



*More than a Project™*

# Are Your Facilities Compliant with MS4?

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# Why are you interested in MS4 regulations?

- Municipal staff
- MS4 Operator or Coordinator
- Consultant
- Contractor
- I may get audited by IDEM
- I love clean streams and waterways
- Just here to get my continuing education credits



# Minimum Control Measures

MCM 1 and 2 – Public Education and Involvement

MCM 3 – Illicit Discharge Detection and Elimination

MCM 4 – Construction Runoff Controls

MCM 5 – Post-Construction Runoff Controls

**MCM 6 – Municipal Operations Pollution Prevention and Good Housekeeping**

# Salt Storage And Deicing Activities

- » Covered salt storage
- » Push salt away from the entrance
- » Manage tracking on vehicle tires
- » Prevent spills
- » Clean up spills
- » Apply the amount necessary to achieve deicing
- » Do not over apply
- » Calibrate spreaders



# Snow Disposal Area

- » When snow must be relocated
- » Does not include snow plowing to the side of streets
- » BMPs
  - » Select a location where snow melt will infiltrate
  - » Minimal potential for stormwater runoff
  - » No direct runoff to a storm conveyance or waterway
  - » Clean up debris when snow melts
  - » Not within a wellhead protection area



# Illicit Discharges

- » Illicit discharges are discharges to the storm sewer system or a spill on the ground that could mix with stormwater
- » MS4 ordinance prohibits Illicit discharges
- » Dry weather inspection of drains and outfalls



# Check your floor drains

- » Know where they flow (storm or sanitary)?
- » A storm connection = Illicit discharge
- » Plug or reroute storm connections to a sanitary sewer
- » Clean up spills



# Wash Water

- » Outdoor washing – no detergents or soap
- » Vehicle washing and equipment
  - » Indoors with floor drains to sanitary
  - » Commercial car wash
- » Equipment might include:
  - » Street sweeper
  - » Salt spreaders
  - » Snow plows
  - » Excavators





# SPCC Assessment

- » Spill Prevention, Control and Countermeasures
- » EPA rule 40 CFR 112 – Code of Federal Regulations
- » What is “oil”
  - » Petroleum, animal/vegetable, used, mineral, synthetic
- » Threshold – 1,320 gallons of oil in 55-gallons or more



# Oil Containers 55-gallons or larger

- » 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

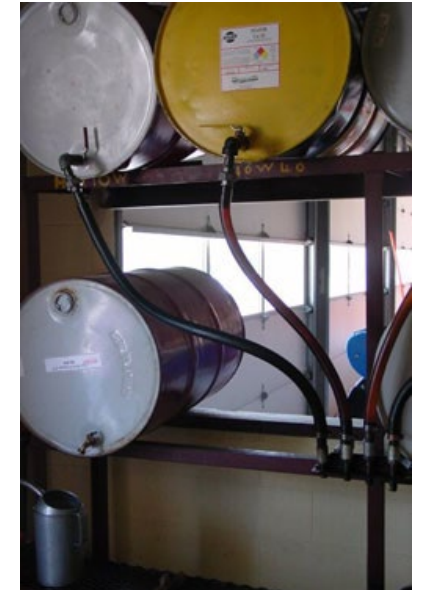
# Example Calculation

- » 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 = 1325 gallons

1,320-gallon THRESHOLD

SPCC Plan REQUIRED



# SPCC Plan

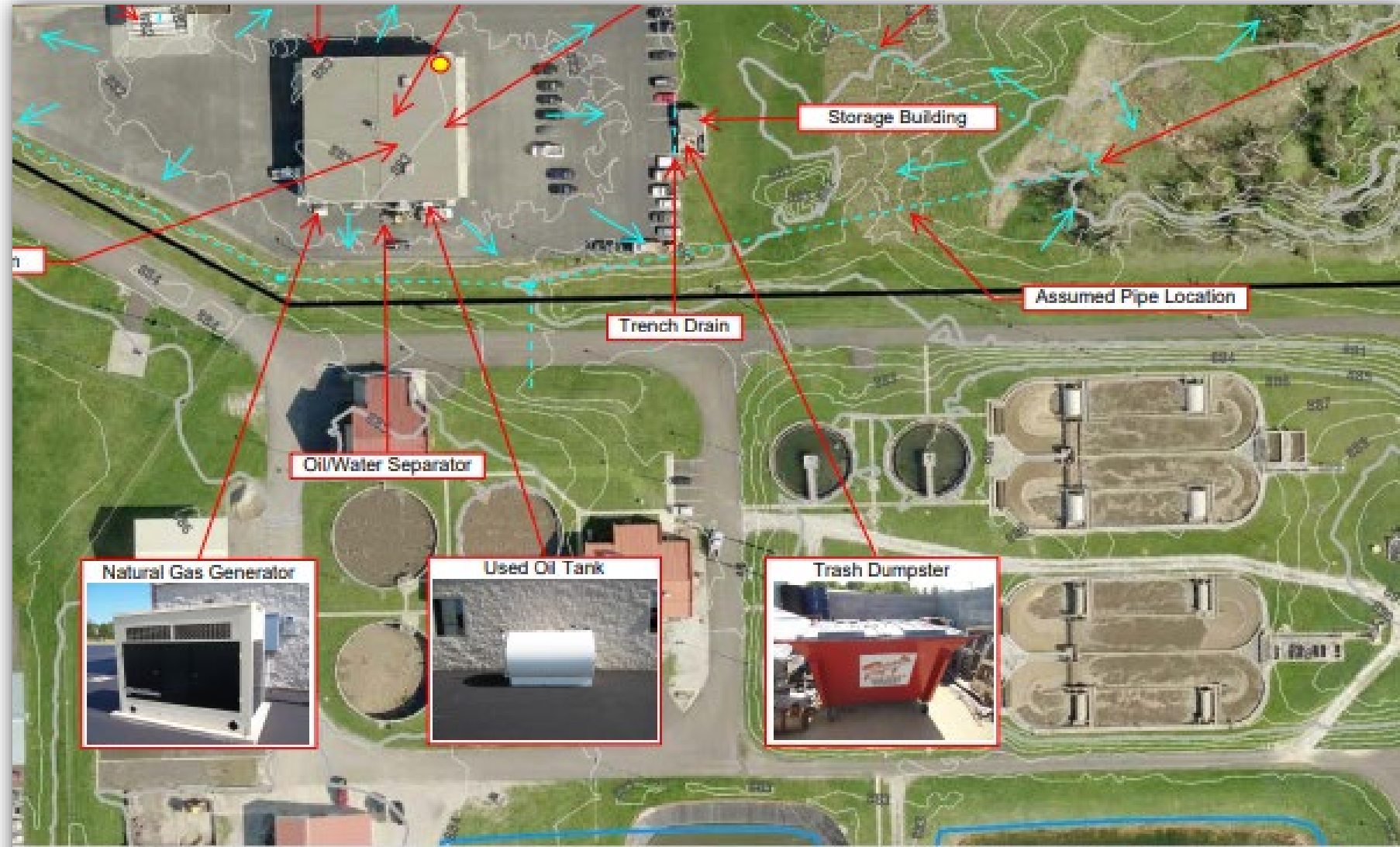
- » Spill Prevention, Control and Countermeasures
- » Facility map showing location of all regulated containers
- » Secondary Containment for all containers
  - » 100% of the container
  - » Largest container if more than one in an area
  - » Account for rain accumulation
- » Regular inspections to check for leaks, spills, containment area accumulation, deteriorating tanks or piping, etc.
- » Site lighting and security
- » Include storage areas and transfer areas
- » Certified by Professional Engineer

# Facility SWPPP

- » Develop a Stormwater Pollution Prevention Plan (SWPPP) for your facilities
  - » Facility map showing drainage patterns, storage areas, building locations, etc.
  - » Map of storm system and outfalls
  - » Identify activities and storage of materials/chemicals
  - » Best management practices
  - » Spill response
  - » Proper disposal of waste

# SWPPP Site Maps

- 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



**STORMWATER POLLUTION PREVENTION PLAN**

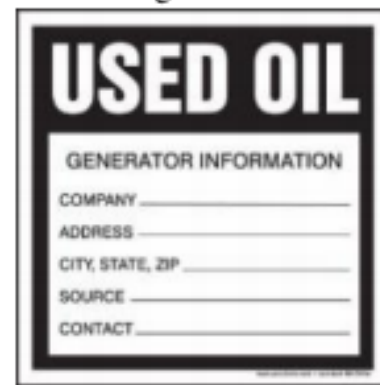
# Facility Inspection Form (Quarterly)

A trained individual shall complete this evaluation a minimum of once per year.

Inspector(s): \_\_\_\_\_ Inspection Date: \_\_\_\_\_

No.	INSPECTION ITEM	YES	NO	N/A
1.	Have empty drums/containers or chemicals that are no longer being used been removed, recycled or disposed of properly?			
a.	Are recycled drums/containers labeled as "Empty" or according to their reuse?			
2.	Are chemical storage shelves organized and free from stains and spills?			
a.	Are chemical drums/containers labeled according to their contents?			
b.	Are chemical drums/containers in good condition, closed and not stored outdoors or adjacent to floor drains?			

4. The department collects used oil from maintenance activities and transfers it to a container in the garage bay. The container is provided with secondary containment. It is required that the container be labeled as "Used Oil" to prevent mixing of incompatible fluids. See image below (on the left) of the used oil container being used at the facility. See other images as examples for labeling.



# Annual Staff Training

1. Detect and eliminate illicit discharges
  - » Teach you staff to identify illicit discharge and report them
2. Visual inspections of the storm system
  - » Teach your staff to identify maintenance issues, erosion or pollution issues as they are doing their daily duties
3. Implement the facility SWPPP
  - » Teach your staff about spill clean up, BMPs, SOPs and good housekeeping practice



# MS4-owned projects

- » 1 acre of total land disturbance
- » Rule 5 (327 IAC 15-5) permit change to Construction Stormwater General Permit (CSGP)
- » Effective December 18, 2021
  
- » Surface milling is not land disturbance
- » Complete road reconstruction
- » Work along roadside shoulders and ditches
- » All projects that disturb soil
  - » New municipal buildings
  - » Parks projects
  - » Utility projects

# MS4-owned projects

- » MS4-owned projects must comply with the CSGP
  - » Trained individual must be involved
  - » Develop a SWPPP
  - » Detention and water quality treatment required
  - » Submit plans to SWCD (Soil and Water Conservation District)
  - » Submit NOI to IDEM
  - » Implement plan during construction
  - » Weekly self-inspections

# Annual Reporting and Documentation

- » Measurable goals tracking
- » Number and location of repaired outfalls
- » Amount of material collected from system cleaning
  - » Document disposal method
- » Amount of material collected from street sweeping
  - » Document disposal method
- » Number and location of deicing salt and sand storage areas.
- » Document the methods used to minimize stormwater exposure from salt and sand.

# Annual Reporting and Documentation

- » Document training
  - » Employee name and position
  - » Date of training
  - » Description of training
- » Document quarterly facility SWPPP inspections

# Highlights of the Indiana Spill Rule 326 IAC 2-6.1

- » Applies to hazardous substances (HS), extremely hazardous substances (EHS), petroleum and objectionable substances that are of a quantity, type, duration, and in a location as to damage the waters of the state.
- » Some exclusions apply, notably:
  - » Spills < 1 pound or < 1 pint
  - » Oil sheens from watercraft
  - » Lawful chemical applications
  - » Spill response activities by local agencies

# Highlights of the Indiana Spill Rule 326 IAC 2-6.1

- » Identifies stricter requirements for reporting spills in sensitive areas:
  - » Karst regions
  - » Sole source aquifers
  - » Wellhead Protection Areas (WHP Area)
  - » Private drinking water wells
  - » Outstanding state resource water
  - » Supporting a salmonid fishery
  - » Water that is a fish hatchery, wildlife area, nature preserve, recreational area owned by DNR or US

# Highlights of the Indiana Spill Rule 326 IAC 2-6.1

- » Spills to surface water:
  - » HS or EHS when >100 pounds or the reportable quantity (Refer to EPA's List of Lists for reportable quantities for HS and EHS)
  - » Petroleum of a quantity that causes a sheen
  - » Objectionable substances
- » Spills to soil within facility boundaries:
  - » HS or EHS > reportable quantity
  - » Petroleum > 1,000 gallons
  - » Objectionable substances
- » Spills to soil outside facility boundaries:
  - » HS or EHS > 100 pounds or > reportable quantity
  - » Petroleum > 55 gallons
  - » Objectionable substances

# Highlights of the Indiana Spill Rule 326 IAC 2-6.1

- » Person that caused a spill must:
  - » Contain the spill
  - » Spill response measures
  - » ASAP or within 2 hours – call IDEM Emergency Response
  - » Notify downstream users if surface water spill
  - » Notify property owners if spill is outside property boundaries
  - » Written report to IDEM if requested



## Highlights of Secondary Containment of Tanks with Hazardous Materials 326 IAC 2-10

- » Requirements for secondary containment structures for hazardous materials (HM) and spill response
- » Separate from SPCC requirements for petroleum
- » Notable exclusions:
  - » Agricultural chemicals, fire prevention, solids or gases
  - » Underground storage tanks
  - » Tanks < 660-gallons and not in a WHP Area
  - » Tanks < 275-gallons in a WHP Area and approved by utility
  - » Empty containers
  - » Process tanks

## Highlights of Secondary Containment of Tanks with Hazardous Materials 326 IAC 2-10

- » Storage inside a building:
  - » HM tanks or storage areas must have a floor compatible with materials and system to prevent a spill from entering waters of the state (e.g. walls and no doors)
- » Storage outside a building:
  - » HM tanks or storage areas must have containment – prevent a release for 72-hours, hold 110% of volume of largest tank, or largest tank volume and freeboard for 25-year/24-hour storm event
  - » Double-walled tanks are an alternative
  - » Drum storage must hold 120-gallons
  - » Remove accumulated liquids within 72-hours

## Highlights of Secondary Containment of Tanks with Hazardous Materials 326 IAC 2-10



- » HM Transfer areas:
  - » Designed to prevent a spill from entering waters of the state
  - » Contain the volume that could be pumped in 1-minute of transfer operations or divert to a tank or sump that can hold the volume
  - » Remove accumulated liquid within 72-hours (rain, ice, or HM residuals)
- » Spill Response Plan
  - » Must develop plan if have area subject to rule
  - » Can be part of another emergency plan

# Written O&M Plan for MS4 SW Infrastructure

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

# Written O&M Plan for MS4 SW Infrastructure

- » Maintenance Activities in O&M Plan:
  - » 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

# Written O&M Plan for MS4 SW Infrastructure

- » HOW DO I DO THIS?!
- » EASY – Standard Operating Procedures
- » Create/update SOPs for the following:
  - » Procedures for waste disposal:
    - » How is it collected?
    - » Where is my waste going? Is it legal?
    - » Do I have records of it – manifest, invoice, bill of lading?
  - » Maintenance activities/schedules/inspections
    - » How do I document completed maintenance?
    - » What time of year does it happen?
    - » How often does it occur?
    - » How do I document inspections?
    - » City/Town maps of routes?

# Written O&M Plan for MS4 SW Infrastructure

- » Review/update SOPs for the following:
  - » Program to maintain conveyances and structures
    - » Do I do any of these?
      - » Litter pick up
      - » Structure cleaning
      - » Roadside stabilization
      - » Roadside vegetation repair/planting
      - » Outfall scouring remediation
      - » Street and parking lot cleaning
    - » Do I have an SOP for it?
- » YES – that’s your program...well, the start of it anyway.

# Visual Surface Inspections

- » Inspections of 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/departement
    - » Inlet investigated and cleaned out
    - » Track completion in a log or maintenance program
    - » Record corrective action (cleaned out, jetted line, etc.)



# Visual Surface Inspections

- » Prioritize in 1<sup>st</sup> year of permit = TRAIN staff to identify maintenance, erosion, and pollution issues and report it
- » 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

- » 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 1 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)

# Street and Parking Lot Sweeping



- » Develop SOP
  - » Prioritize streets, roads and parking lots with heavy traffic
  - » Map streets, roads, and lots = likely already in GIS
  - » Street sweeping schedule – months of May through September; 1/week by quadrant
  - » Any special event sweeping – before & after?
  - » How is it disposed of?
  - » How is it dewatered (if needed)?
  - » How is the completion tracked?
  - » How is the amount collected recorded?

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Questions?



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