

# Manage Your New MS4 General Permit Program; Don't Let it Manage YOU!



**INAFSM**

INDIANA ASSOCIATION FOR  
FLOODPLAIN AND STORMWATER  
MANAGEMENT



INAFSM Annual Conference  
September 13<sup>th</sup>, 2023



# Agenda

1. Introduction
2. MS4 Program Management
3. Requirements & Implementation
4. Program Challenges (+Activity)
5. Indicators of Success
6. Strategies for Limited Budgets
7. Examples of Tracking Methods
8. Program Management - Next Steps

# INTRODUCTION



**Don't Worry!**



# PROGRAM MANAGEMENT



# Coordinate

- **Coordinate** Stormwater activity between departments within each permittee, co-permittees, and/or the permittee and other organizations/agencies.
  - streamlines tasks, prevents redundancy, and optimizes resource allocation.
  - simplifies the permitting process, as regulatory agencies are more likely to respond positively to a coordinated and organized approach to managing stormwater.

Comprehensive Stormwater Management Planning Intergovernmental, Agency, Departmental Coordination		
Interview Questions	Response	
Are roles and responsibilities for multiple co-permittees established?	YES	NO
If multiple co-permittees, is there an “umbrella group” to coordinate activities?	YES	NO
	Name of Group:	
Are the MOUs between co-permittees and outside agencies?	YES	NO
How are in-house departments coordinated?		
Is there a stormwater task force or committee in place?	YES	NO
Are outside groups used to implement the SWMP?	YES	NO
	Name of Group(s):	
Applicable Documents	Reviewed	Obtained
MOUs or other agreements		
Meeting schedules for in-house or inter-agency task forces or committees		

# Prioritize

- **Prioritize** existing areas/practices of concern. Prioritization enables effective resource utilization, targeted problem-solving, and the achievement of meaningful environmental and community outcomes.
  - Facilities and areas for screening are prioritized according to risk.
  - Ensure that projects prioritized to determine inspection frequency.
  - Sub watersheds or neighborhoods are prioritized for outreach based on complaints or land use.

Comprehensive Stormwater Management Planning Prioritization of Resources		
Interview Questions	Response	
Have pollutants of concern (POC) been established? If yes, based on what? <ul style="list-style-type: none"> <li>• 303(d) list?</li> <li>• TMDLs?</li> <li>• Land uses of concern?</li> <li>• Existing watershed planning efforts?</li> </ul>	YES	NO
Have POC-specific strategies been developed in the SWMP?	YES	NO
How does the permittee decide program implementation priorities for resource allocation?		

# Delegate

- **Delegate** responsibilities to the appropriate staff or agency. Delegating stormwater management, inspection & maintenance, data collection, and reporting can ensure the successful execution of program goals
  - Hire an individual/agency to ensure MS4 program goals are met (ex. Interns or qualified personnel)
  - Delegating the development and implementation of training programs for staff, contractors, and stakeholders to ensure proper stormwater management practices.

<b>Comprehensive Stormwater Management Planning Staff Inventory &amp; Organization</b>		
<b>Interview Questions</b>	<b>Response</b>	
Has an organizational chart been developed?	YES	NO
Have roles and responsibilities been assigned?	YES	NO
<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
Stormwater program staff lists, responsible parties, contact names, organizational charts		

# REQUIREMENTS & IMPLEMENTATION





# Requirements for Public Education & Outreach- (MCM1)

	<b>PUBLIC EDUCATION AND INVOLVEMENT MCM</b>	
<input type="checkbox"/>	Update Public Education/Involvement Plan	4.3(a)
<input type="checkbox"/>	Identify 3 Local Stormwater Quality Issues	4.3(a)(2)
<input type="checkbox"/>	Plan for Public Education & Involvement	4.3(a)(1)
<input type="checkbox"/>	Plan for Distribution of Educational Materials	4.3(b)(2)
<input type="checkbox"/>	Implement Education & Involvement Plans	
<input type="checkbox"/>	Develop Educational Materials	4.3(a)(4)
<input type="checkbox"/>	Conduct Two Events Annually	4.3(a)(3)
<input type="checkbox"/>	Maintain List of Educational Materials Used	4.3(d)
<input type="checkbox"/>	Annual Training for Builders, Developers, etc.	4.3(a)(5)
<input type="checkbox"/>	Annual Update to Local MS4 Web Page	4.3(c)
<input type="checkbox"/>	Annual Program Assessment/Improvement Plan	4.3(g)

# Illicit Discharge Detection & Elimination- (MCM3)

	<b>ILLICIT DISCHARGE DETECTION AND ELIMINATION MCM</b>	
<input type="checkbox"/>	Update Overall IDDE Plan	4.4(b)
<input type="checkbox"/>	Map All Industrial Facilities	4.4(b)(3)
<input type="checkbox"/>	SOP for Receiving IDDE Complaints	4.4(b)(6)
<input type="checkbox"/>	SOP for Investigating IDDE Complaints	4.4(b)(5)(C)
<input type="checkbox"/>	SOP for Dry Weather Screening	4.4(b)(1)
<input type="checkbox"/>	Schedule for Screening of all Outfalls	4.4(b)(2)
<input type="checkbox"/>	Annual Staff Training on IDDE SOPs	4.4(g)(2)
<input type="checkbox"/>	Staff Training on Dry Weather Screening	
<input type="checkbox"/>	IDDE Dry Weather Outfall Screening	4.4(h)
<input type="checkbox"/>	Identify New Systems/Outfalls to add to Map	4.4(e)
<input type="checkbox"/>	Update Maps to Include New Systems/Outfalls	
<input type="checkbox"/>	Identify High Priority Areas for IDDE Program	4.4(f)
<input type="checkbox"/>	Add High Priority IDDE Areas to Map	
<input type="checkbox"/>	Annual Program Assessment/Improvement Plan	4.4(i)

# Construction Site Stormwater Runoff – (MCM4)

	CONSTRUCTION SITE STORMWATER RUNOFF MCM	
<input type="checkbox"/>	Updated Construction Site Inventory List	4.5(l)
<input type="checkbox"/>	Policies and Procedures to Implement MCM 4	
<input type="checkbox"/>	Plan Review Procedures & Timetables	4.5(c)
<input type="checkbox"/>	Construction Site Inspections	4.5(d)
<input type="checkbox"/>	Enforcement Mechanisms	4.5(e)
<input type="checkbox"/>	Receipt/Resolution/Tracking of Complaints	4.5(g)
<input type="checkbox"/>	MS4 Owned & Operated Projects	4.5(k)
<input type="checkbox"/>	Staff Training on MCM 4	4.5(j)
<input type="checkbox"/>	Ongoing Construction Site Inspections	4.5(d)(3)
<input type="checkbox"/>	Annual Program Assessment/Improvement Plan	4.5(i)

# Post-Construction Site Stormwater Runoff – (MCM5)

	POST-CONSTRUCTION STORMWATER RUNOFF PROGRAM MCM	
<input type="checkbox"/>	Policies and Procedures to Implement MCM 5	
<input type="checkbox"/>	SOP for Maintaining MS4 Owned BMPs	4.6(d)
<input type="checkbox"/>	SOP for Post-Construction BMP Inspections	4.6(f)
<input type="checkbox"/>	Staff Training on MCM 5	4.6(i)
<input type="checkbox"/>	Updated List of Post-Construction BMPs	4.6(f)
<input type="checkbox"/>	Ongoing MCM 5 BMP Inspections	
<input type="checkbox"/>	Annual Program Assessment/Improvement Plan	4.6(h)

# Pollution Prevention & Good housekeeping – (MCM6)

	<b>MUNICIPAL OPERATIONS POLLUTION PREVENTION &amp; GOOD HOUSEKEEPING</b>	
<input type="checkbox"/>	MS4 Owned/Operated Facility Inventory List	4.7(b)
<input type="checkbox"/>	Annual Assessment for Each Facility	4.7(c)
<input type="checkbox"/>	Update Facility SWPPPs	4.7(d)
<input type="checkbox"/>	Facility Quarterly Inspections	4.7(f)(1)
<input type="checkbox"/>	MS4 Coordinator Annual Facility Inspections	4.7(f)(4)
<input type="checkbox"/>	SOP/O&M Plan for MS4 Owned Infrastructure	4.7(g)
<input type="checkbox"/>	Disposal of Waste Materials	4.7(g)(1)
<input type="checkbox"/>	Periodic Litter Pickup	4.7(g)(2)(A)
<input type="checkbox"/>	Periodic Structure Cleaning	4.7(g)(2)(B)
<input type="checkbox"/>	Roadside Shoulder and Ditch Stabilization	4.7(g)(2)(C)
<input type="checkbox"/>	Roadside Vegetation	4.7(g)(2)(D)
<input type="checkbox"/>	Remediation of Outfall Scouring	4.7(g)(2)(E)
<input type="checkbox"/>	Prioritization of Surface Visual Inspections	4.7(g)(3)(A)
<input type="checkbox"/>	Program to Maintain Infrastructure	4.7(g)(4)
<input type="checkbox"/>	Pollution Reduction Procedures	4.7(g)(5)
<input type="checkbox"/>	Procedures for 3 <sup>rd</sup> Party Entities	4.7(j)
<input type="checkbox"/>	Procedures for Flood Control Project Reviews	4.7(k)
<input type="checkbox"/>	Evaluation of Existing Flood Control Structures	4.7(l)
<input type="checkbox"/>	Annual PP & GH Training	4.7(m)
<input type="checkbox"/>	Train New Full- and Part- Time Hires within 2 months	4.7(m)(2)(A)
<input type="checkbox"/>	Train Seasonal Employees Within the First 30 days	4.7(m)(2)(B)
<input type="checkbox"/>	Annual Program Assessment/Improvement Plan	4.7(i)

# PROGRAM CHALLENGES



# MS4 Common Challenges-EPA

- Common issues faced by MS4s
  - Intradepartmental coordination on SW issues
  - Lack of formal coordinated program framework
  - Lack of SWMP planning documents to guide implementation
  - A plan/program is available for co-permittees, but no action taken for implementation

## **MS4 Program Evaluation Guidance**

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

Comments on this guide should be directed to:

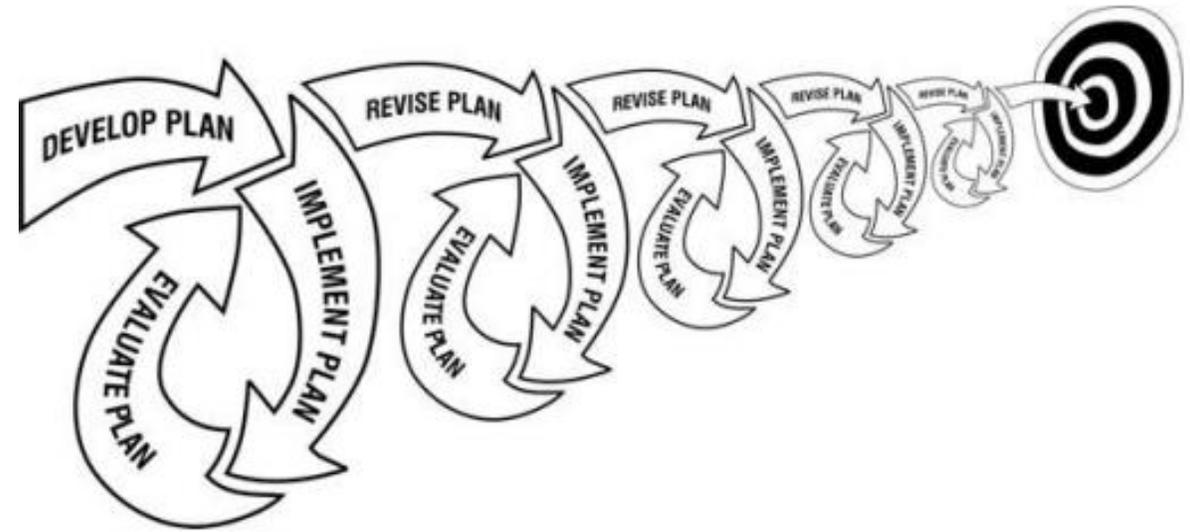
Jenny Molloy  
U.S. EPA Water Permits Division  
(202) 564-1939  
[Molloy.Jennifer@epa.gov](mailto:Molloy.Jennifer@epa.gov)

January 2007 — *Field test version*

EPA-833-R-07-003

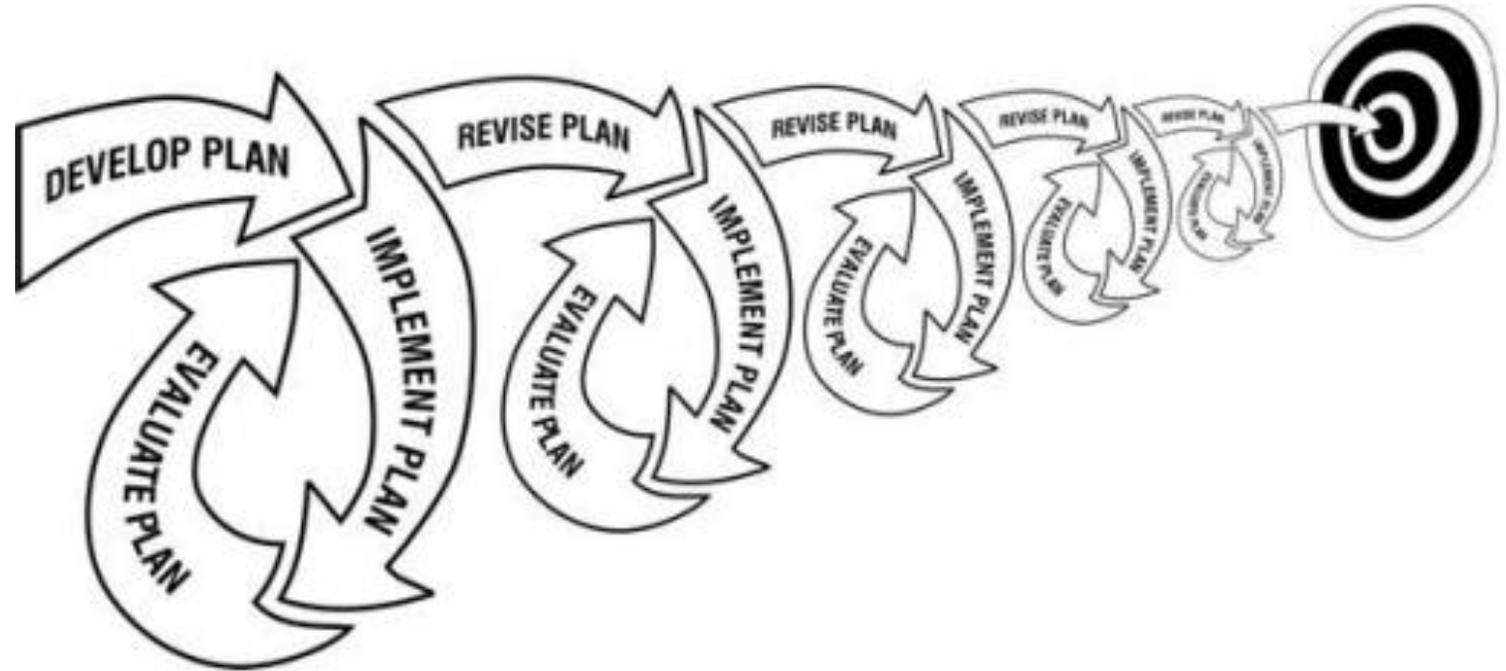
# MS4 Implementation Challenges

- Challenges in Implementation:
  - Lack of adequate manpower or qualified personnel
  - Lack of Funding to hire, train, & retain staff
  - How to deal with conveyances that are controlled by a different MS4 entity
  - Building public support



# MS4 Implementation Challenges cont'd

- **40 CFR 122.26(d)(2)(v) and 122.34(g)** requires MS4s to reduce the discharge of pollutants to the “maximum extent practicable”
- **MS4GP** becomes more stringent every 5-years due to:
  - Improvement of Knowledge and Technology
  - Changes in Federal and State Guidelines
  - TMDL considerations provide a broader context for the periodic strengthening of MS4GP requirements.



# ACTIVITY: CHALLENGES & BELIEFS



# MS4 Challenges & Beliefs-Publication

- Rieck, L., Carson, C., Hawley, R.J. et al. Phase II MS4 challenges: moving toward effective stormwater management for small municipalities. *Urban Ecosystems* 25, 657–672 (2022).

<https://doi.org/10.1007/s11252-021-01179-3>

- Published Online October 26, 2021
- Identified 5 Common Challenges Summarized as Beliefs

Urban Ecosystems (2022) 25:657–672  
<https://doi.org/10.1007/s11252-021-01179-3>



## Phase II MS4 challenges: moving toward effective stormwater management for small municipalities

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### Abstract

Federal regulations for municipal separate storm sewer systems (MS4s) in the United States have been in place since 1990 as part of the National Pollutant Discharge Elimination System (NPDES), aiming to reduce sediment and pollutant loads originating from urban areas. However, small-municipality (Phase II) MS4s frequently grapple with several challenges, resulting in a lack of stakeholder buy-in and actionable stormwater management plans. We identify five common challenges concerning MS4 requirements based on literature review, professional experience, and feedback solicited from stakeholders, municipal managers, and fellow professionals and offer real-world examples of efficient, effective MS4 frameworks and/or solutions. The five challenges are summarized as beliefs that: (1) agricultural land use is the largest pollutant contributor and the root cause of pollution problems; (2) stormwater management only benefits downstream communities; (3) large, expensive projects are required to comply with regulations; (4) maintenance, monitoring, and inspection of best management practices (BMPs) is overwhelmingly complex and expensive; and (5) a lack of direct funding makes complying with regulations an impossible task. These challenges are universal in nature for Phase II MS4 permittees and can create real barriers for effective stormwater management. However, we found many examples of methods or techniques to effectively address these five specific challenges, making them well-suited and important for discussion. BMPs can create tangible improvements for surrounding communities (e.g., reduced streambank erosion and flooding), and improved understanding of the structure and options within the MS4 program will help small municipalities make informed choices about management plans.

**Keywords** Phase II MS4 · Urban stormwater · Best management practice · Municipality · Stakeholders

### Introduction

Urbanization is accelerating globally (United Nations Department of Economic and Social Affairs 2019) through a process that transforms natural land cover into a built landscape dominated by impervious surfaces drained largely by grey infrastructure (e.g., stormwater pipes) and straightened, hardened stream channels (Booth 1991; Alberti et al. 2007; Burcher et al. 2007; Napieralski and Carvalho 2016). Urban

landscapes possess a unique hydrologic regime characterized by increased a) severity and frequency of floods (Paul and Meyer 2001; Wenger et al. 2009), b) erosion (Arnold and Gibbons 1996; Paul and Meyer 2001; Pizzuto et al. 2000), c) physical disturbance (Fitzpatrick and Peppler 2010; Vietz et al. 2014; Hawley et al. 2016), and d) concentrations of pollutants in runoff reaching stream channels (Carle et al. 2005; Hobbie et al. 2017). Urban-induced physiochemical alterations to streams typically result in low diversity of invertebrate and fish assemblages (Paul and Meyer 2001; Meyer et al. 2005), altered nutrient cycling (Alberti 2005; O'Driscoll et al. 2010), decreased connectivity to the surrounding terrestrial landscape (Kautza and Sullivan 2015; Alberts and Sullivan 2016), and simplified food webs (Eitzmann and Paukert 2010; Kautza and Sullivan 2016). Stormwater flow paths through highly connected piped systems to stream channels cause a suite of physical, chemical, and ecological changes to urban streams (i.e., the “urban stream syndrome”; Walsh et al.

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# Discussion: Challenges & Beliefs faced by MS4s

Agricultural land use is the largest pollutant contributor & the root cause of pollution problems.



**TRUE**



**FALSE**

## Challenges/Beliefs

Agriculture is *the* problem & urban stormwater is unfairly targeted



## Solutions/Truths

- Urban stormwater a pollutant
- Better outreach & education for now
- Future: basin-wide non-point source management plans?



## Desired Results

Stormwater Management Programs that are:

- Adapted to local environment
- Iterative
- Building community assets & amenities
- Financially viable long-term
- Environmentally effective
- Compliant with regulations

# Discussion: Challenges & Beliefs faced by MS4s

Stormwater management only benefits downstream communities.



**TRUE**



**FALSE**

## Challenges/Beliefs

Only downstream communities will benefit



## Solutions/Truths

- Numerous local financial, social, environmental benefits (“triple bottom line”)
- Better outreach & education
- Design BMPs to engage community values, desired amenities



## Desired Results

Stormwater Management Programs that are:

- Adapted to local environment
- Iterative
- Building community assets & amenities
- Financially viable long-term
- Environmentally effective
- Compliant with regulations

# Discussion: Challenges & Beliefs faced by MS4s

Large, expensive projects are required to comply with regulations.



**TRUE**



**FALSE**

## Challenges/Beliefs

Must have large, expensive BMPs to be effective



## Solutions/Truths

- Large or small can work
- Evaluate each region: topography, climate, socio-economics, land use, existing infrastructure, etc.



## Desired Results

Stormwater Management Programs that are:

- Adapted to local environment
- Iterative
- Building community assets & amenities
- Financially viable long-term
- Environmentally effective
- Compliant with regulations

# Discussion: Challenges & Beliefs faced by MS4s

Maintenance, monitoring, and inspection of best management practices (BMPs) is overwhelmingly complex and expensive.



**TRUE**



**FALSE**

## Challenges/Beliefs

Maintenance, monitoring, and inspection is overwhelmingly expensive & time-consuming



## Solutions/Truths

- Big challenge: manpower
- Many options: landowner agreements, citizen science, stormwater coalitions, remote sensing
- Gather information to improve



## Desired Results

Stormwater Management Programs that are:

- Adapted to local environment
- Iterative
- Building community assets & amenities
- Financially viable long-term
- Environmentally effective
- Compliant with regulations

# Discussion: Challenges & Beliefs faced by MS4s

A lack of direct funding makes complying with regulations an impossible task



**TRUE**



**FALSE**

## Challenges/Beliefs

Lack of direct funding is insurmountable and required projects are unaffordable



## Solutions/Truths

- Can be very expensive
- Stormwater Utilities/Fees
- Market-Based Incentives
- Grants
- Stormwater coalitions
- Tailor to socio-economic conditions in region



## Desired Results

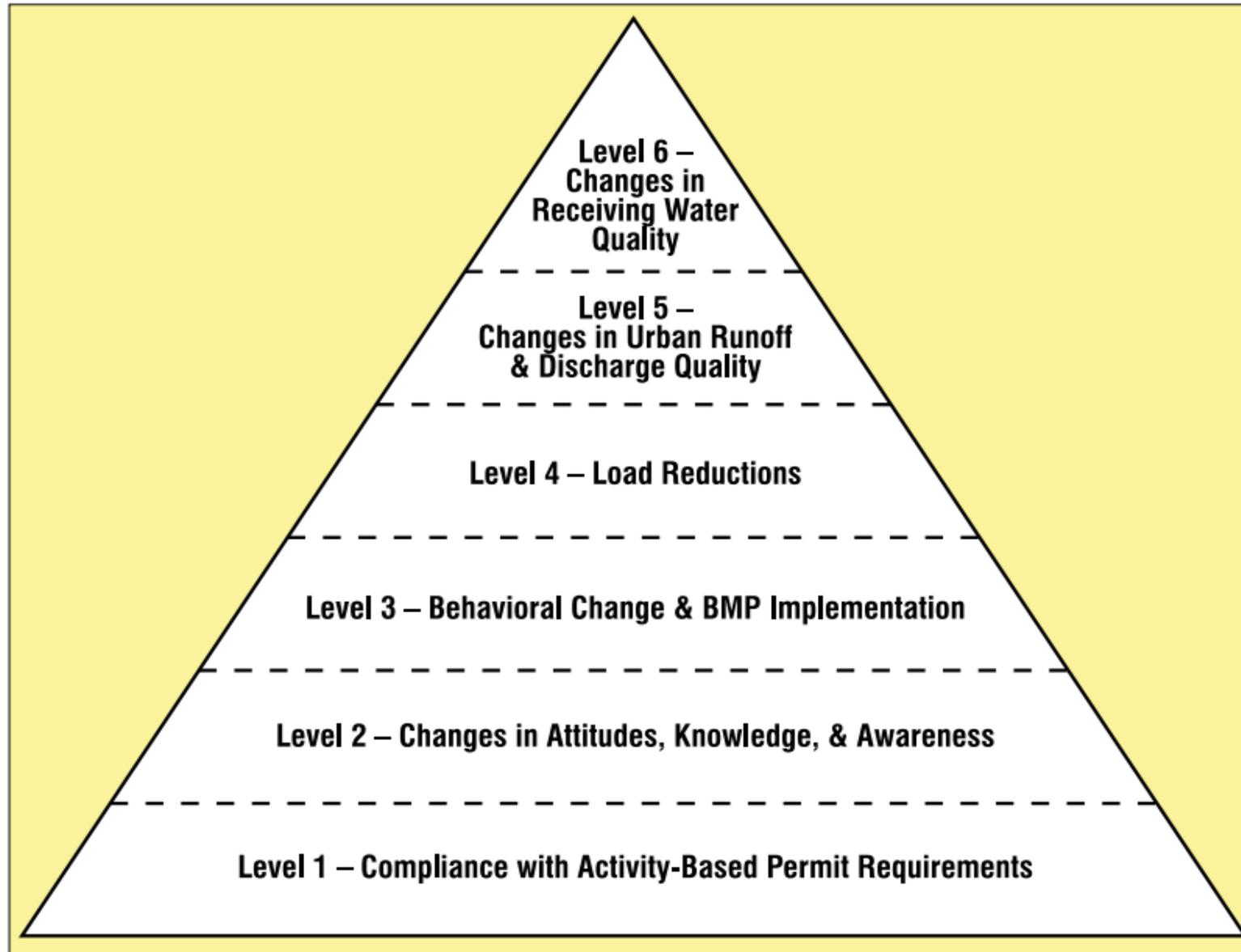
Stormwater Management Programs that are:

- Adapted to local environment
- Iterative
- Building community assets & amenities
- Financially viable long-term
- Environmentally effective
- Compliant with regulations

# INDICATORS OF SUCCESS



# Approaches to evaluation of stormwater program effectiveness



# Social Indicators

- Evaluating social indicators:
  - Gauge the effects of public education efforts
  - Monitor attendance at public meetings
  - Assess pollution-generating behavior changes



# Program Operations

- Assess program operations:
  - Record-keeping of BMP details: type, number, specifications, location, completion dates, and maintenance.
  - Documenting management activities and efforts to reduce pollutant sources.



# Case Study: TCPWQ

- The TCPWQ is a collaborative effort dedicated to improving water quality by addressing stormwater runoff and involving various stakeholders in a collective mission to protect and enhance local water resources
- <https://www.tippecanoe.in.gov/954/Tippecanoe-County-Partnership-for-Water->



**TIPPECANOE COUNTY**  
PARTNERSHIP FOR WATER QUALITY™

# STRATEGIES FOR LIMITED BUDGETS



# Budgeting & Funding Sources

- Budgeting & funding sources include:
  - Grants, Municipal bonds
  - State Revolving Funds
  - Corporate Sponsorships and Donations
  - Public-Private Partnerships (PPPs)
- It's important for municipalities and organizations to carefully evaluate their specific needs, project requirements, and available resources to determine the most appropriate combination of funding sources for their MS4 program.



# EXAMPLES OF TRACKING METHODS





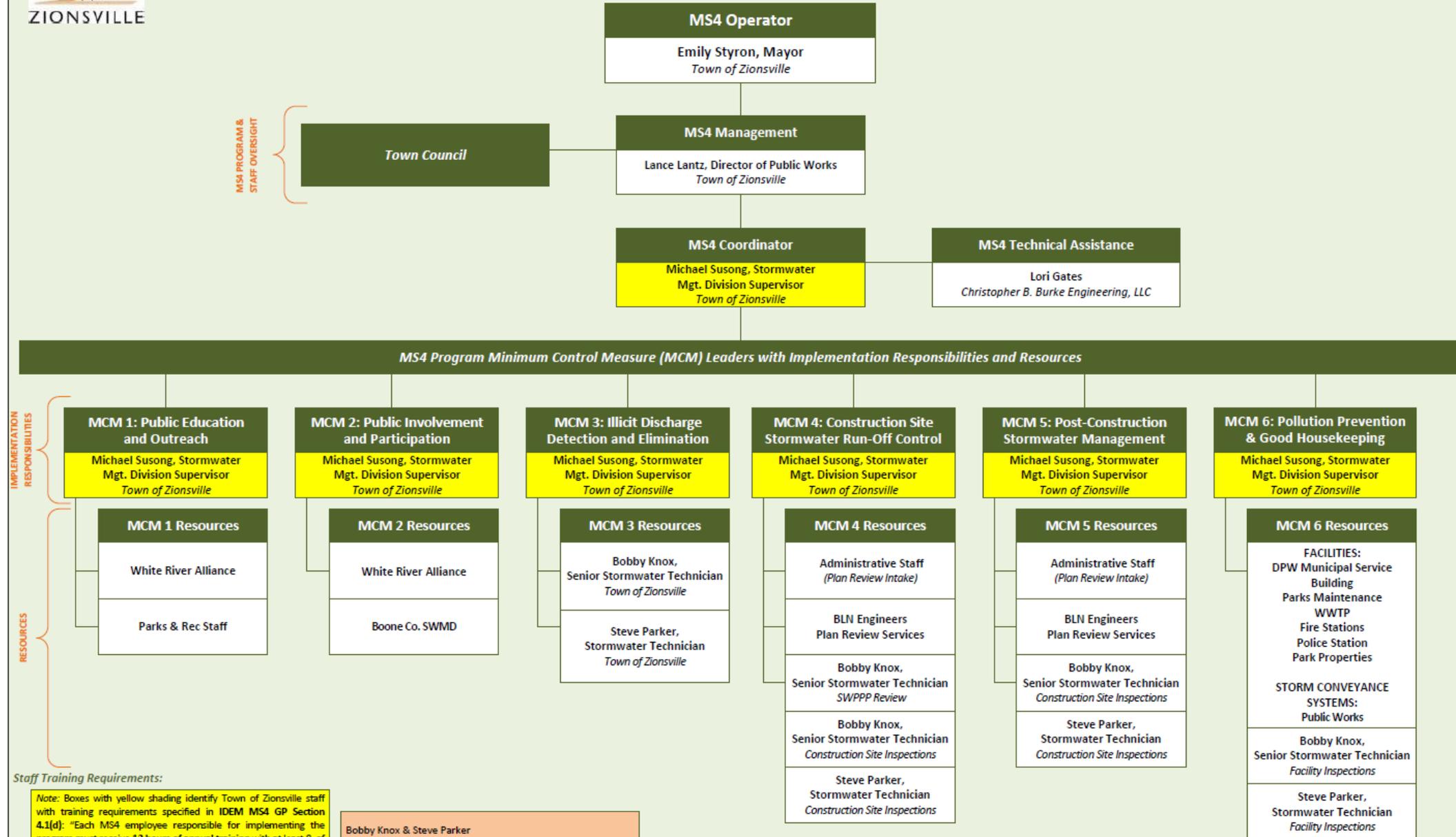
- Track program between all staff and assign tasks
- Clip documents to a central location
- Log staff training
- Prepare for IDEM audits and annual reports

A - Tasks Identified in the IDEM MS4 General Permit:	B - Task Type	C - MS4 Citation	D - Rule 13	E - Template	F - MS4 GP DOC	H - Start Date	I - End Date	J - Duration	K - % Complete	L - Assigned to	M - Status
CLIENT LOGO	DOCUMENT DEADLINE TRAINING DATA NEED										July 7, 2023
<b>Tasks Identified in the IDEM MS4 General Permit:</b>	<b>Task Type</b>	<b>MS4 Citation</b>	<b>Rule 13</b>	<b>Template</b>	<b>MS4 GP DOCS</b>	<b>Start Date</b>	<b>End Date</b>	<b>Duration</b>	<b>% Complete</b>	<b>Assigned to</b>	<b>Status</b>
<b>PERMIT DOCUMENTS AND REPORTS</b>						6/13/2022	4/1/2023	293d	55%		Review
New Permit Notice of Intent (NOI)	DOCUMENT	6.5				6/13/2022	7/5/2022	23d	100%		Completed
List of Responsible Individuals	DOCUMENT	4.1 (c)				1/3/2023	2/28/2023	57d	90%		Review
Water Quality Characterization Report	DOCUMENT DEADLINE	3.0				7/5/2022	12/16/2022	165d	75%		Review
Stormwater Quality Management Plan	DOCUMENT DEADLINE	4.2				7/5/2022	12/16/2022	165d	75%		Review
<b>Annual MS4 Program Report/Update to Elected Officials</b>		4.3 (e)				1/3/2023	3/31/2023	88d	0%		Review
Prepare Annual MS4 Program Report/Update to Elected Officials	DOCUMENT	4.3 (e)				1/3/2023	2/28/2023	57d	0%		Review
Present Annual MS4 Program Report/Update to Elected Officials	DOCUMENT DEADLINE	4.3 (e)				3/1/2023	3/31/2023	31d	0%		Review
Document Presentation	DOCUMENT DATA NEED	4.3 (h) (4)				3/31/2023	3/31/2023	1d	0%		Review
<b>Annual Report Submittal to IDEM</b>						1/3/2023	4/1/2023	89d	0%		Review
Begin Assembling Data for IDEM Annual Report	DOCUMENT	8.1				1/3/2023	2/28/2023	57d	0%		Review
Get Signatures on Annual Report	DOCUMENT	8.3				3/1/2023	3/10/2023	10d	0%		Review
Submit MS4 Annual Report to IDEM	DOCUMENT DEADLINE	8.2				3/13/2023	4/1/2023	20d	0%		Review
<b>MS4 STAFF TRAINING</b>						1/3/2023	12/15/2023	347d	0%		Active
<b>Staff Responsible for MS4 Implementation (12 Hrs. of Annual Training)</b>						1/3/2023	12/15/2023	347d	0%		Active
Staff Member #1 (See "Staff Training Tracker for Status)	DOCUMENT TRAINING	4.1 (d)				1/3/2023	12/15/2023	347d	0%		Active
<b>PUBLIC EDUCATION AND INVOLVEMENT</b>						10/3/2022	12/31/2022	116d	0%		Active

A - Tasks Identified in the IDEM MS4 General Permit:	B - Task Type	C - MS4 Citation	D - Template	E - MS4 GP DOCS	G - Start Date	H - End Date	I - Duration	J - % Complete	K - Assigned to	L - Status
<div style="border: 1px solid #ccc; padding: 5px;"> <p>Drag files here</p> <ul style="list-style-type: none"> <li>- DOCUMENT</li> <li>- DEADLINE</li> <li>- TRAINING</li> <li>- DATA NEED</li> </ul> </div>										September 11, 2023
<b>Tasks Identified in the IDEM MS4 General Permit:</b>	<b>Task Type</b>	<b>MS4 Citation</b>	<b>Template</b>	<b>MS4 GP DOCS</b>	<b>Start Date</b>	<b>End Date</b>	<b>Duration</b>	<b>% Complete</b>	<b>Assigned to</b>	<b>Status</b>
<b>PERMIT DOCUMENTS AND REPORTS</b>					7/5/2022	7/5/2024	732d	32%		Active
New Permit Notice of Intent (NOI)		6.1, 6.2, 6.3			4/7/2023	4/7/2023	1d	100%		Completed
List of Responsible Individuals		4.1 (c)			7/1/2023	10/7/2023	99d	100%		Completed
Water Quality Characterization Report		3.0			7/12/2022	1/6/2023	179d	90%		Active
Stormwater Quality Management Plan		4.2			7/5/2022	1/6/2023	186d	100%		Completed
Update Ordinance/Regulatory Mechanism					7/5/2022	7/5/2024	732d	0%		Active
<b>2023 Annual MS4 Program Report/Update to Elected Officials</b>		4.3 (e)			1/1/2024	4/7/2024	98d	0%		Inactive
Prepare Annual MS4 Program Report/Update to Elected Officials		4.3 (e)			1/1/2024	4/7/2024	98d	0%		Inactive
Present Annual MS4 Program Report/Update to Elected Officials		4.3 (e)			1/1/2024	4/7/2024	98d	0%		Inactive
Document Presentation		4.3 (h) (4)			1/1/2024	4/7/2024	98d	0%		Inactive
<b>Annual Report Submittal to IDEM</b>					1/1/2024	4/30/2024	121d	0%		Inactive
Begin Assembling Data for IDEM Annual Report		8.1			1/1/2024	4/1/2024	92d	0%		Inactive
Get Signatures on Annual Report		8.3			4/1/2024	4/15/2024	15d	0%		Inactive
Submit MS4 Annual Report to IDEM		8.2			4/15/2024	4/30/2024	16d	0%		Inactive
<b>MS4 STAFF TRAINING</b>					7/5/2023	7/5/2024	367d	0%		Active
<b>Staff Responsible for MS4 Implementation (12 Hrs. of Annual Training)</b>					7/5/2023	7/5/2024	367d	0%		Active
Name 1 (See "Staff Training Tracker/Logs")		4.1 (d)			7/5/2023	7/5/2024	367d	0%		Active
Name 2 (See "Staff Training Tracker/Logs")		4.1 (d)			7/5/2023	7/5/2024	367d	0%		Active



# Town of Zionsville MS4 Communications Chart



**Staff Training Requirements:**

Note: Boxes with yellow shading identify Town of Zionsville staff with training requirements specified in IDEM MS4 GP Section 4.1(d): "Each MS4 employee responsible for implementing the program must receive 12 hours of annual training with at least 8 of the 12 hours of training distributed amongst the specific Minimum Control Measure(s) for which they are responsible for administering.

Bobby Knox & Steve Parker  
Annual Training Target: 6 Hours.

**MCM 6: Poll. Prev. & Good Housekeeping (City Depts.)**

*Stormwater Coordinator*

**Street Dept. Facility**  

---

*Dept. Head*

**SWPPP Components**

Fueling Area

Stockpiles

Salt/Sand Piles

Composting

Pesticides

Fertilizer

Vehicle Manintenance

Liquid Chemical Storage

Dry Chemical Storage

Oil/Water Separator

**Facility Inspector**

*Street Foreman*

**Park Dept. Facility**  

---

*Dept. Head*

**SWPPP Components**

Fueling Area

Stockpiles

Composting

Pesticides

Fertilizer

Vehicle Manintenance

Liquid Chemical Storage

Dry Chemical Storage

Oil/Water Separator

**Facility Inspector**

*Park Foreman*

**Police Station Facility**  

---

*Police Chief*

**SWPPP Components**

Liquid Chemical Storage

Dry Chemical Storage

Oil/Water Separator

**Facility Inspector**

*Shift Supervisor*

**Fire Station 1 Facility**  

---

*Fire Chief*

**SWPPP Components**

Liquid Chemical Storage

Dry Chemical Storage

Oil/Water Separator

**Facility Inspector**

*Shift Supervisor*

**Fire Station 2 Facility**  

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*Fire Chief*

**SWPPP Components**

Liquid Chemical Storage

Dry Chemical Storage

Oil/Water Separator

**Facility Inspector**

*Shift Supervisor*

# MS4web2.0

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# Free Tracking Methods

## Anytown MS4 Program: Municipal Facility Quarterly Stormwater Assessment Checklist

Purpose: This Quarterly Stormwater Assessment Checklist is a periodic evaluation of the effectiveness of the stormwater quality control measures being implemented at this municipal facility and in accordance with the Facility Stormwater Pollution Prevention Plan (SWPPP). Any checklist items rated as "Potential Problem" (PP) or "Corrective Action" (CA) should be addressed promptly and noted/recorded on the Quarterly Stormwater Assessment Log.

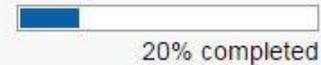
\* Required

### Specify the Anytown Facility for this Quarterly Assessment \*

(Choose one of the following)

- Public Works
- Fire Station
- Police Station

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# PROGRAM MANAGEMENT – NEXT STEPS



# Professional Development

## Certifications & Certificates

EnviroCert was established to provide guidelines for the practice of StormWater Quality (CPSWQ), Erosion and Sediment Control (CPESC), Municipal Stormwater Management (CPMSM), StormWater Inspections (CESSWI), and Industrial Stormwater Management (CPISM).



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# Program Management – Permit comparison

MS4 PROGRAM ELEMENT/TASK		REQUIRED FOR PHASE II MS4 CITIES?	REQUIRED FOR PHASE I MS4 CITIES?
<b><i>PUBLIC EDUCATION AND OUTREACH (MINIMUM CONTROL MEASURE 1)</i></b>			
Develop a Storm Water Quality Management Plan that includes methods and measurable goals to inform defined constituencies about the impacts of polluted stormwater runoff on water quality and ways they can minimize their impact on water quality. The defined constituent groups are at left.	Residents		
	Visitors		
	Public Service Employees		
	Commercial and Industrial Facilities		
	Construction Site Personnel		
<b><i>PUBLIC PARTICIPATION AND INVOLVEMENT (MINIMUM CONTROL MEASURE 2)</i></b>			
Develop a Storm Water Quality Management Plan that includes provisions to allow for constituents within the MS4 area to participate in the stormwater management program development and implementation.			

# Program Management – Permit comparison

	REQUIRED FOR PHASE II MS4 CITIES?	REQUIRED FOR PHASE I MS4 CITIES?
<b><i>ILLCIT DISCAHRGE DETECTION AND ELIMINATION (MINIMUM CONTROL MEASURE 3)</i></b>		
Develop a Storm Water Quality Management Plan that includes a commitment to develop and implement a strategy to detect and eliminate illicit discharges to the MS4 conveyance.		
Develop a storm sewer system map showing the location of all outfalls.		
Enact a local ordinance that prohibits illicit discharges into MS4 conveyances and establishes appropriate enforcement procedures and actions.		
Develop a plan to detect, address, and eliminate illicit discharges and illegal dumping into MS4 conveyances.		
Conduct dry weather screening of outfalls.		
Identify all active industrial facilities within the MS4 area.		
Educate public employees, businesses and the general public about the hazards associated with illicit discharges and the improper disposal of waste.		

# Program Management – Permit comparison

	REQUIRED FOR PHASE II MS4 CITIES?	REQUIRED FOR PHASE I MS4 CITIES?
<b><i>CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (MINIMUM CONTROL MEASURE 4)</i></b>		
Develop a Storm Water Quality Management Plan that includes a commitment to develop, implement, manage and enforce an erosion and sediment control program for construction activities that disturb one or acres of land within the MS4 area.		
Enact a local ordinance that establishes a construction program that controls polluted runoff from construction activities with land disturbance greater than or equal to one acre or more.		
Provide annual training for MS4 personnel responsible for plan review, inspection, and enforcement of construction activities.		
<b><i>POSTCONSTRUCTION STORMWATER RUNOFF CONTROL (MINIMUM CONTROL MEASURE 5)</i></b>		
Develop a Storm Water Quality Management Plan that includes a commitment to develop, implement, manage and address discharges of postconstruction stormwater runoff from new development and redevelopment areas that disturb one or more acres of land within the MS4 area.		
Enact a local ordinance that implements planning procedures to promote improved water quality.		
Provide annual training for MS4 personnel responsible for plan review, inspection, and enforcement of postconstruction Best Management Practices (BMPs).		

# Program Management – Permit comparison

	REQUIRED FOR PHASE II MS4 CITIES?	REQUIRED FOR PHASE I MS4 CITIES?
<b><i>MUNICIPAL OPERATIONS POLLUTION PREVENTION AND GOOD HOUSEKEEPING (MINIMUM CONTROL MEASURE 6)</i></b>		
Develop a Storm Water Quality Management Plan that includes a commitment to develop and implement a program to prevent or reduce pollutant runoff from municipal operations within the MS4 area.		
Written documentation (SOPs) of maintenance activities, maintenance schedules, and long-term inspection procedures for BMPs to reduce floatables and other pollutants discharged from separate storm sewers.		
Controls (Storm Water Pollution Prevention Plans) for reducing or eliminating the discharge of pollutants from operation areas.		
Provide training for MS4 entity personnel on topics such as proper disposal of hazardous wastes, vegetative waste handling, fertilizer and pesticide application, and the function of implemented BMPs.		
<b><i>REPORTING REQUIREMENTS</i></b>		
Submit an Annual Report to IDEM.		
<b><i>FUNDING REQUIREMENTS</i></b>		
Establish dedicated funding to support the implementation of the required MS4 activities.		

# Program Management – Permit comparison

MS4 PROGRAM ELEMENT	REQUIRED FOR PHASE II MS4 CITIES?	REQUIRED FOR PHASE I MS4 CITIES?
<b><i>SPILL PREVENTION</i></b>		
Implement a program aimed at spill prevention and response, including city-wide tracking/reporting of spills and illegal dumping.	✘	✔
<b><i>STREET/ROADWAY MANAGEMENT</i></b>		
Inventory, mark/paint, inspect, continually re-mark/re-paint storm drains whose castings are not stamped by the manufacturer.	✘	✔
Track street sweeping debris on a street-by-street basis and prioritize street sweeping program based on historical volumes removed.	✘	✔
<b><i>PESTICIDES &amp; FERTILIZER MANAGEMENT</i></b>		
Implement a pesticide and fertilizer application program applicable to municipal staff and Contractors regarding licensing by the Office of the State Chemist, material storage, and application.	✘	✔

# Program Management – Permit comparison

		REQUIRED FOR PHASE II MS4 CITIES?	REQUIRED FOR PHASE I MS4 CITIES?
<b><i>PRIVATELY OWNED INDUSTRIAL AND HIGH-RISK COMPLIANCE PROGRAM</i></b>			
Conduct stormwater compliance inspections of all restaurants within the City ; issue reports; issue corrective action plans as required.			
Conduct stormwater compliance inspections of all retail gasoline outlets within the City ; issue reports; issue corrective action plans with additional employee education as required.			
Enact a local Ordinance providing the authority to regulate the four industrial categories listed at left. A Phase I entity must ensure that: appropriate operational permits are current; there are no illicit discharges or connections; SWQMPs and SWPPPs are being followed; site inspections; and a review of facility records.	All automotive service centers within the City		
	All hazardous material treatment, storage, disposal, and recovery facilities within the City		
	All Title III industrial facilities within the City		
	All industrial facilities with an NPDES (Rule 6) storm water discharge permit within the City		

# Program Management – Permit comparison

	REQUIRED FOR PHASE II MS4 CITIES?	REQUIRED FOR PHASE I MS4 CITIES?
<b>ASSESSMENT OF LOCAL POLLUTION REDUCTION CONTROLS</b>		
Annual assessment of overall reductions in loadings of pollutants discharged from the MS4 conveyances, via trend analysis of monitoring data or computer model estimates.	✗	✓
Conduct studies to evaluate the effectiveness of structural control Best Management Practices utilized within the City	✗	✓
Evaluate the effectiveness of selected BMPs by tracking the estimated volume and/or mass of materials removed or prohibited from entering MS4 conveyances.	✗	✓
<b>IN-STREAM RECEIVING WATER MONITORING REQUIREMENTS</b>		
Conduct in-stream sampling at multiple locations to determine ambient receiving water conditions.	✗	✓
Conduct in-stream sampling at multiple locations to characterize stormwater discharge quality.	✗	✓
Conduct in-stream sampling at multiple locations to assess the effectiveness and adequacy of BMPs implemented by the MS4.	✗	✓
Conduct in-stream sampling at multiple locations to identify and prioritize areas of the city that may be contributing excessive levels of pollutants and will require additional future controls.	✗	✓
Analysis and collection of samples shall be done in accordance with the methods specified at 40 CFR Part 136.	✗	✓
Monthly report of estimated pollutant loadings and mean concentrations for each identified location.	✗	✓
Identification and report of water quality improvements or degradation.	✗	✓
Quarterly monitoring shall be conducted for up to 20 pollution parameters of concern at sampling sites.	✗	✓

# Program Management – Permit comparison

	REQUIRED FOR PHASE II MS4 CITIES?	REQUIRED FOR PHASE I MS4 CITIES?
<b>REPORTING REQUIREMENTS</b>		
Quarterly Discharge Monitoring Reports (DMRs) must be submitted to IDEM.		
Annual submittal of a fiscal analysis, complete with all expenditures for the reporting period (broken down by major MS4 elements), and a budget for the year after the reporting period.		

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