

**“Assessing your MS4 Pollution Prevention &  
Good Housekeeping Program”  
Or  
“Am I ready for an Audit.....TODAY?!””**

**KSA  
Annual Conference 2017**



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# Session Agenda

- **The Starting Blocks**
- **Pulling it All Together**
- **MS4-owned Facility Inspections**
- **Audit Prep Resources**
- **Hands-On Exercise Example: “You’re the Inspector – Tell us what you see!”**

## The Starting Blocks -- Getting Ready for the Good Housekeeping & Pollution Prevention Audit

### ***“What will the audit cover??!”***

PP&GH covers TWO areas:

- 1. Overall separate storm system (pipes, ditches, inlets, etc.) and***
- 2. Facilities & Operational Areas (that have potential stormwater contamination issues – Maintenance, Fueling, Chemical Storage, etc.)***



## The Starting Blocks -- Getting Ready for the Good Housekeeping & Pollution Prevention Audit

***“Where do I start??!”***

**Focus on what you may be audited on:**

- ***Your NPDES MS4 SWQMP Commitments including Measurable Goals***
- ***Your last Annual Report***
- ***Your last agency MS4 Audit Reports***
- ***Your CURRENT Facility SWPPPs***



# Sample SWQMP PP&GH BMP Table

Your "SWQMP" Defines  
your MS4's Commitments  
and Defines the  
Parameters of your Audit

Table 8-2  
Pollution Prevention and Good Housekeeping BMPs

Best Management Practice (BMP)	Measurable Goals, Tracking, and Programmatic Indicators	Timeline	Priority Areas	Responsible Party
MS4 Conveyance System Maintenance	<ul style="list-style-type: none"> <li>Begin inspection and maintenance program, in 2012.</li> <li>Prioritize maintenance needs based on inspections and make conveyance systems improvements as funding allows.</li> <li>Track using Programmatic Indicators #26, #27, #28, #29, and #32.</li> </ul>	Begin in 2011, then on-going.	Unstable, unvegetated, scoured, or eroded roadside shoulders and/or ditches.	DPW Engineering
Street Sweeping Program	<ul style="list-style-type: none"> <li>Sweep all streets at least twice (2).</li> <li>Track using Programmatic Indicator #33.</li> </ul>	Annually	Remove salt, sand, and debris from winter activities.	DPW
Salt and Sand Management	<ul style="list-style-type: none"> <li>Implement salt and sand management BMPs as part of on-going permit activities and as budgets allow.</li> <li>Track using Programmatic Indicators #30 &amp; #31.</li> </ul>	On-going	Application on City streets and Municipal Facilities.	DPW
Snow Disposal Areas	Identify and use designated snow disposal areas beginning in Winter 2010, then on-going each winter.	On-going	Municipal Facilities	DPW
Spill Prevention and Clean Up	<ul style="list-style-type: none"> <li>This will be part of on-going permit activities.</li> <li>Track using Programmatic Indicator #24.</li> </ul>	On-going	Municipal Facilities	Facility Department Heads
Vehicle Maintenance Areas	<ul style="list-style-type: none"> <li>Implement vehicle maintenance area BMPs.</li> <li>Continue activities as part of regular good housekeeping practices.</li> </ul>	On-going	Maintenance Facilities, especially around storm inlets and/or conveyances.	Facility Department Heads
Wash Water Management	Eliminate wash waters from entering separate storm system with a wash water management program.	On-going	Municipal Facilities	Facility Department Heads
Fertilizer and Pesticide Management	<ul style="list-style-type: none"> <li>Contractors and/or staff are certified by OISC.</li> <li>Track using Programmatic Indicator #25.</li> </ul>	On-going	Sensitive areas	Parks
Waste Disposal	<ul style="list-style-type: none"> <li>Document disposal of all wastes</li> <li>Determine if waste can be recycled, reused, or disposed of in a landfill.</li> <li>Contract with private firm to perform waste disposal as needed.</li> </ul>	On-going	Waste generated from MS4 Conveyance System, MS4 Operational Areas, and DPW Facilities.	DPW Outsourced
Flood Management Projects	<ul style="list-style-type: none"> <li>Document that all new and existing flood management projects are assessed for incorporation of additional water quality devices or practices.</li> <li>Review of existing projects</li> </ul>	On-going	Proposed locations for new flood control projects.	Engineering
MCM 6 Staff Training	<ul style="list-style-type: none"> <li>Conduct training (1). Train on various good housekeeping topics</li> <li>Track using Programmatic Indicators #2 and #3.</li> </ul>	Annually	Focus on municipal facility and other City-owned properties and stormwater infrastructure.	NIRPC Consultant

## Pulling It All Together

***“This audit process is a review of your permit compliance and the documentation that you have to support your BMPs.” --IDEM Audit Prep Worksheet***

**Organize your documents and your colleagues:**

- ***Audit Prep Matrix***
- ***Binder Index***
- ***MS4/MCM 6 Responsibility Chart***
- ***Engaging Your Colleagues***
- ***Preparing Staff for the Audit***
- ***On the ‘Day of the Audit’***



What do I need? Is it in there somewhere?



# Audit Prep Matrix and Data Checklist

Focus on what is **REQUIRED** by MS4 Rule, Regulatory, or Permit Language

RULE 13 GOOD HOUSEKEEPING AND POLLUTION PREVENTION AUDIT PREP MATRIX

RULE LANGUAGE	Typical IDEM Audit Items for Good Housekeeping and Pollution Prevention	Local MS4 Written Tracking Document	Has Copy Been Placed in Binder?
327 IAC 15-13-17(b)(1): Written documentation of maintenance activities, maintenance schedules, and long term inspection procedures for BMPs to reduce floatables and other pollutants discharged from the separate storm sewers. Maintenance activities shall include, as appropriate, the following:	Does the MS4 maintain written documentation of maintenance activities, maintenance schedules, and long term inspection procedures for BMPs to reduce floatables and other pollutants discharged from the separate storm sewers. (Litter pick-up, structure cleaning, roadside clean-up, roadside shoulder and ditch stabilization, proper care of roadside vegetation, pavement sweeping.)	{Addressed by items noted below. Typically, written documentation is accomplished via local Standard Operating Procedures (SOPs), Facility Stormwater Pollution Prevention Plans (SWPPPs), Field Inspections, or Self-Inspections.}	N/A
(b)(1)A. Periodic litter pickup as defined in the Stormwater Quality Management Plan (SWQMP) Part C	Does the MS4 keep written documentation of: (Catch Basin cleaning, pipe & ditch cleaning, etc) - maintenance activities (tracking system or database?), - maintenance schedules, and - long term inspection procedures <u>for periodic litter pick-up</u> ? - Field Inspection Forms - completed & blank?	Yes, written document is:	"Yes" or "No":
(b)(1)B. Periodic BMP structure cleaning (as defined in Part C)	Does the MS4 keep written documentation of: - maintenance activities, - maintenance schedules, and - long term inspection procedures <u>for periodic structure cleaning</u> ?  Has the MS4 inventoried areas with high pollutant loadings inventoried and prioritized for cleaning?  If not, how is cleaning schedule determined?	Yes, written document is:  "Yes" or "No":  Schedule determined by:	"Yes" or "No":  "Yes" or "N/A":  "Yes" or "No":
(b)(1)C. Periodic pavement sweeping (as defined in Part C)	Does the MS4 keep written documentation of: - maintenance activities, - maintenance schedules, and - long term inspection procedures <u>for periodic pavement sweeping</u> ?	Yes, written document is:	"Yes" or "No":
(b)(1)D. Roadside ditch & shoulder stabilization	Does the MS4 keep written documentation of: - maintenance activities, - maintenance schedules, and - long term inspection procedures <u>for roadside ditch &amp; shoulder stabilization</u> ?	Yes, written document is:	"Yes" or "No":
(b)(1)E. Planting & care of roadside vegetation	Does the MS4 keep written documentation of:	Yes, written document is:	"Yes" or "No":



# Binder Index; Organizing Your Data

## Organize Your GH & PP Documents in Accordance with MS4 Rule, Regulatory, or Permit Language

### MCM 6 Document Binder Index

INDIANA ADMINISTRATIVE CODE SECTION 327 IAC 15-13-17 Storm water quality management plan municipal operations pollution prevention and good housekeeping MCM	TAB NO.
<p><b>15-13-17(b)(1)</b> Written documentation of maintenance activities, maintenance schedules, and long term inspection procedures for BMPs to reduce floatables and other pollutants discharged from the separate storm sewers. Maintenance activities shall include, as appropriate, the following:</p> <ul style="list-style-type: none"> <li>(A) Periodic litter pick up as defined in the MS4 area SWQMP.</li> <li>(B) Periodic BMP structure cleaning as defined in the MS4 area SWQMP.</li> <li>(C) Periodic pavement sweeping as defined in the MS4 area SWQMP.</li> <li>(D) Roadside shoulder and ditch stabilization.</li> <li>(E) Planting and proper care of roadside vegetation.</li> <li>(F) Remediation of outfall scouring conditions.</li> </ul>	<p><b>Tab 1</b> Maintenance SOPs</p>
<p><b>15-13-17(b)(2)</b> Controls for reducing or eliminating the discharge of pollutants from operational areas, including roads, parking lots, maintenance and storage yards, and waste transfer stations. Appropriate controls shall include the following:</p> <ul style="list-style-type: none"> <li>(A) Covering or otherwise reducing the potential for polluted storm water run-off from deicing salt or sand storage piles.</li> <li>(B) Establishing designated snow disposal areas that have minimal potential for pollutant run-off impact on MS4 area receiving waters.</li> <li>(C) Providing facilities for containment of any accidental losses of concentrated solutions, acids, alkalies, salts, oils, or other polluting materials.</li> <li>(D) Standard operating procedures for spill prevention and clean-up during fueling operations.</li> <li>(E) BMPs for vehicular maintenance areas.</li> <li>(F) Prohibition of equipment or vehicle wash waters and concrete or asphalt hydrodemolition waste waters into storm water run-off except under the allowance of an appropriate NPDES wastewater permit.</li> <li>(G) Minimization of pesticide and fertilizer use. Pesticides shall be used, applied, handled, stored, mixed, loaded, transported, and disposed of via office of the Indiana state chemist's guidance requirements.</li> <li>(H) Proper disposal of animal waste. If applicable, it is recommended that canine parks be sited at least one hundred fifty (150) feet away from a surface waterbody.</li> </ul>	<p><b>Tab 2</b> Facility SWPPPs</p>
<p><b>15-13-17(b)(3)</b> Written procedures for the proper disposal of waste or materials removed from separate storm sewer systems and operational areas. All materials removed from separate storm sewer systems and operational areas, including dredge spoil, accumulated sediments, floatables, and debris, must be:</p> <ul style="list-style-type: none"> <li>(A) reused or recycled; or</li> <li>(B) disposed of in accordance with applicable solid waste disposal regulations.</li> </ul>	<p><b>Tab 3</b> Waste Material Reuse or Disposal</p>
<p><b>15-13-17(b)(4)</b> Written documentation that new flood management projects are assessed for their impacts on water quality and existing flood management projects are examined for incorporation of additional water quality protection devices or practices.</p>	<p><b>Tab 4</b> Flood Management</p>
<p><b>15-13-17(b)(5)</b> Written documentation that appropriate MS4 entity employees have been properly trained, with periodic refresher sessions, on topics such as proper disposal of hazardous wastes, vegetative waste handling, fertilizer and pesticide application, and the function of implemented BMPs.</p>	<p><b>Tab 5</b> Training</p>
<p><b>15-13-17(c)</b> An MS4 operator shall develop measurable goals for this MCM. To comply with this measure, specific reduction percentages and timetables must be identified. As applicable or, if not applicable, then appropriately justified, goals must address relevant catch basin cleaning and street sweeping procedures, employee training, recycling program implementation, pesticide, fertilizer and sand or salt usage reductions, floatables reduction, and maintenance schedule for BMPs.</p>	<p><b>Tab 6</b> Measurable Goals</p>

Tab 1

Maintenance SOPs

Tab 2

Facility SWPPPs

Tab 3

Waste Material Reuse/Disposal

Tab 4

Flood Management

Tab 5

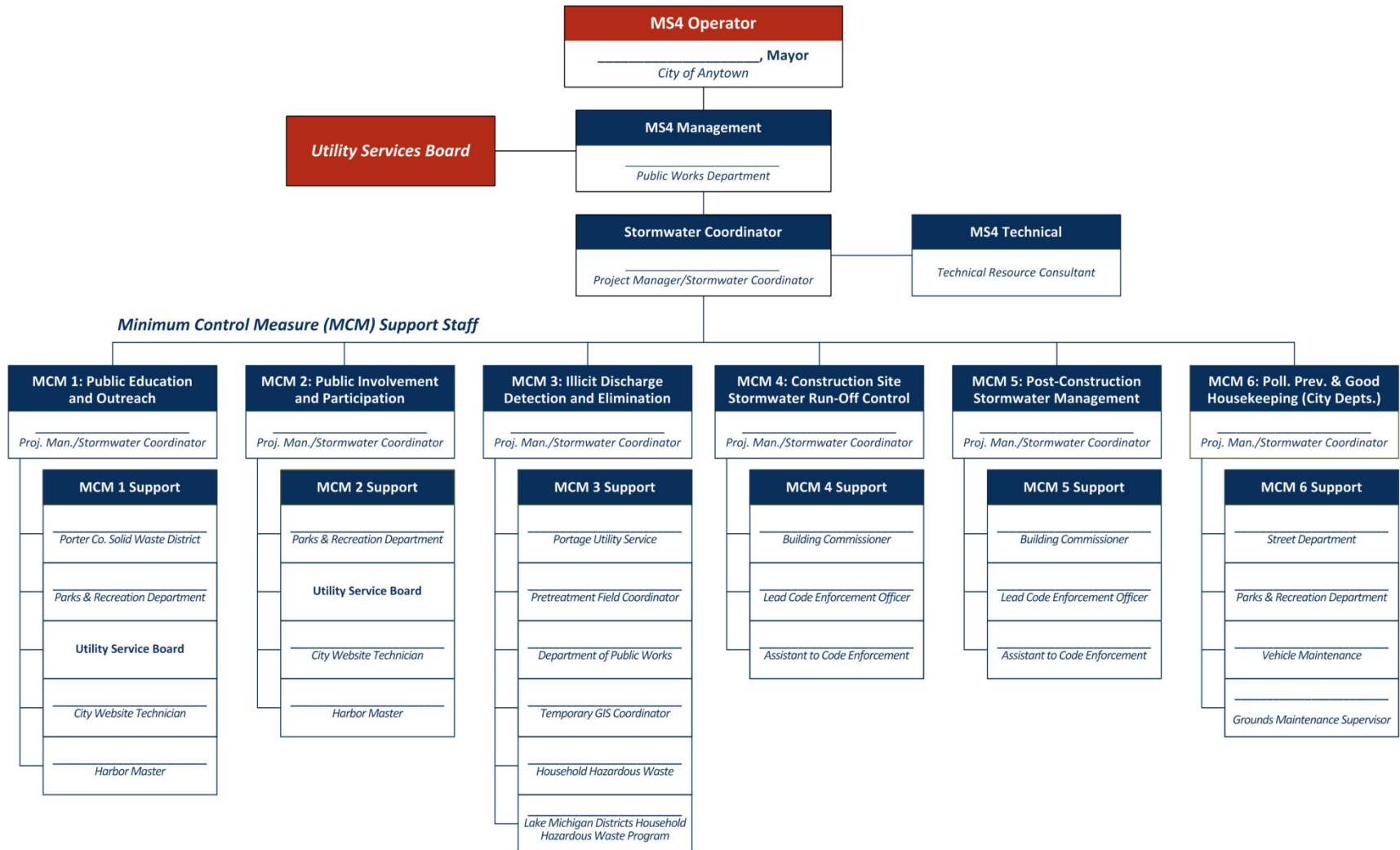
Training

Tab 6

Measurable Goals

# MS4/MCM 6 Responsibility Chart

## Sample MS4 Communication Chart Addressing MCM 1 through MCM 6



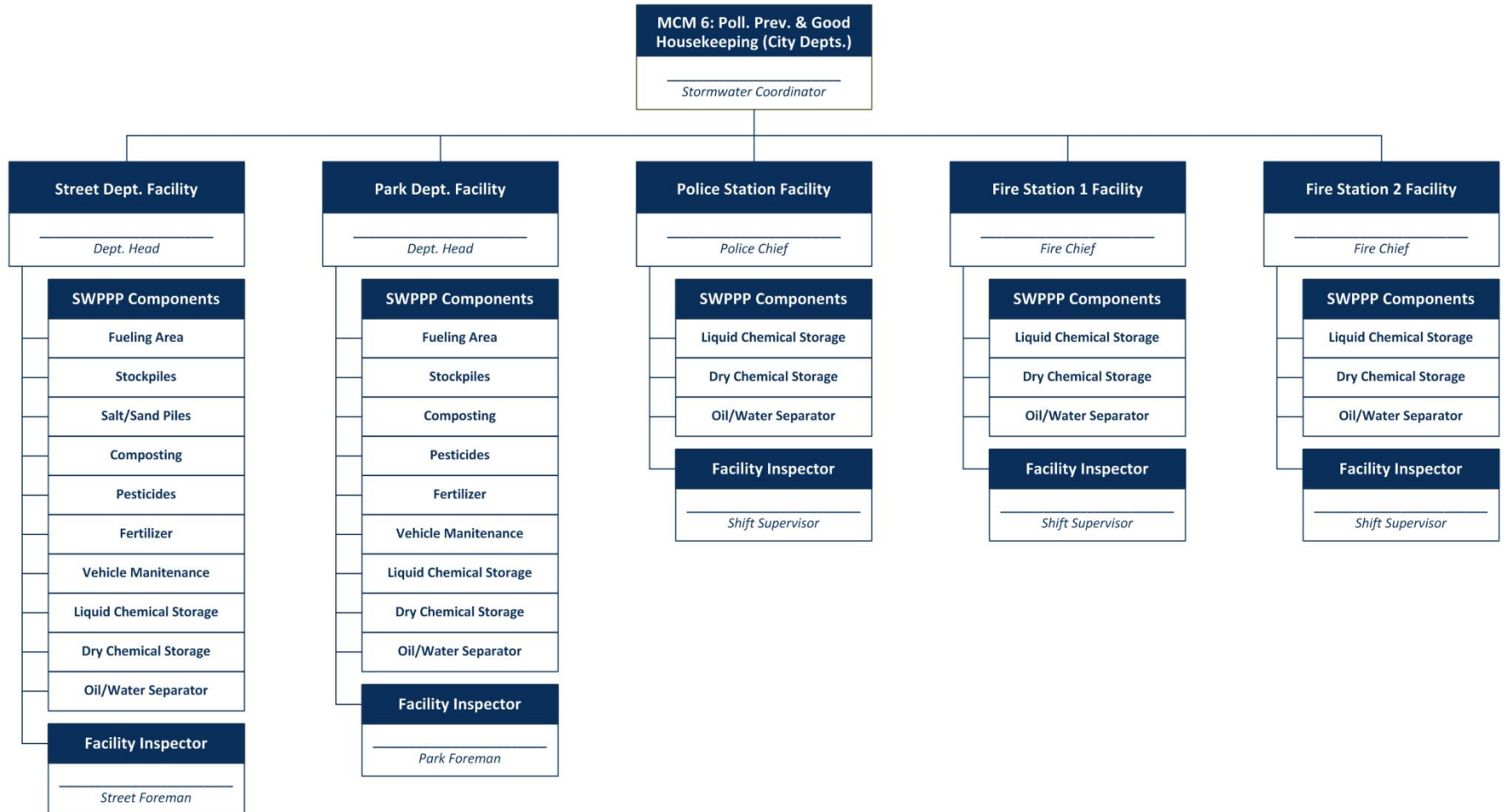
# MS4/MCM 6 Responsibility Chart

## Sample MS4 Communication Chart Addressing MCM 1 through MCM 6



# MS4/MCM 6 Responsibility Chart

## Sample Expanded MCM 6 Responsibility Chart



# Engaging Your Colleagues – Make it Easy

**Your colleagues have several things on their plate:**

- ***Make Stormwater Compliance Easy for them***
  - ***What tools/assistance do they need?***
  - ***You are building a good working relationship***
- ***Help them to “Rehearse” for Audit Day***
- ***Make them feel engaged & important to your overall program***



# Engaging Your Colleagues – Audit Documentation

**Your colleagues MUST provide detailed info:**

- ***Work Orders Example – How do we PROVE that separate storm maintenance is done?***
  - ***What format?***
    - ***Electronic? Can you do screen captures?***
  - ***Do they use work codes?***
  - ***Can you make up some “Case Studies” as examples?***





# Preparing Your Staff for the Audit

## **STAFF TRAINING**

*Who needs “trained”?*

- *Anyone dealing with the implementation of the stormwater program*

*Does everyone need the same training?*

- ***NO!!***

*What if I am behind on training?*

- *Get something scheduled & be prepared to submit a training schedule to your regulatory agency*

# Preparing Your Staff for the Audit

## **STAFF TRAINING – Sample Questions/Topics**

- *What is an illicit discharge?*
- *Who are we supposed to call or what are we supposed to do if we see something “weird”?*
- *What types of BMPs are allowed/not allowed?*
- *How do we clean up spills and leaks?*
- *Why do we have oil/water separators?*
- *Where can residents take household hazardous wastes?*
- *Why do we have to pick up dog poop?*
- *Why should we care about fish and bugs?*



# Preparing Your Staff for the Audit

## **STAFF TRAINING**

*Where can we send our staff for training?*

- *Videos (You Tube, internet, DVDs, etc.)*
- *Commercial Lunch and Learn*
- *Field visits with more experienced staff*
- *State/Regional meetings*
- *Professional Certifications*



## On the “Day of the Audit”

### **KEEP CALM!!!!**

- *Stay Organized!*
- *Listen carefully*
- *Precisely answer questions*
- *Have elected officials stop by*
- *Have other departmental staff attend*
- *Use the audit as a training & funding opportunity*



# Conducting Facility Inspections

- *Four Areas of Inspections*
- *Inspection Photo Summaries*
- *Potential Audit Questions during Facility Inspections*





# Four Focus Areas of Good Housekeeping Facility Inspections

OUTER PERIMETER

FACILITY YARD

BUILDING

PROCEDURES



# Four Focus Areas of Good Housekeeping Facility Inspections

OUTER PERIMETER

FACILITY YARD

BUILDING

PROCEDURES

- Evidence of Possible Contaminated Runoff
- Perimeter is Adequately Maintained
- Designated Release Points Functioning Properly





# Four Focus Areas of Good Housekeeping Facility Inspections

OUTER PERIMETER

**FACILITY YARD**

BUILDING

PROCEDURES

- Stormwater Conveyances Appear in Working Order
- Refueling Areas are Properly Managed
- Dumpsters are Covered & Not Leaking
- Stockpiles are Properly Managed



# Four Focus Areas of Good Housekeeping Facility Inspections

OUTER PERIMETER

FACILITY YARD

**BUILDING**

PROCEDURES

- Building Drain BMPs
- Vehicle Maintenance BMPs
- Liquid Material Storage
- Dry Material Storage



50 m



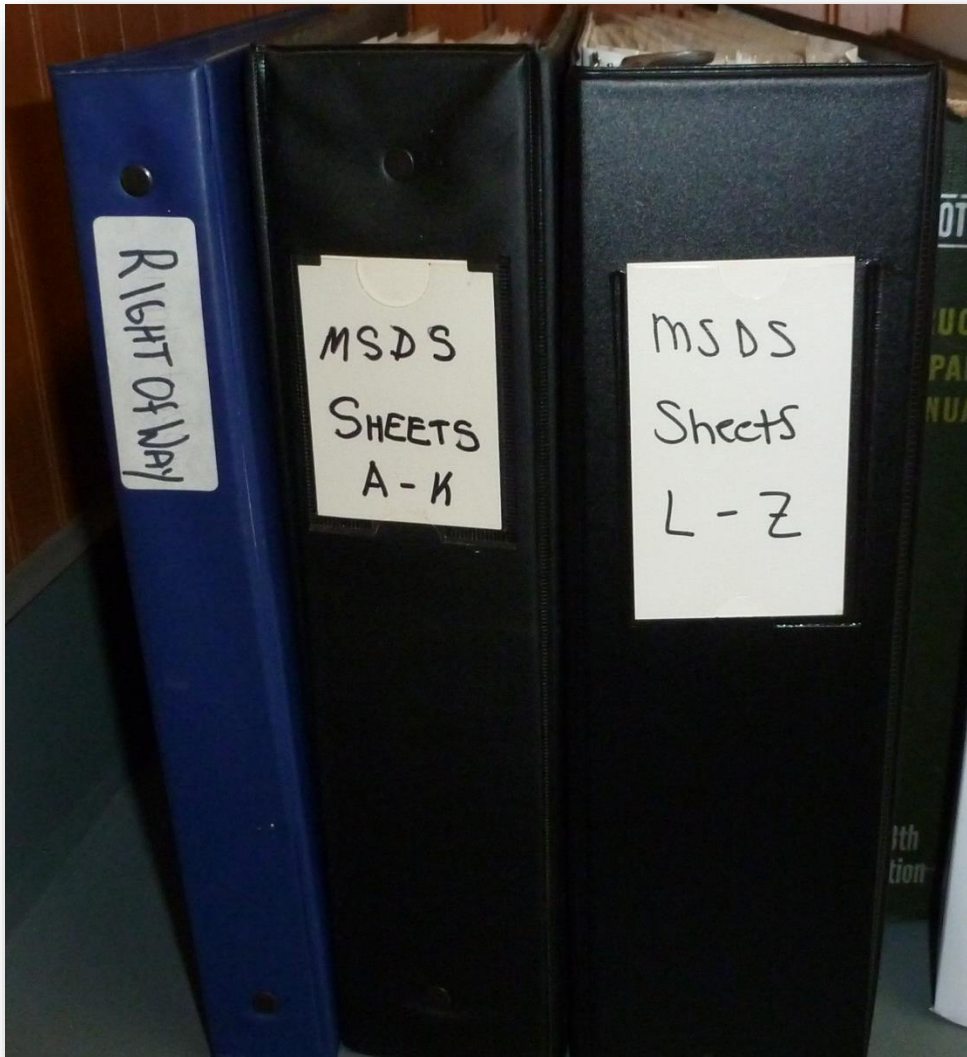
# Four Focus Areas of Good Housekeeping Facility Inspections

OUTER PERIMETER

FACILITY YARD

BUILDING

PROCEDURES



- SWPPP Available
- MSDS Sheets Available
- Maintenance Documents

SEWER COLLECTIONS System Report  
FOR July 2014

22	LIFT STATIONS INSPECTED DAILY	22 HRS
0	LIFT STATIONS REPAIRED	0 HRS
	LIFT STATION GENERAL MAINTENANCE	348 HRS
	SHOP - OFFICE	90 HRS
5075	FEET OF SEWER MAIN JET CLEANED	
3492	FEET OF SEWER MAIN TELEVIEWED	
9	SEWATER M.H.'S INSP. 4 WERE CLEANED	367 HRS
0	SEWERS DYE TESTED	
206	STORM MANHOLES INSPECTED. 34 MANHOLES CLEANED	66 HRS
14	DETENTION PONDS INSPECTED, 3 WERE CLEANED	13 HRS
1	RETENTION POND AND DRAIN PIPE CLEANED. TREES AND ROOTS BLOCKING DRAIN PIPE WERE REMOVED. (125TH & DEWEARE)	34 HRS
16	DITCHES INSPECTED. 0 WERE CLEANED	8 HRS
2	DETENTION PONDS HAD GRASS CUT	6 HRS
17	DITCHES AND OR CULVERT ENDS HAD GRASS CUT.	40 HRS
7	SEWER REPAIRS:	
	1) 331 W. WALNUT SINK HOLES + CB. 2) 444 S. MAIN @ STREETS. 3) BRACKENBURY LL. 12" POND DRAIN PIPE + SINK HOLE. 4) 518 MERRILL RD. DAMAGE TO SW. M.H.	94 HRS
	5) 12" STORM LINE + SINK HOLE 6) 116TH & KENTUCKY DAMAGED STORM M.H. 7) RAISE BULKHEAD ST. M.H. DRAINAGE IMPROVEMENT. 186 S. 105TH AVE - INSTALL CB WITH DUMPING WASTE LID AND 100' OF 4" PIPE.	15 HRS
	SOBS LOOTH LN: REGRADE AND LANDSCAPE DITCH LINE	12 HRS
9	SEWER CALLS	
18	SEWER INSPECTIONS	
420	SEWER LOCATES	



# Audit Prep Resources

## Resource guides for Good Housekeeping & Pollution Prevention Audits include:

- *EPA Audit Prep Guide – “MS4 Program Evaluation Guidance”*
- *Center for Watershed Protection Manual 9*
- *State Association Guidance Documents*



## **MS4 Program Evaluation Guidance**

### **U.S. Environmental Protection Agency Office of Wastewater Management**

Comments on this guide should be directed to:

Jenny Molloy  
U.S. EPA Water Permits Division  
(202) 564-1939  
[Molloy.Jennifer@epa.gov](mailto:Molloy.Jennifer@epa.gov)

**January 2007** — *Field test version*

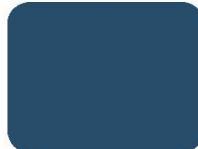
EPA-833-R-07-003

9

# Municipal Pollution Prevention/ Good Housekeeping Practices

Version 1.0

September 2008



# Long-Term Implementation: INAFSM Guidance for MS4s



August 2015

## NPDES GUIDANCE for MS4s

Creating A Program Plan  
for  
Municipal Operations Pollution Prevention and Good Housekeeping



Prepared by the INAFSM Stormwater Committee  
Pollution Prevention and Good Housekeeping Group

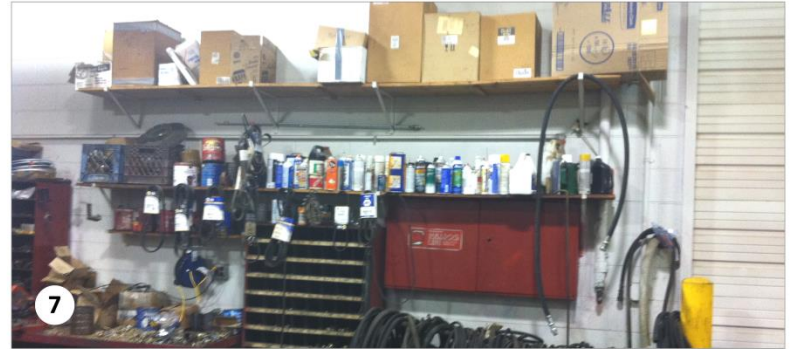
- *Indiana Association for Floodplain and Stormwater Management (INAFSM)*
- *Completed in August 2015*
- *Developed by MS4 volunteers*



**Hands On Exercise: “You’re the Inspector – Tell us what you see”!**

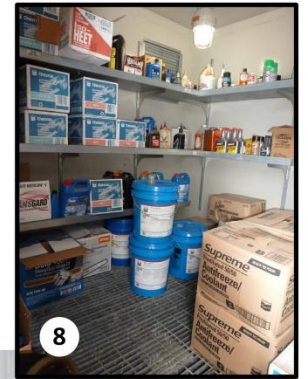


**WEST PAWNEE,  
INDIANA**

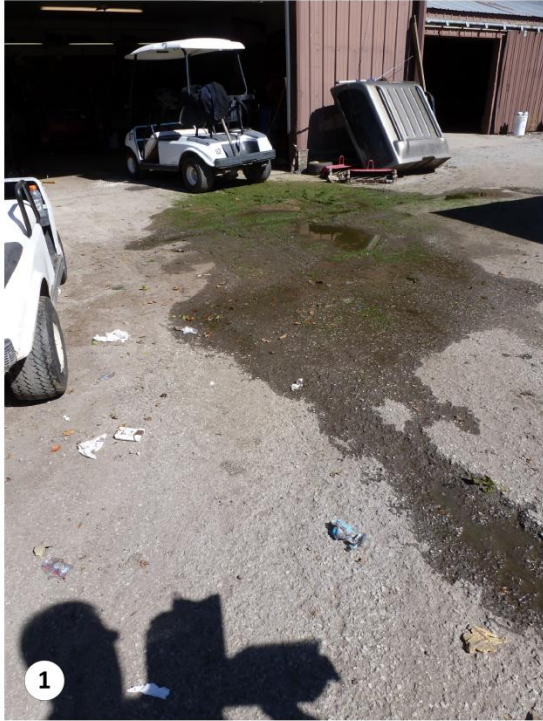




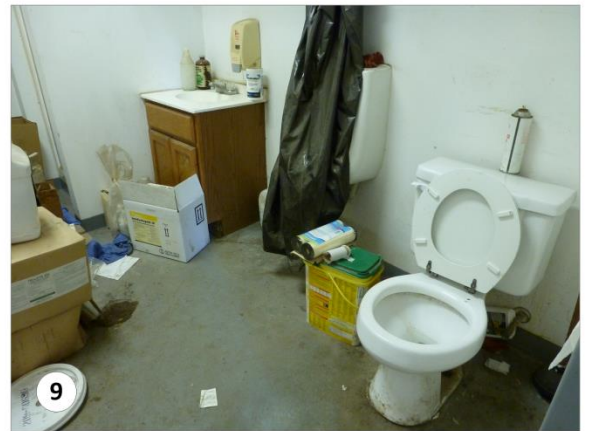
# SOUTH PAWNEE, INDIANA





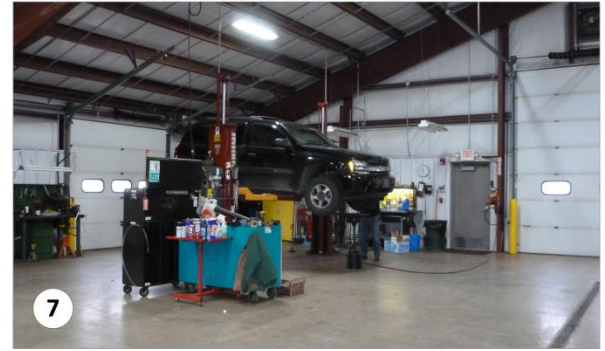
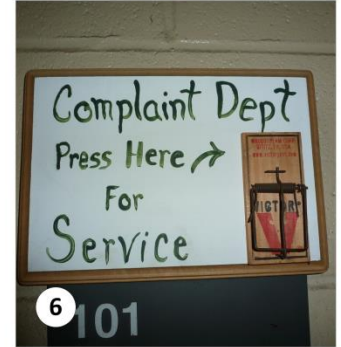


**EAST PAWNEE,  
INDIANA**





# NORTH PAWNEE, INDIANA



# Questions?

## KSA Annual Conference 2017



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