



More than a Project™

WHAT'S NEW WITH MUNICIPAL OPERATIONS

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MS4GP Municipal Operations

Section 4.7

- » Presentation will review the requirements of Section 4.7 of the MS4GP including:
 - » General Requirements
 - » SWPPPs
 - » Standard Operating Procedures
 - » Operation & Maintenance Manual
 - » Surface Visual Inspections
 - » Implementation

Inventory of MS4 Facilities

Section 4.7 (b)

- » Which sites?
 - » List of insured properties
 - » Not easements
- » What is included?
 - » Facility name or description
 - » Address or latitude & longitude (5 decimals)
 - » SW & WW permits for each facility (if any)
 - » Identify the facilities with the greatest potential to generate stormwater pollution
 - » Facility manager and alternate with contact information
 - » Location map

Sites that use, store, or discharge pollutants that may degrade water quality should get a SWPPP (4.7 d)

**NEW IDEM
INTERPRETATION**

IDEM

Interpretation on Identified Facilities for SWPPPs

- » MS4GP language “use, store, or discharge pollutants that may degrade water quality”
- » Does NOT include:
 - » Chemicals stored indoors with drains to sanitary sewer or in secondary containment
 - » Chemicals outdoors with containment
 - » Interior washing/maintenance areas with drains to sanitary
 - » Activities/sites under other regulations
- » Does include:
 - » Exterior washing or maintenance
 - » Exterior stockpiles
 - » Exterior chemical storage with no containment

IDEM Interpretation on Identified Facilities for SWPPPs

- Rule 6 applies to domestic WWTP if Flow > 1 MGD or required to have Pretreatment Program
- Rule 6 does not apply if WWTP operations are handled under Rule 13 (MS4GP)
- WWTP NPDES permits do not include housekeeping or SW management measures; does include spill reporting

- » Activities under other regulations may include:
 - » Sites with Spill Prevention, Control, and Countermeasures (SPCC) Plans – oil containers
 - » Drinking Water plants with Emergency Response Plans – likely includes spill reporting, emergency contacts & hazardous chemical inspections
 - » Wastewater Treatment Plant NPDES permits - if all SW goes back to the headworks
 - » Indiana Spill Rule (326 IAC 2-6.1) for spills and catastrophic events
 - » Secondary Containment of Tanks with Hazardous Materials (326 IAC 2-10) – exterior storage and transfer of chemicals

IDEM Interpretation Scenarios

Input
from Staci

- » Exterior storage & activities, but no discharge to SW conveyance?
- » Firefighting practice activities with SW inlets?
- » Dry material storage (pipes, poles, picnic tables, etc.)?
- » Exterior stockpiles stored in segregated areas on gravel?
- » WWTP SW inlets that have no municipal activities that drain to them?
- » Animal Control facilities with dog runs?
- » Trash and or scrap dumpsters only?
- » Sites with no other activities except bulk chemical transfers?

SWPPPs for Identified Sites

Section 4.7 (d) - Content

Keep the inspections with the SWPPP at each facility

- » Develop/revise SWPPPs for facilities that use, store, or discharge pollutants that may degrade water quality
- » Annual review of SWPPPs for changes
- » Process for corrective actions
- » Site map
- » Inspection forms, completed inspections & Annual Facility Assessments
- » Maintenance activities performed & schedules
- » Site activities – washing, chemicals, waste disposal, etc.
- » SPCC Plan applicability & compliance

SWPPPs for Identified Sites

Section 4.7 (d) - Content

Applicable for Parks Dept.
or Animal Control SWPPPs

- » Operational procedures to achieve performance objectives for SW management:
 - » Eliminate exposure
 - » Implement good housekeeping
 - » Implement proper storage
 - » Don't discharge water from washing pavement, buildings, equipment or vehicles to SW
 - » Proper disposal of animal waste
 - » Snow disposal and salt/sand storage methods (e.g., stockpiles or pails for sidewalks)
 - » SOPs
 - » Spill response procedures & equipment












SWPPP Site Map

Section 4.7 (d)(2)

- » Include in a facility map:
 - » Buildings
 - » Storage areas
 - » Drainage patterns
 - » Storm system, outfalls & receiving waters
 - » Identify activities
 - » Spill equipment locations
 - » Post-construction measures (if any)

SWPPP Site Map

» Don't forget a legend on the map

	Right of Way
	Road Centerlines
	Streams
Contours	
	Contour 1 Ft Intermediate
	Contour 5 Ft Index
	Catch Basin/Inlet
	Other Structures
	Storm Lines
	Surface Drainage Flow
	Underground Pipe/Trench
	Spill Equipment



SWPPPs & SPCC Assessment

Section 4.7 (d)(6)(F)

- » Spill Prevention, Control and Countermeasures (SPCC) Plan – 40 CFR 112
- » Oil includes petroleum, animal/vegetable, used, waste, mineral, synthetic
- » Threshold – 1,320 gallons of oil in 55-gallons or more in drums, totes, tanks, equipment
 - » Fuel tanks (diesel and unleaded)
 - » Hydraulic oil tanks
 - » Plastic totes of new or used oil
 - » Emergency generator fuel tanks
 - » Hydraulic elevator reservoirs
 - » Oil-filled equipment such as pumps, compressors or transformers

SWPPPs & SPCC Assessment

Section 4.7 (d)(6)(F)

- Regulated by USEPA - Refer to the Oil Spills Prevention and Preparedness Regulations page
- Municipality may be a “qualified facility” and can self-certify a SPCC Plan; otherwise need a PE to certify

EXAMPLE CALCULATION:

- » 500-gallon tank of unleaded
- » 250-gallon tank of diesel
- » 300-gallon tote of used oil
- » 4 drums (55 gallons each) hydraulic oil
- » 1 empty drum that contained or will contain oil

TOTAL = 1,325 gallons

> 1,320-gallon THRESHOLD

SPCC PLAN REQUIRED

Facility SWPPP Inspections

Section 4.7 (c) & (f)

- » Update inspection form as part of SWPPP
- » Complete inspections quarterly
- » Keep copy with SWPPP → suggest each department sends to MS4 Coordinator also
- » Identify deficiencies and corrective actions
- » Completed by site personnel or site contact
 - » One quarter completed by MS4 Coordinator or designated individual as the **Annual Facility Assessment**

- Annual Facility Assessment reviews same items as SWPPP Inspection plus the map
- Use updated SWPPP Inspection form as documentation of assessment

Facility SWPPP Inspections

Section 4.7 (c) & (f)

No.	INSPECTON ITEM	YES	NO	N/A
1.	Are the interior drains marked or provided with a label indicating where they discharge?			
	a. Are floor trenches inspected and maintained adequately?			
	b. Is vehicle maintenance being conducted only indoors?			
	c. Is vehicle washing being conducted only indoors?			
2.	Are the building floors and indoor areas clean and organized?			
	2. Are chemical storage areas clean and organized?			
	a. Have empty drums/containers or chemicals that are no longer being used been removed, recycled, or disposed of properly?			
	b. Are chemical drums/containers labeled or marked with their contents (or marked Empty) and are the labels visible?			
	c. Are chemical containers greater than 55-gallons provided with adequate secondary containment?			
	d. Are vehicle-wash chemical containers in good condition with no signs of leaks?			
	e. Are the flammable cabinets organized and free of spills and leaks?			
	f. Is the Salt-Away drum in good condition with no signs of leaks?			
3.	g. Are all other chemical drums in good condition with no signs of leaks?			
	h. Is absorbent available near each chemical area, used, and then cleaned up and disposed of properly?			
	3. Are the surrounding grounds and paved areas free of leaks and spills?			
	a. Are the trash dumpsters covered or the lids closed?			
	b. Is the portable generator in good condition with no signs of leaks?			
	c. Have empty drums/containers stored outdoors that are no longer being used been removed, recycled, or disposed of properly?			
	d. Are exterior drains free of signs of pollution?			
	e. Are paved and gravel areas free of stains, spills, or leaks?			

Facility SWPPP Inspections

Section 4.7 (c) & (f)

Must include area to identify issues, the corrective action & that it was completed

ALL PROBLEMS OR CONCERNS NEED TO BE ADDRESSED WITH A CORRECTIVE ACTION. Identify the problem and/or provide additional explanation as needed. Once corrected, mark your name and date on the form.

Identified Problem/Concern	Corrective Action Taken	Completed By & Date

MS4 Infrastructure O&M Plan

Section 4.7 (g)

Complete by
developing
Standard
Operating
Procedures

Components of an O&M Plan: (not in order per MS4GP)

- 1) Program to maintain conveyances & structures
- 2) Procedures for properly disposing of waste or materials from system and operational areas
- 3) Documentation of maintenance activities, schedules, and long-term inspection procedures (frequency, forms, etc.)
- 4) Procedures to reduce discharge of pollutants from streets and parking lots
- 5) Surface visual inspections of catch basins, outfalls, and conveyance systems

MS4 Infrastructure O&M Plan

Section 4.7 (g)(4)

- 1) Program to maintain conveyances and structures:
 - » Litter pick up
 - » Structure cleaning
 - » Roadside shoulder and ditch stabilization
 - » Planting and proper care of roadside vegetation
 - » Remediation of outfall scouring conditions
 - » Street and parking lot cleaning
 - » Utilize surface visual inspections

- » Develop SOPs for these maintenance activities

O&M Plan SOPs

Section 4.7 (g)(1) & (2)

- 2) Procedures for proper waste disposal
 - » How is it collected?
 - » Where is my waste going?
 - » Do I have records of it – manifest, invoice, bill of lading?
- 3) Maintenance activities/schedules/inspections
 - » How do I document completed maintenance – work orders, tracking logs?
 - » What time of year does it happen?
 - » How often does it occur?
 - » How do I document inspections?
 - » City/Town maps of routes?

Examples of Inspection Schedules

**DRY WEATHER SCREENING SCHEDULE
MCM 3 - ILLICIT DISCHARGE DETECTION AND ELIMINATION**

OUTFALL			ROUTINE SCHEDULE																			
ID	Description	Receiving Water	2022				2023				2024				2025				2026			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
268	S. OF BLINN ST.BRIDGE E.SIDE	Blinn Ditch																				
269	S.OF BLINN ST.BRIDGE W. SIDE	Blinn Ditch																				
270	S. OF BARNER ST.BRIDGE W. SIDE	Blinn Ditch																				
271	UNDER BARNER ST. BRIDGE	Blinn Ditch																				
272	S. OF BARNER ST. BRIDGE E. SIDE	Blinn Ditch																				
273	NE COR OF GREEN ST BRIDGE	Blinn Ditch																				
274	UNDER GREEN ST. BRIDGE NW. COR.	Blinn Ditch																				
275	UNDER GREEN ST. BRIDGE SW COR.	Blinn Ditch																				
276	UNDER GREEN ST BRIDGE SE COR	Blinn Ditch																				
277	BEHIND 1710 W.GREEN ST.	Blinn Ditch																				
278	WEST OF SUNCREST RETENT. POND	Blinn Ditch																				
279	NW OF SUNCREST RET. POND.	Blinn Ditch																				
280	NW OF SUNCREST RET. POND.	Blinn Ditch																				
281	NW OF SUNCREST RET. POND.	Blinn Ditch																				
282	WEST OF SUNCREST RETENT. POND	Blinn Ditch																				
283	W. OF NORTH RET.AREA SUNCREST	Blinn Ditch																				
284	SOUTH OF # 20068	Blinn Ditch																				
285	CONCRETE SPILLWAY SUNCREST	Blinn Ditch																				
286	WEST OF # 20070	Blinn Ditch																				
287	NORTH OF # 20071	Blinn Ditch																				

Examples of Inspection Schedules

**STORMWATER INFRASTRUCTURE OPERATIONS AND MAINTENANCE ROUTINE SCHEDULE
MCM6 - MUNICIPAL OPERATIONS POLLUTION PREVENTION AND GOOD HOUSEKEEPING**

ACTIVITY	ROUTINE SCHEDULE											
	January	February	March	April	May	June	July	August	September	October	November	December
Routine Structure Cleaning												
Routine Street Sweeping												
Event Street Sweeping												
Routine Litter Collection												
Event Litter Collection												
Leaf Collection												
Outfall Inspections												
Routine City Trash Collection												
City Recycling Collection												
City Clean-Up Events												
Heavy Trash Collection												
Shoulder & Ditch Stabilization												
Vegetation Care												
Outfall Scouring Repairs												
Conveyance System Repairs												
Disposal of Animal Waste												
City Plowing/Salt Application												

Street & Parking Lot Sweeping

Section 4.7 (g)(5)



- 4) Procedures to reduce discharge of pollutants from streets and parking lots
 - » Prioritize streets, roads and parking lots with heavy traffic
 - » Map streets, roads, and lots – look at GIS
 - » Street sweeping schedule – months of May through September; 1/week by quadrant
 - » Any special event sweeping – before & after?
 - » How is the completion tracked?
 - » How is the amount collected recorded?
 - » How is it dewatered (if needed)?
 - » How is it disposed of?

SOP Example

STREET SWEEPING STANDARD OPERATING PROCEDURES

- 1) **Frequency**
 - a) Street sweeping is typically provided from April to November.
 - b) Streets are to be swept at least one time per year.
 - c) Residents can submit an online request for street sweeping in a specified area.
- 2) **Responsible Entity – Utility Department**
- 3) **Preparation**
 - a) Cleaning routes are designated by quadrants.
 - b) Street maps are used to ensure all streets are swept at the specified interval.
 - c) Increase sweeping frequency just before the rainy season, unless sweeping occurs continuously throughout the year.
 - d) Perform preventative maintenance and services on sweepers to increase and maintain their efficiency.
- 4) **Process**
 - a) Street sweeping is most effective on streets with curb and gutter.
 - b) Drive street sweeper equipment according to manufacturer's settings and standards. This includes adjusting sweeper speed, brush alignment, rotation rate and sweeping pattern.
 - c) Sweep in a pattern that prevents materials from being pushed into storm drains/catch basin inlets.
 - d) If unusual sweeper debris is noticed, bring to the attention of supervisor for testing.
 - e) Make note of streets that have consistently higher content of debris and/or sediments and inform supervisor.
- 5) **Clean-up and Disposal**
 - a) Street sweepers are emptied into drying beds at the Abandoned WWTP for dewatering then disposal at a landfill.
 - b) Street sweepers are to be cleaned out in a manner that does not allow debris to enter the storm drain system.
 - c) Water from cleaning the Street Sweeper is collected at the Utilities Building and discharged to the sanitary sewer system.
- 6) **Documentation**
 - a) The amount of material collected during sweeping is documented on a Work Order.
 - b) Annually report the estimated amount of material by weight collected from street sweeping.

Surface Visual Inspections

Section 4.7 (g)(4)

Think of it like this...

1. Implement my base O&M Plan
2. Use Surface Visual Inspections to identify problems areas or to identify areas needing more frequent cleaning

- 5) Surface visual inspections of all catch basins, outfalls, and conveyance system
 - » Intended to capture observations of municipal employees when doing daily tasks
 - » Example: Crew collecting limbs and sees an inlet flooded, puddling, or full of trash
 - » Call in issue to dispatch/departament
 - » Inlet investigated and cleaned out
 - » Track completion in a log or maintenance program
 - » Record corrective action (cleaned out, jetted line, etc.)

Surface Visual Inspections

Section 4.7 (g)(4)

For Counties or MS4s with large systems – Is 5 years feasible?

WORDING: Conveyance is any structural process for transferring SW between 2 points = piping, ditches, swales, curbs, gutters, catch basins, channels, storm drains and roadways.

- » Prioritize in 1st year = TRAIN staff to identify & report maintenance, erosion, and pollution issues
- » Visual inspections for entire system completed by end of permit term or 15% annually – HOW?
 - » Do you sweep all streets every 5 years?
 - » Do you clean all structures every 5 years?
 - » Do you inspect all outfalls every 5 years?
 - » YES – then done!
- » Document through your schedules and frequencies described in the SOPs or through maintenance system or logs

Corrective Actions

Section 4.7 (g)(4)

- » Part of the program to maintain conveyances and structures
- » Use staff observations (surface visual inspections) to determine if more maintenance is required than currently being done
- » Corrective Actions = Find it, Fix it, Record it
- » Example: Erosion identified at outfall during routine inspection – document on form
 - » How do you plan to fix it?
 - » When do you plan to fix it?
 - » Now – Great!
 - » Later – Increase visual monitoring to 3/year until corrected (look at it every 4 months)

General Requirements

Section 4.7 (h)

- » MCM Certification
 - » New MS4s – certify within 365 days of NOI submittal date
 - » Existing MS4s – no certification

General Requirements

Section 4.7 (i)

- » Annual Review of Municipal Operations
 - » Review SWPPPs annually
 - » Annual Facility Assessment
 - » Review and assess the good housekeeping program annually and update as needed

General Requirements

Section 4.7 (j)

- » Third-Party Entities
 - » Ensure contractors hired by the MS4 to perform maintenance or other operational activities to the SW system comply with good housekeeping practices and facility-specific SW management policies and procedures
 - » Provide a brief training on housekeeping, MS4's waste disposal practices, vegetation repair, etc.
 - » Could be street sweepers, televising lines, system repairs, riprap repairs, etc.

Annual Staff Training

Section 4.7 (m)

INAFSM has a list of online municipal training options under Training & Resources

- » Training program for employee directly involved in implementing good housekeeping for infrastructure & facilities:
 - » Detecting and eliminating illicit discharges
 - » Surface visual inspections & what to look for
 - » How to report/document identified issues
 - » Operations – sweeping, cleaning, deicing, etc.
 - » Disposal – labeling, handling
 - » Spill response – equipment, contacts, etc.
 - » SOPs
 - » Fueling (if applicable)
 - » Good housekeeping practices

Annual Staff Training

Section 4.7 (m)

No specific number of hours identified for employees

- » Schedule/Frequency:
 - » New employees within first 2 months
 - » Seasonal employees within 30 days
 - » Existing employees at least annually
- » Documentation
 - » Use attendance sheets, work orders, conference attendance, certifications, etc.
 - » Record name, position, date and description of training

General Requirements

Section 4.7 (n)

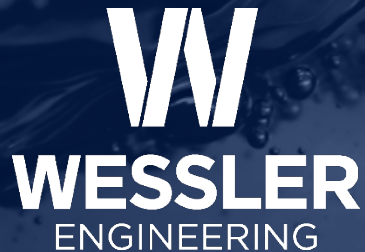
Disposal methods
documented in SOP

- » Annual Report to include:
 - » Status of measurable goals, compliance schedules & timetables
 - » If objectives are not being met – explain why and the changes to be implemented
 - » Number and location of outfalls & conveyances repaired
 - » Est. amount of material collected from:
 - » System cleaning
 - » Street sweeping (if applicable)
 - » Number and location of deicing salt and sand storage areas
 - » Methods used to minimize stormwater exposure from salt and sand

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