garbage, and other waste
- Proper storage and transfer of materials
- Frequent walkthroughs or inspections of work areas for potential problems

#### **Problems to Look For**

- Uncovered/exposed materials
- Dirty or cluttered surfaces exposed to stormwater
- Oils, grease, or other chemicals on the ground
- Spots, stains, and discoloration
- Leaking equipment
- Poor chemical storage or transfer operations
- Floor drains or other conduits that toxic chemicals are likely to enter
- Suspicious-looking puddles

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# Inspection Record

						Corrective Actions			
			Corr	ective A	ction	from	Previou	IS	
Facility	Inspection Date	Inspector	Need	Needed?			Inspection Done?		
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No —	NA	
			Yes	No —	NA	Yes	No —	NA	
			Yes	NO	NA	Yes	No	NA	
			Yes	NO	NA	Yes	NO		
			Yes		NA	Yes			
				No					
				No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	
			Yes	No	NA	Yes	No	NA	

#### High-Priority Facility Determination

This section provides questions that should help you determine the priority of the permittee-owned facility.

If you check "Yes" for question 1, the facility is high priority. The answers to questions 2-7 should assist you in your determination, but "Yes" responses to questions 2-7 do not necessarily define the facility as high priority. Refer to the TCEQ permit for more information on definitions and requirements related to the high-priority facilities.

Inspector Name						
Inspector Title and Department						
Name and Location of Facility/Site						
Facility/Department Manager						
Date		•				
Inspection Period	Quarterly	🗆 Sei	miannu	ally	□ Annually	□ Other:
High-Priority Facility Determination			Yes N	o NA	Comments	
1. Is this a maintenance yard, haza	rdous waste facility,	, fuel				
storage location, or other facility w	here chemicals or o	other	*			
materials have a high potential to b stormwater?	be discharged in					
2. Is there a large amount of urban	pollutants stored a	t the				
site (for example, pesticides, fertili: sediment)?	zers, and/or sand or	ſ				
3. Does this facility hold activities t	hat must not be					
performed outside (for example, ch	nanging automotive	fluids				
or washing vehicles)?		_				
4. Is this facility close to water bodies or sensitive aquifer						
recharge features?						
5. Have improperty stored material	is been previously					
6 Have poor housekeeping practic	es heen previously					
identified at this facility?	co been premously					
7. Has discharge of pollutant(s) of a	concern to impaired					
water(s) been previously identified at this facility?						
Additional Notes:						

### **Checklist Header**

Inspector Name						
Inspector Title and Department						
Name and Location of Facility/Site						
Facility/Department Manager						
High-Priority Facility	□ Yes □ No (See the High-Priority Determination checklist.)					
Date						
Inspection Period	Quarterly	□ Semiannually	□ Annually	□ Other:		

#### General

General	Yes	No	NA	Comments
1. Are there appropriate measures in place to control				
pollutants in stormwater discharge (e.g., silt fencing)?				
2. Are there structural practices (e.g., earth dikes and				
drainage swales) in place to divert flows or limit runoff and		-	-	
the discharge of pollutants?				
3. Are the appropriate measures in place to control				
stormwater pollutants related to erosion and sediment?				
4. Has the maintenance of drains/inlets/drainage paths				
been checked to confirm these are properly functioning?				
5. Do runoff discharges from HVAC, cooling towers, and/or				
boilers drain to a sanitary sewer?				
6. Have the containment and/or filtering BMP controls been				
checked to make sure they are in good condition?				
7. If the facility conducts surface or pressure washing, is				
wastewater collected?				
8. Are there any signs of leaks, spills, or drips in exterior				
vehicle and equipment areas?				
9. If the facility has storm drains, are any toxic chemicals				
likely to enter them?				
Additional Notes/Corrective Action Needed:				
-				
Expected Completion Date for Actions:				
Person Responsible for Corrective Actions:				
Name:	Ti	tie: _		
Signature:				
Simplify of Increatory				
Signature of Inspector:				

### Yard

Bulk Material Storage	Yes No	NA	Comments
<ol> <li>Are there any bulk materials stored outside, such as sand, gravel, asphalt, or mulch?</li> </ol>			
2. Are these materials in a containment bay?			
3. Is the containment bay covered?			
4. Are erosion controls in place around the bulk materials?			
Waste Materials	Yes No	NA	Comments
5. Are there any exposed litter, debris, or chemicals?			
6. If there are, have they been picked up, stored according			
to hazard, or disposed of properly?			
7. Are all dumpsters or outdoor trash containers covered?			
8. Do all dumpsters have their drains plugged to prevent waste from discharging?			
Chemicals	Yes No	NA	Comments
9. Are chemicals in labeled containers?			
10. Are containers stored outside under cover or inside?			
11. Are containers stored on spill pallets?			
12. Are chemicals used outside?			
Materials Stored Outside in Containers			
(Drums, Barrels, Tanks, etc.)	Yes No	NA	Comments
13. Are there any materials or wastes stored outside in			
14. Are the containers stored on an impervious surface?			
15. If containers are stored on an impervious surface, are			
they under cover or is there a secondary containment (e.g.,			
berms)?			
16. Are the containers empty and clean?			
17. Are the containers in good condition and not leaking?			
Vehicles and Equipment Stored Outside	Yes No	NA	Comments
18. Are vehicles and equipment stored outdoors?			
19. Are they stored under cover?			
20. Are they stored on a paved/impervious surface?			
21. Are there any signs of leaking from vehicles or equipment?			
22. Are drip pans placed under leaking vehicles and equipment?			
Additional Notes/Corrective Action Needed:			
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			· · · · · · · · · · · · · · · · · · ·
Expected Completion Date for Actions:			

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Person Responsible for Corrective Actio	
Name:	Title:
Signature:	
Signature of Inspector:	

### Fuel and Fleet Maintenance

Fuel Facility	Yes No NA	Comments
1. Is the fuel facility paved?		
2. Is the fuel facility under cover?		
3. Are fuel dispensers locked?		
4. Is an emergency shutoff switch present?		
5. Are written spill cleanup procedures posted and a spill kit readily available?		
6. Is there signage prohibiting "topping off"?		
7. Is a spill containment device and/or spill kit readily available?		
8. Is there evidence of leaked vehicle fluids on the ground?		
9. Does the fuel facility have a Spill Prevention, Control, and Countermeasures (SPCC) Plan?		
Vehicle Service Bays	Yes No NA	Comments
10. Are vehicles serviced indoors?		
11. Do spill pallets, fire cabinets, and parts cleaners appear to be used effectively?		
12. Are drip pans placed under leaking vehicles?		
13. Are containers properly labeled and stored, without any signs of fluid leakage?		
14. Are written spill cleanup procedures posted and is there a spill kit readily available?		
15. Is there evidence of leaked vehicle fluids on the ground?		
16. Is used oil disposed of properly?		
17. Does the oil/water separator drain to the sanitary sewer?		
18. Does the facility have up-to-date maintenance records for the oil/water separator?		
Vehicle Washing	Yes No NA	Comments
19. Are vehicles washed on site?		
20. Is there a designated washing area?		
21. Are there standard operating procedures (SOPs) for vehicle washing to ensure that vehicle wash water does not drain directly to the municipal storm sewer system or a water body? For example, vehicles are washed indoors, or wash water is redirected to flow to a vegetated area or sent to the sanitary sewer system.		
22. Are sand trap records maintained?		
Chemicals	Yes No NA	Comments
23. Are chemicals in labeled containers?		
24. Are containers stored outside under cover or inside?		
25. Are containers stored on spill pallets?		
26. Are chemicals used outside?		

#### Additional Notes/Corrective Action Needed:

**Expected Completion Date for Actions:** 

Person Responsible for Corrective Actions: Name:

Signature:\_\_\_\_\_

\_\_\_\_\_ Title: \_\_\_\_\_

Signature of Inspector:

### Spills/Solid Waste

Spills	Yes No NA	Comments			
1. Is staff training on spill response documented?					
2. Is there a spill response plan in place?					
3. Are spill protocol notices posted?					
4. Do employees know where the spill kit is located?					
5. Are the spill response plan and spill kits readily available					
close to where they are needed?					
6. Are spill kits labeled on the site plan?					
<ol><li>Are spill kits stocked? (Also check the level of absorbent material.)</li></ol>					
8. Are spills reported as required?					
9. Which staff members are responsible for spill response?	Name(s):				
10. Is the contact information for reporting a spill up to					
date?					
11. Is there a disposal plan in place?					
12. Are there signs of spill stains? (Suspicious-looking					
Solid Waste		Commonte			
13 Does the facility keen waste manifests for the 3-year		Comments			
minimum requirement?					
14. Are outdoor trash receptacles overflowing?					
Additional Notes/Corrective Action Needed:					
Expected Completion Date for Actions:					
Person Responsible for Corrective Actions:					
Name: Title					
Signature:					
Signature of Inspector:					

### Storage Tanks/General Equipment

Storage Tanks/General Equipment	Yes No NA	Comments			
1. Are drums, barrels, tanks, and other containers in good					
condition?					
2. Are the containers properly labeled?					
3. Are the containers properly sealed?					
4. Are there visible leaks from the containers?					
5. Is there visible damage to the containers?					
6. Do drums have adequate secondary containment and cover?					
7. Are bulk fluids and wastes double-contained to prevent accidental discharges?					
8. Is there liquid in the secondary containment storage?					
9. Are aboveground storage tanks inspected on a periodic basis for leaks and other hazardous conditions?					
10. Are used batteries protected from contact with stormwater?					
Additional Notes/Corrective Action Needed:					
Person Responsible for Corrective Actions:					
Name: Signature:	Title:				
Signature of Inspector:					

### Parks and Grounds

Parks and Grounds	Yes No NA	Comments		
<ol> <li>Is landscape maintenance debris contained and stored away from drainage paths?</li> </ol>				
2. Are irrigation systems regularly maintained to avoid overwatering?				
3. After mowing, are grass clippings left or swept/blown on the grass, or swept/blown into a pile for removal?				
4. Is trash picked up from the grounds in conjunction with mowing?				
5. Are outdoor trash receptacles overflowing?				
6. Is the spraying of pesticides avoided within 50 feet of surface water, creek, etc., or within designated "no-spray" zones?				
7. Is spot spraying the preferred practice for weed and insect control?				
8. Is broadcast spraying avoided?				
9. Are fertilizers and pesticides not applied before rain events?				
10. Is dog waste disposed of properly?				
Chemicals	Yes No NA	Comments		
11. Are chemicals in labeled containers?				
12. Are containers stored outside under cover or inside?				
13. Are containers stored on spill pallets?				
14. Are chemicals used outside?				
Additional Notes/Corrective Action Needed:				
Expected Completion Date for Actions:				
Name:				
Signature of Inspector:				

## Animal Services Shelters/Dog Parks

Animal Services Shelters/Dog Parks	Yes No NA	Comments
<ol> <li>If kennels are cleaned/washed outside, does the wash water drain to a sanitary sewer?</li> </ol>		
2. Are there waste stations, and do they function properly?		
<ol><li>Are waste stations monitored on a regular basis (for example, twice a week)?</li></ol>		
4. Are dog-waste bags available?		
5. Is a dog-waste ordinance posted?		
Chemicals	Yes No NA	Comments
6. Are chemicals in labeled containers?		
7. Are containers stored outside under cover or inside?		
8. Are containers stored on spill pallets?		
9. Are chemicals used outside?		
Additional Notes, connective Action Needed.		
Parson Pasnansible for Corrective Actions:		
Name:Signature:	Title:	
Signature of Inspector:		

### Definitions

**Best management practices (BMPs):** Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPS also include treatment requirements, operating procedures, and practices to control runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

**Catch basins:** Storm drain inlets and curb inlets to the storm drain system. Catch basins typically include a grate or curb inlet that may accumulate sediment, debris, and other pollutants.

**Control measure:** Any BMP or other method used to prevent or reduce the discharge of pollutants to water in the state.

**Conveyance:** Curbs, gutters, manmade channels and ditches, drains, pipes, and other constructed features designed or used for flood control or to otherwise transport stormwater runoff.

**Discharge:** When used without a qualifier, refers to the discharge of stormwater runoff or certain nonstormwater discharges as allowed under the authorization of this general permit.

**High-priority facilities:** High-priority facilities are facilities with a high potential to generate stormwater pollutants. These facilities must include, at a minimum, the MS4 operator's maintenance yards, hazardous waste facilities, fuel storage locations, and other facilities where chemicals or other materials have a high potential to be discharged in stormwater. Among the factors that must be considered when giving a high-priority rating are: the amount of urban pollutants stored at a site, the identification of improperly stored materials, activities that must not be performed outside (for example, changing automotive fluids, vehicle washing), proximity to water bodies, proximity to sensitive aquifer recharge features, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s).

**Impaired water:** A surface water body that is identified on the latest approved Clean Water Act CWA §303(d) List as not meeting applicable state water quality standards. Impaired waters include waters with approved or established total maximum daily loads (TMDLs), and those where a TMDL has been proposed by TCEQ but has not yet been approved or established.

**Pollutant(s) of concern:** Biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity, or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from a municipal separate storm sewer system (MS4).

**Stormwater and stormwater runoff:** Rainfall runoff, ice/snow melt runoff, and surface runoff and drainage.

**Structural control or practice:** A pollution prevention practice that requires the construction of a device, or the use of a device, to capture or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to: wet ponds, bioretention, infiltration basins, stormwater wetlands, silt fences, earthen dikes, drainage swales, vegetative lined ditches, vegetative filter strips, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

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**Surface water in the state:** Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark [MHWM] out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.