

# MS4 Construction & Post-Construction Program Audits

## Lessons Learned



Heather Buck  
*hbuck@cbbel-in.com*  
(317) 266-8000

# Surviving MS4 Construction & Post-Construction Program Audits

- I. Construction Site Stormwater Runoff Control Program Requirements
- II. Post-Construction Stormwater Runoff Control Program Requirements
- III. State Audit Form
- IV. The Audit
  - ❖ Part 1: Audit Preparation
  - ❖ Part 2: Office Audit
  - ❖ Part 3: Construction Site Audit
  - ❖ Part 4: Post-Audit Actions



# Construction Site Stormwater Runoff Program Requirements

United States  
Environmental Protection  
Agency

Office of Water  
(4203) January

EPA 833-F-00-008  
(December 2005)  
Fact Sheet 2.6



## Construction Site Runoff Control Minimum Control Measures

AUDIT ITEMS

### What Is Required?

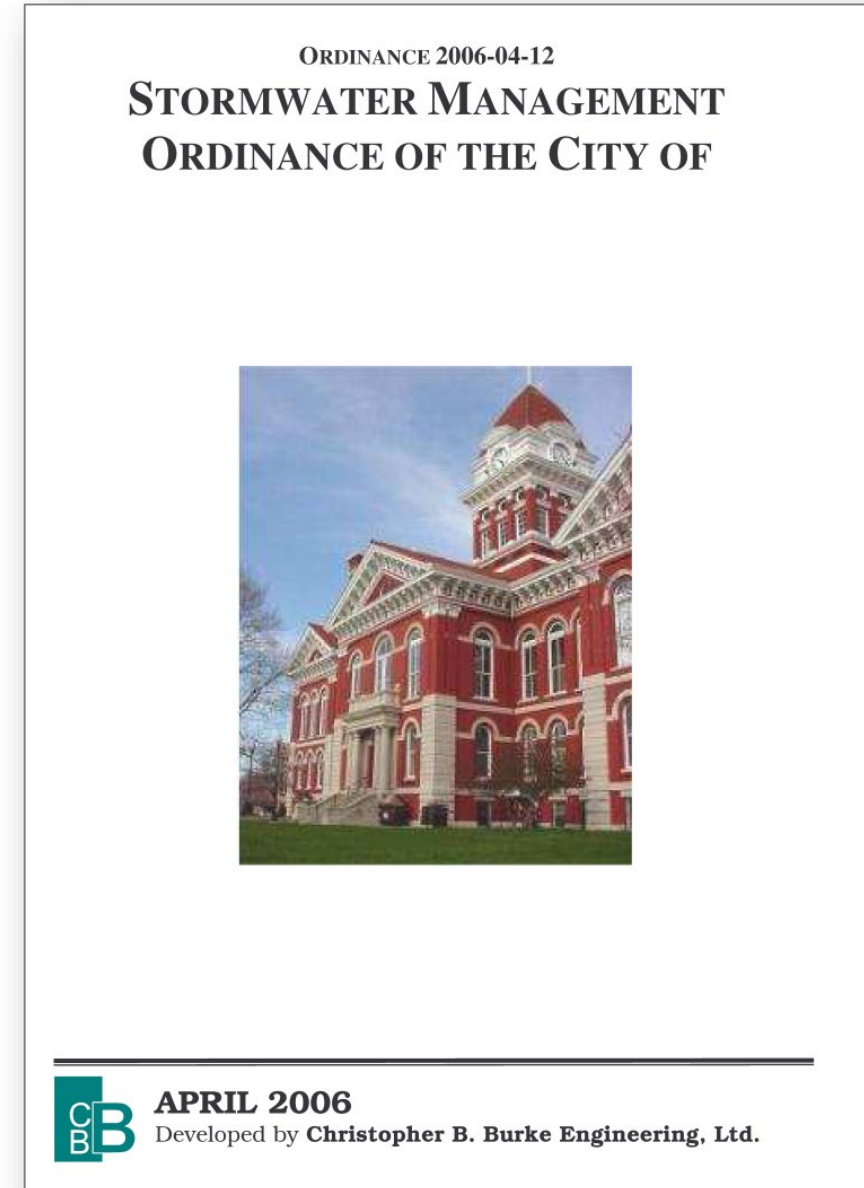
The Phase II Final Rule requires an operator of a regulated small MS4 to implement, and enforce a program to reduce pollutants in stormwater runoff to their MS4 from construction activities that result in a land disturbance of greater than or equal to 1 acre. The small MS4 operator is required to:

- ☐ Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites;
- ☐ Have procedures for site plan review of construction plans that consider potential water quality impacts;
- ☐ Have procedures for site inspection and enforcement of control measures;
- ☐ Have sanctions to ensure compliance (established in the ordinance or other regulatory mechanism);
- ☐ Establish procedures for the receipt and consideration of information submitted by the public; and
- ☐ Determine the appropriate BMPs and measurable goals for this MCM.



# Construction Site Stormwater Runoff Program Requirements

REGULATORY MECHANISM	
SITE PLAN REVIEW	➤ Have an ordinance or other regulatory mechanism requiring proper erosion and sediment controls on construction sites.
INSPECTIONS	
ENFORCEMENT	➤ Applicable to construction sites with a land disturbance of greater than or equal to one acre. <ul style="list-style-type: none"><li>❖ Local requirements may have smaller size restrictions.</li></ul>
INFORMATION FROM THE PUBLIC	
APPROPRIATE BMPs	
MEASURABLE GOALS	



# Construction Site Stormwater Runoff Program Requirements

REGULATORY  
MECHANISM

SITE PLAN REVIEW

INSPECTIONS

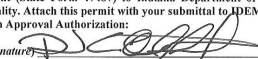
ENFORCEMENT

INFORMATION  
FROM THE PUBLIC

APPROPRIATE  
BMPs

MEASURABLE  
GOALS

- Plan review procedures that consider potential water quality impacts.
- Stormwater Pollution Prevention Plans (SWPPPs):
  - ❖ Stormwater Discharge Points.
  - ❖ Sources of Pollution.
  - ❖ Practices used to reduce pollutants in stormwater discharges.
  - ❖ Best Management Practices (BMPs) for stormwater quality and quantity
- Consistent Procedures:
  - ❖ Same procedures for MS4-Owned and Operated construction projects.
- Requirements may include a local Stormwater Permit

GENERAL PROJECT INFORMATION	
Project Name:	Porter Street Industrial Park Units 1 & 2
Project Location:	North and South side of Porter St, just west of Indiana Ave, Crown point, IN 46307
Project Acreage:	4.49 (Total) 4.49 (Disturbed)
Hydrologic Unit Code:	04040001030040
Plan Received Date:	5-22-17
Plan Reviewed Date:	6-14-17 10-19-17
Project Owner's Name:	Indiana Street Storage, LLC/ Dan Churilla
Address:	2842 45 <sup>th</sup> Street, Suite A
City/State/Zip:	Highland, IN 46322
Phone:	219-88-9972 Fax: 219-662-2740
E-Mail:	jhuls@dvgteam.com
PLAN PREPARER	
Plan Preparer:	DVG Team Inc. - Jack Huls
Address:	1155 Troutwine Rd.
City/State/Zip:	Crown Point, IN 46307
Phone:	219-662-7710 Fax: 219-662-2740
E-Mail:	jhuls@dvgteam.com
PLAN REVIEWER	
Plan Reviewers:	City of Crown Point - Don Oliphant from Christopher Burke Engineering
Address:	705 Industrial Blvd
City/State/Zip:	Crown Point, IN 46307
Phone:	(219) 662-3242 Fax: (219) 661-2280
E-Mail:	doliphant@cbbel.com
<input checked="" type="checkbox"/> <b>PLAN IS ADEQUATE</b> A comprehensive plan review has been completed and it has been determined that the plan satisfies the minimum requirements of the Crown Point Stormwater Management Ordinance #2006-04-12. Submit Rule 5 Notice-of-Intent (State Form 47487) to Indiana Department of Environmental Management (IDEM) - Office of Water Quality. Attach this permit with your submittal to IDEM. Plan Approval Authorization: (Signature)  Don Oliphant (Stormwater Quantity Review)	
<small>This review is an evaluation of the submitted Storm Water Pollution Prevention Plan (SWPPP). The Plan has not been reviewed for other local, state, or federal permits that may be required to proceed with this project. All proposed storm water pollution prevention measures and those referenced in this review must meet the design criteria and standards set forth in the Crown Point Storm Water Technical Standards Manual, Indiana Storm Water Quality Manual or equivalent Guidance Documents.</small>	
Comments: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	

Form Revised 11/24/10

# Construction Site Stormwater Runoff Program Requirements

REGULATORY  
MECHANISM

SITE PLAN REVIEW

INSPECTIONS

ENFORCEMENT

INFORMATION  
FROM THE PUBLIC

APPROPRIATE  
BMPs

MEASURABLE  
GOALS

- Establish written procedures or policies for implementing construction site runoff inspections.
- Procedures/Policies to identify priority sites for inspection:
  - ❖ Extent of construction activity
  - ❖ Topography
  - ❖ Soils
  - ❖ Receiving Waters
- Convey plan review 'knowledge' to Inspectors

## MS4 PROJECT REVIEW FOR PRIORITY INSPECTIONS

City of Crown Point \* 101 N. East St. \* Crown Point, IN 46307  
Phone: (219) 662-3242 \* Fax: (219) 661-2280

Project/Subdivision:		SWPPP Reviewer:	
Location:		Date:	
SWPPP Preparer:			

The Crown Point Stormwater Management Ordinance (Chapter 7) identifies Sensitive Areas and Impact Drainage Areas as follows:

- **Sensitive Areas** include: highly erodible soils, wetlands, threatened or endangered species habitat, outstanding waters, impaired waters, recreational waters, and surface drinking water sources.
- **Impact Drainage Areas** include: a floodway or floodplain as designated by the most updated Crown Point Code dealing with floodplain regulation; land within 75 feet of each bank of any ditch within the Lake County Regulated Drainage System; land within 75 feet of the centerline of any drain tile or enclosed conduit within the Lake County Regulated Drainage System.

Projects that contain impacts or discharges to **Sensitive Areas** or **Impact Drainage Areas** will be identified as **Priority Sites** for construction site inspections and enforcement. During the course of the SWPPP review, identify any of the following items that the construction project impacts or discharges to:

Sensitive Area or Impact Drainage Area Potential Items	As identified in the SWPPP submittal:				
	Is Item Within or Adjacent to the Project Limits?		Do Construction Activities Impact or Discharge to the Item?		
	YES	NO	YES	NO	N/A
Highly Erodible Soils					
Wetlands					
Threatened or Endangered Species Habitat					
Outstanding Waters					
Impaired Waters					
Recreational Waters					
Surface Drinking Water Sources					
Floodway or Floodplain					
Land within 75 Feet of bank of a Regulated Drain					
Land within 75 feet of the centerline of drain tile or conduit of Lake County Regulated Drainage System					
Wellhead Protection Area					
Sinkholes					
Class V Injection Wells					

When this "MS4 Project Review for Priority Inspections" checklist is completed, forward to the Crown Point MS4 Department.

# Construction Site Stormwater Runoff Program Requirements

REGULATORY MECHANISM
SITE PLAN REVIEW
INSPECTIONS
ENFORCEMENT
INFORMATION FROM THE PUBLIC
APPROPRIATE BMPs
MEASURABLE GOALS

- Established within the Ordinance.
- Escalating in strength:
  - ❖ First time offense vs. repeat offender
  - ❖ Amount of pollutant discharged; severity
  - ❖ Accident vs. negligence

## Sample #1

EXTENT OF DAMAGE				
MATERIALS RELEASED (potential for harm)	Ranges are per/day violations (does not include recoverable damages or expenses)	MINOR Can be restored to original state	MODERATE Cannot be restored to original state No structural damage No impairment to MS4 drainage conveyance	MAJOR Significantly impairs drainage/structures Removal of contaminated soils or replacement of structures required Failure to obtain permit or comply with MS4 enforcement
	MINOR Non-toxic materials discharged	\$100 - \$500	\$500 - \$1000	\$1000 - \$2500
	MODERATE Potentially harmful materials discharged	\$500 - \$1000	\$1000 - \$2500	\$2500 - \$4000 (≤\$2500 for 1 <sup>st</sup> offense)
	MAJOR Health- threatening materials discharged	\$1000 - \$2500	\$2500 - \$4000 (≤\$2500 for 1 <sup>st</sup> offense)	\$4000 - \$7500 (\$2500 for 1 <sup>st</sup> offense)

# Construction Site Stormwater Runoff Program Requirements

REGULATORY  
MECHANISM

- Established within the Ordinance.

SITE PLAN REVIEW

- Escalating in strength:
  - ❖ First time offense vs. repeat offender
  - ❖ Amount of pollutant discharged; severity
  - ❖ Accident vs. negligence

**Sample #2**

INSPECTIONS

ENFORCEMENT

Any person found in violation of any provision of this Ordinance shall be responsible for a civil infraction and subject to a maximum fine of \$2,500 for each offense, plus costs, damages, and expenses. The City of portage has established an Enforcement Response Schedule that standardizes the approach the City and its Public Utility Service Board may take in dealing with stormwater regulations offenses subject to this Ordinance and the associated Technical Standards document. The enforcement response schedule is as noted in the following table:

Offence #	Type of Response Anticipated
1 <sup>st</sup> offense	Verbal Telephone Notice, Letter of Violation or Written Warning and Administrative Penalty
2 <sup>nd</sup> offense	Letter of Violation, Administrative Penalty and/or Site Visit
3 <sup>rd</sup> offense	Letter of Violation, Administrative Penalty and/or Site Visit
4 <sup>th</sup> offense	Letter of Violation, Administrative Penalty and/or Site Visit
5 <sup>th</sup> offense	Agreed Order, Administrative Penalty and/or Site Visit
6 <sup>th</sup> offense	Administrative Order, Administrative Penalty and/or Site Visit
7 <sup>th</sup> offense	Compliance Schedule, Administrative Penalty and/or Site Visit
8 <sup>th</sup> offense	Litigation and Administrative Penalty

Offence #	Penalty
1 <sup>st</sup> offense	\$250.00
2 <sup>nd</sup> offense	\$500.00
3 <sup>rd</sup> offense	\$1,000.00
4 <sup>th</sup> offense	\$2,500.00

INFORMATION  
FROM THE PUBLIC

APPROPRIATE  
BMPs

MEASURABLE  
GOALS



# Construction Site Stormwater Runoff Program Requirements

REGULATORY  
MECHANISM

SITE PLAN REVIEW

INSPECTIONS

ENFORCEMENT

INFORMATION  
FROM THE PUBLIC

APPROPRIATE  
BMPs

MEASURABLE  
GOALS

- Required to demonstrate acknowledgement and consideration of information from the public.
- May use a simple tracking process: log book, spreadsheet, database, etc.
- Used as a tool to identify areas or instances of construction site non-compliance.

Sample Website Form

A sample website form for public input. The form has a yellow background and a navigation bar at the top with links: 'ment', 'Departments', 'Visiting', 'Business', 'Online Services', and 'I Want To...'. The form fields are: 'From' (text input), 'Subject' (dropdown menu with 'Comment' selected), 'Phone Nbr' (text input), 'Email Address' (text input), and 'Question' (large text area). Fields marked with a red asterisk (\*) are required. A legend at the bottom states: 'Fields denoted with \* are required'. At the bottom right are 'Send' and 'Reset' buttons.

ment Departments Visiting Business Online Services I Want To...

From

Subject \*

Phone Nbr

Email Address \*

Question \*

Fields denoted with \* are required

Send Reset

# Construction Site Stormwater Runoff Program Requirements

REGULATORY  
MECHANISM

SITE PLAN REVIEW

INSPECTIONS

ENFORCEMENT

INFORMATION  
FROM THE PUBLIC

APPROPRIATE  
BMPs

MEASURABLE  
GOALS

## Sample Technical Standards

Table C-1  
Approved Stormwater Pollution Control Practices for Construction Sites

Practice No.	BMP Description	Applicability / Limitations	Fact Sheet
<b>Administrative</b>			
1a	Permitting (Stormwater, Floodway, Wetland)	All Sites as required by local, state and federal regulations	N/A
1b	Stormwater Pollution Prevention Plan (SWP3)	All sites with 1 acre or more disturbance	N/A
1c	Posting Rule 5 NOI	All sites with 1 acre or more disturbance	N/A
1d	Self-monitoring	All permitted sites	N/A
1e	Apply for Rule 5 NOT	All sites with Rule 5 permit	N/A
<b>Planning - Sequencing</b>			
2a	Construction Sequencing	All permitted sites requiring a permit	CN - 101
<b>Planning - Site Preservation / Protection</b>			
3a	Tree Preservation and Protection	Strongly recommended for nearly all sites with desirable trees	CN 120
3b	Wetland Areas Protection	All delineated wetlands	CN 121
<b>Site Access / Traffic Control Practices</b>			
4a	Temporary Construction Entrances	All sites	CN 114
4b	Wheel Wash	All sites	CN 102
4c	Street Sweeping	All sites	CN 122
<b>Filtration / Settling - Perimeter Sediment Control</b>			
5a	Silt Fence (Short Term)	Projects lasting no longer than 3 months (see limitations)	CN 107
5b	Silt Fence (Long term)	Projects lasting >3 months (see limitations)	CN 107
5c	Coir Logs		
<b>Filtration / Settling - Sediment Traps</b>			
6a	Temporary Sediment Trap/Basin	5 acre maximum contributing drainage area	CN 123
<b>Surface Stabilization - Temporary Cover</b>			
7b	Temporary Seeding (including dormant seeding)	Areas of bare soil where additional work is not scheduled to be performed for a minimum of 14 days	CN 124
<b>Surface Stabilization - Permanent Cover</b>			
8a	Fertilization & Soil Amendments	Areas as needed based on soil testing	CN 126
8b	Permanent Seeding	All areas of bare soil at final grade	CN 125

APPENDIX C

October 8, 2013

Practice No.	BMP Description	Applicability / Limitations	Fact Sheet
8c	Erosion Control Blanket (Surface)	Final surface stabilization	CN 108
<b>Material Management - Concrete Washout</b>			
9a	Concrete Washout Pit (Above Ground)	All sites utilizing concrete	CN 127
9b	Concrete Washout Pit (Below Ground)	All sites utilizing concrete	CN 128
9c	Manufactured Concrete Washout Basins	All sites utilizing concrete	CN 116
<b>Surface Stabilization - Temporary Diversion</b>			
10a	Diversion Berm	Up-slope and down-slope sides of construction site, above disturbed slopes within construction site	CN 129
10b	Slope Drains		CN 130
<b>Filtration / Settling - Check Dams</b>			
11a	Rock Check Dam	2 acres maximum contributing drainage area	CN 123
11b	Manufactured Temporary Permeable Berms	For swales (max. 38% slopes)	CN 110
11c	Silt Tubes	Sheet flow, sheet flow perimeter barrier	CN 117
<b>Filtration / Settling - Inlet Protections</b>			
12a	Rigid Frame Yard inlet Protection	Maximum flow rate must be <= WQr	CN 131
12b	Yard Inlet Protection	Small areas only	
<b>Surface Stabilization - Outlet Protection</b>			
13a	Permanent Transition Mats for Outlets	Must cover entire outlet surface area	CN 113
<b>Surface Stabilization - Wind Soil Suspension</b>			
14a	Dust Control Treatments	Must be reapplied as needed	CN 115
14b	Drive Watering	Must be continually applied in dry weather	CN 132
<b>Filtration / Settling - Dewatering Bag</b>			
15a	Dewatering Bags	Must be sized for maximum pump rate	CN 117/103
<b>Filtration / Settling - Polymers</b>			
16a	Floculating Polymers	Must be sized for maximum anticipated WQr	CN 118
<b>Surface Stabilization - Soil Reinforcement</b>			
17a	Long-Term Mats		CN 109

APPENDIX C

October 8, 2013

# Construction Site Stormwater Runoff Program Requirements

REGULATORY  
MECHANISM

SITE PLAN REVIEW

INSPECTIONS

ENFORCEMENT

INFORMATION  
FROM THE PUBLIC

APPROPRIATE  
BMPs

MEASURABLE  
GOALS

## Sample Stormwater Quality Management Plan (SWQMP) Part C

*Table 3-3 Construction and Post-Construction BMPs*

Best Management Practice (BMP)	BMP Description	Measurable Goals, Tracking, and Programmatic Indicators	Timeline	Responsible Party
<b>Stormwater Management Ordinance</b>	<ul style="list-style-type: none"> <li>Review the active construction and post-construction site language contained in the Lake County Stormwater Management and Clean Water Regulations Ordinance once per permit term for updates and to ensure compliance with current Rule 5 language</li> </ul>	<ul style="list-style-type: none"> <li>Continue to enforce the Stormwater Management and Clean Water Regulations Ordinance</li> <li>Review the Stormwater Management and Clean Water Regulations Ordinance at least once per permit term; document the review</li> </ul>	On-going	LCSO Staff; Consultant
<b>Plan Review, Site Inspection, and Enforcement</b>	<ul style="list-style-type: none"> <li>LCSO Staff will continue their review of project plans, conducting site inspections, and actively enforcing the Lake County Stormwater Management and Clean Water Regulations Ordinance for compliance with active construction site and post-construction site requirements</li> </ul>	<ul style="list-style-type: none"> <li>Continue to review and approve proposed new and redevelopment projects</li> <li>Continue to review 100% of construction plans and SWPPPs</li> <li>Inspect priority construction sites at least four (4) times annually</li> <li>Check As-Built drawings for newly installed post-construction BMPs</li> <li>Track using Programmatic Indicators #13, #14, #15, #17, #18, #19, and #20</li> </ul>	On-going	LCSO Staff; Consultant; SWCD for MS4-Owned Projects
<b>Training for Construction Professionals</b>	<ul style="list-style-type: none"> <li>Present an education program on erosion and sediment control standards and BMPs for members of the local construction and development community</li> </ul>	<ul style="list-style-type: none"> <li>Conduct one (1) training/workshop annually</li> <li>Document date, time, and attendance at workshops</li> <li>Track using Programmatic Indicators #1, #2, and #3</li> </ul>	Annually	LCSO Staff; Consultant

# Post-Construction Stormwater Runoff Program Requirements

United States  
Environmental Protection  
Agency

Office of Water  
(4203)

January 2000

W-00-009

September 2005)

Fact Sheet 2.7



## Post-Construction Runoff Control Minimum Control Measure

AUDIT ITEMS

### What Is Required?

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in post-construction runoff to their MS4 from new development and redevelopment projects that result in the land disturbance of greater than or equal to 1 acre. The small MS4 operator is required to:

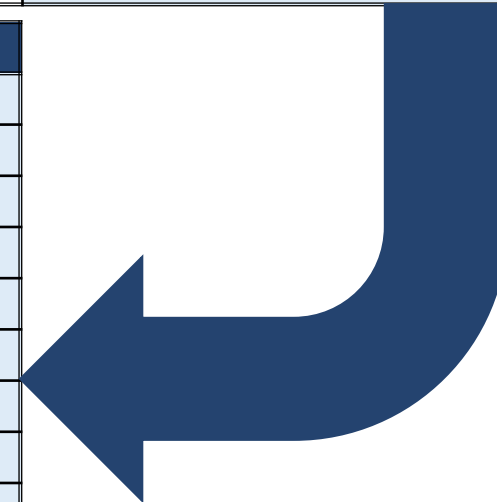
- ☐ Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs);
- ☐ Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law;
- ☐ Ensure adequate long-term operation and maintenance of controls;
- ☐ Determine the appropriate best management practices and measurable goals for this minimum control measure.



# POST-CONSTRUCTION BMPs FOR STORMWATER “HOT SPOTS”: PRE-TREATMENT OPTIONS

Stormwater Hot Spots	Minimum Pre-Treatment Options
Vehicle Maintenance and Repair Facilities	A, E, F, G
Vehicle Fueling Stations	A, D, G
Drive-through Restaurants, Pharmacies, Convenience Stores	B, C, D, I, K
Outdoor Chemical Mixing or Handling	G, H
Outdoor Storage of Liquids	G
Commercial Nursery Operations	I, J, L
Other Uses or Activities Designated by Appropriate Authority	As Required

Minimum Pre-Treatment Options	
<b>A</b>	Oil/Water Separators / Hydrodynamic Separators
<b>B</b>	Sediment Traps/Catch Basin Sumps
<b>C</b>	Trash/Debris Collectors in Catch Basins
<b>D</b>	Water Quality Inserts for Inlets
<b>E</b>	Use of Drip Pans and/or Dry Sweep Material under Vehicles/Equipment
<b>F</b>	Use of Absorbent Devices to Reduce Liquid Releases
<b>G</b>	Spill Prevention and Response Program
<b>H</b>	Diversion of Stormwater away from Potential Contamination Areas
<b>I</b>	Vegetated Swales/Filter Strips
<b>J</b>	Constructed Wetlands
<b>K</b>	Stormwater Filters (Sand, Peat, Compost, etc.)
<b>L</b>	Stormwater Collection and Reuse (especially for irrigation)
<b>M</b>	BMPs that are a part of a Stormwater Pollution Prevention Plan (SWPPP)



# State Audit Form

<b>Wetlands and Storm Water Section</b> <b>Storm Water Program</b> <b>Office of Water Quality</b> <b>Indiana Department of Environmental Management</b>	<b>Authority:</b> <i>This inspection was conducted pursuant to Indiana Code (IC) 13-14-2-2 and is consistent with the requirements of IC 13-14-5.</i>
Municipal Separate Storm Sewer System (MS4) Minimum Control Measure Audit: <ul style="list-style-type: none"><li>• Construction Site Run-off</li><li>• Post-Construction Run-off</li></ul>	<b>Date of Audit:</b> <b>Report Issued:</b> <b>Audit Conducted By:</b> <b>Report Prepared By:</b>

This audit report is a cumulative overview of the MS4 program for the construction site run-off and post-construction run-off minimum control measures. The report provides general background information, observations, recommendations, and requirements. The purpose of the audit is to identify program areas where an MS4 can improve program implementation, but to also identify deficiencies and/or violations that will require the MS4 to respond or address within specified timelines.

## Section A: MS4 Program Information

<b>MS4 Entity:</b>		<b>County:</b>
<b>MS4 Permit Number:</b>	<b>Permit Start and Expiration:</b>	
<b>MS4 Operator:</b>		
<b>MS4 Coordinator/Representative:</b>		
<b>Audit Participants:</b>		
<b>Construction Certification Date:</b> <b>Post-Construction Certification Date:</b>		

# State Audit Form

Section B: Overall Program Assessment - Construction Site Run-off <i>(S = Satisfactory, M = Marginal, U = Unsatisfactory, NE = Not Evaluated, NA = Not Applicable)</i>	
<div><div>S M U NE NA</div><div>(B1) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The construction site ordinance meets the intent of 327 IAC 15-5.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(B2) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Requirements and standards have been developed and/or adopted for the implementation of measures associated with erosion, sedimentation, and other waste on construction sites.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(B3) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Construction plans submitted for regulated projects are reviewed in accordance with the local MS4 ordinance.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(B4) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Construction projects are managed through a tracking system that includes name, address/location, duration, indication of compliance actions, and status (active NOI or equivalent and termination).</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(B5) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The construction site run-off inspection program has established procedures and written policy for program implementation; including sites that are a priority for inspection.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(B6) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Policy and procedures are implemented to enforce the construction site run-off program. The MS4 utilizes <input type="checkbox"/> Fines <input type="checkbox"/> Stop work orders <input type="checkbox"/> Penalties <input type="checkbox"/> Permit suspension</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(B7) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> MS4 personnel responsible for plan review, inspection, and enforcement of construction activities attend annual training.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(B8) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The construction site run-off program is reviewed at least once every five (5) years.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>(B9) Overall performance in administering the construction site run-off minimum control measure.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	

Section C: Overall Program Assessment - Post-construction Site Run-off <i>(S = Satisfactory, M = Marginal, U = Unsatisfactory, NE = Not Evaluated, NA = Not Applicable)</i>	
<div><div>S M U NE NA</div><div>(C1) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The post-construction ordinance addresses local resource issues and meets the intent of 327 IAC15-5.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(C2) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Requirements and standards have been developed and/or adopted for the implementation of measures associated with post-construction site run-off.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(C3) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The MS4 directs physical growth away from sensitive areas and towards those that will not compromise water quality. The MS4 manages the selection of measures in wellhead protection areas, discharges to other sensitive resource areas, and where applicable sinkholes.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(C4) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> New retail gasoline outlets and refueling areas that replace their existing fuel tank systems are required by ordinance or other means to design and install appropriate measures to reduce lead, copper, zinc and polycyclic aromatic hydrocarbons in storm water run-off from the facility.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(C5) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Post-construction plans submitted for regulated projects are reviewed in accordance with the local MS4 ordinance.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(C6) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The MS4 requires the development and implementation of written operational and maintenance plans for all planned structural post-construction storm water management measures to ensure long-term functionality.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(C7) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The post-construction site run-off inspection program has established procedures for implementation, including a mechanism to enforce failure to maintain a post-construction measure.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(C8) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> MS4 personnel responsible for plan review, inspection, and enforcement of the post-construction program attend annual training.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	
<div><div>S M U NE NA</div><div>(C9) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The post-construction site run-off program is reviewed at least once every five (5) years.</div><div>Comment:</div><div>Recommendations:</div><div>Requirements:</div></div>	

# State Audit Form

## Section D: Audit Summary

### Action Items:

- Recommendations:  
(1)
- Required Actions:  
(1)

### Attachments:

**Action by IDEM:** Failure to address and/or respond to deficiencies and/or violations may result in further action by IDEM including, but not limited to a compliance meeting and/or a non-compliance letter. As warranted, IDEM will perform follow-up inspections for projects owned and operated by the MS4 as they are permitted and will periodically revisit sites regulated by the MS4.

## Section E: Audit Information

### Report Provided to:

- Insert primary recipient

Report distributed: ☐ Email ☐ Mail ☐ Via Certified Mail:

Questions and the submittal of documents in response to this report should be directed to:  
Storm Water Specialist

Phone: Email:

Section Chief Storm Water and Wetlands Program  
100 North Senate Avenue  
IGCN, Room 1255  
Indianapolis, Indiana 46204  
Phone: 317-234-3980



<b>Wetlands and Storm Water Section</b> <b>Storm Water Program</b> <b>Office of Water Quality</b> <b>Indiana Department of Environmental Management</b>	<b>Authority:</b> <i>This inspection was conducted pursuant to Indiana Code (IC) 13-14-2-2 and is consistent with the requirements of IC 13-14-5.</i>
Municipal Separate Storm Sewer System (MS4) Minimum Control Measure Audit: <ul style="list-style-type: none"><li>• Construction Site Run-off</li><li>• Post-Construction Run-off</li></ul>	<b>Date of Audit:</b> <b>Report Issued:</b> <b>Audit Conducted By:</b> <b>Report Prepared By:</b>
This audit report is a cumulative overview of the MS4 program for the construction site run-off and post-construction run-off minimum control measures. The report provides general background information, observations, recommendations, and requirements. The purpose of the audit is to identify program areas where an MS4 can improve program implementation, but to also identify deficiencies and/or violations that will require the MS4 to respond or address within specified timelines.	
<b>Section A: MS4 Program Information</b>	
MS4 Entity:	County:
MS4 Permit Number:	Permit Start and Expiration:
MS4 Operator:	
MS4 Coordinator/Representative:	
Audit Participants:	MCM 4 & 5 Audit Form with Binder Tab References:
Construction Certification Date: Post-Construction Certification Date:	
<b>Projects Regulated by MS4:</b> <input type="checkbox"/> All new projects are regulated upon the effective date of the construction site ordinance. The MS4 did not assume responsibility for projects that were active prior to passage of the local ordinance. These projects remain under the regulatory authority of IDEM. <input type="checkbox"/> All new and active projects within the MS4 area, including those where construction was initiated prior to the effective date of the construction site ordinance. <input type="checkbox"/> The MS4 is a non-traditional MS4 (University, Prison, College, etc.) and does not regulate projects within the MS4. All projects that occur within the MS4 are considered to be owned and operated by the MS4. The MS4 is responsible to obtain a permit in accordance with 327 IAC 15-5 and manage the construction site.	
<b>MS4 Boundaries for Program Administration of the Construction Minimum Control Measure:</b> <input type="checkbox"/> County MS4: <input type="checkbox"/> Urbanized Areas Only <input type="checkbox"/> Entire County, Excluding Incorporated Areas Clarification: <input type="checkbox"/> Municipality, City, Town: <input type="checkbox"/> Urbanized Areas Only <input type="checkbox"/> Other Clarification:	
Outreach to the Regulated Community (Construction Site and Post-construction Run-off):	
<b>Section B: Overall Program Assessment - Construction Site Run-off</b> (S = Satisfactory, M = Marginal, U = Unsatisfactory, NE = Not Evaluated, NA = Not Applicable)	
S M U NE NA (B1) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> The construction site ordinance meets the intent of 327 IAC 15-5. Comment: Recommendations: Requirements:	
S M U NE NA (B2) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Requirements and standards have been developed and/or adopted for the implementation of measures associated with erosion, sedimentation, and other waste on construction sites.	

Create Binder with  
Required Documents

INDIANA ADMINISTRATIVE CODE SECTIONS 327 IAC 15-13-15 & -16 MCM 4 & MCM 5 Document Binder Index	TAB NO.
<b>MCM 4 &amp; MCM 5</b> Certification documents; Outreach to Regulated Community.	<b>Tab 1</b> Certification; Outreach Materials
<b>MCM 4 &amp; MCM 5:</b> Local Ordinance that governs Construction Site Run-off (MCM 4) and Post-Construction Site Run-off (MCM 5) and meets the intent of 327 IAC 15-5.  Trigger for local drainage review is land disturbance area of _____. Trigger for local SWPPP is land disturbance area of _____.	<b>Tab 2</b> Local Ordinance Governing Construction & Post-Construction Site Run-off
<b>MCM 4 &amp; MCM 5:</b> Requirements & Technical Standards for implementation of measures associated with MCM 4 & MCM 5.	<b>Tab 3</b> Local Technical Standards for MCM 4 & 5
<b>MCM 4</b> Implementation Measures: (A) Construction plan review process; checklists. (B) Construction project tracking system that includes the name, address/location, duration, compliance actions, status (NOI and NOT). (C) Implementation procedures: written procedures for inspections; inspection checklist; procedures for priority site inspections. (D) Enforcement procedures.	<b>Tab 4</b> MCM 4 Implementation Measures
<b>MCM 4 &amp; MCM 5:</b> MS4 personnel responsible for plan review, inspection, and enforcement of construction activities and post-construction program activities shall attend annual training.	<b>Tab 5</b> Training
<b>MCM 4 &amp; MCM 5:</b> Ordinance and program review/update cycle.	<b>Tab 6</b> Program Review Cycle
<b>MCM 5</b> Implementation Measures: (A) Growth is directed away from sensitive areas. (B) MS4 manages the selection of measures in wellhead protection areas, discharges to other sensitive resource areas, and where applicable sinkholes. (C) New/Replaced Fuel Tanks: MS4 requires new and replacement fuel tanks to have appropriate stormwater BMPs. (D) Requirement for Post-Construction O&M plans. (E) Inspection procedures. (F) Mechanism to enforce failure to maintain a post-construction measure.	<b>Tab 7</b> MCM 5 Implementation Measures

AUDIT PREPARATION	OFFICE AUDIT	CONSTRUCTION SITE	POST-AUDIT ACTIONS
<b>MS4 Program Information</b>	<ul style="list-style-type: none"> <li>➤ <b>Local MS4 Staff/Organization</b> <ul style="list-style-type: none"> <li>❖ MS4 Operator (Highest Elected Official)</li> <li>❖ MS4 Coordinator</li> <li>❖ Plan Reviewers, Site Inspectors</li> </ul> </li> </ul>		
<b>Overall Program Assessment of Construction Site Run-off</b>	<ul style="list-style-type: none"> <li>➤ <b>Program Certification dates (2005-2006 timeframe in Indiana)</b></li> <li>➤ <b>MS4 Boundaries</b> <ul style="list-style-type: none"> <li>❖ City/Town Limits</li> <li>❖ County Urbanized Area</li> <li>❖ Entire County</li> </ul> </li> </ul>		
<b>Overall Program Assessment of Post-Construction Site Run-off</b>	<ul style="list-style-type: none"> <li>➤ <b>Outreach to Regulated Community</b> <ul style="list-style-type: none"> <li>❖ Local Contractors, Developers, Engineering Firms, Designers</li> <li>❖ “Construction Site Personnel” is a defined target constituency for having “an awareness of storm water quality issues”</li> </ul> </li> </ul>		

AUDIT PREPARATION	OFFICE AUDIT	CONSTRUCTION SITE	POST-AUDIT ACTIONS
MS4 Program Information	<p>“Do you have a local Ordinance regulating Construction Site Run-Off?”</p> <p>“Is your Ordinance on-line?” (Auditor may already know the answer!)</p> <p>“Do you have a local Technical Standards Manual?”</p>		
Overall Program Assessment of Construction Site Run-off	<p>“Who reviews local construction plans and SWPPPs?”</p> <p><b>“What are the qualifications of the plan reviewer?”</b></p> <p>“Does the reviewer use a checklist?”</p> <p>“Who reviews plans/SWPPPs for MS4 Owned &amp; Operated projects?”</p>		
Overall Program Assessment of Post-Construction Site Run-off	<p>“Are MS4 Owned &amp; Operated projects reviewed to the same standards?”</p> <p>“When the plan review is completed, do you issue a Stormwater Permit?”</p>		

AUDIT PREPARATION	OFFICE AUDIT	CONSTRUCTION SITE	POST-AUDIT ACTIONS
MS4 Program Information	<p>“Do you have a construction project Tracking System?”</p> <p>“Do you have written procedures for your inspection program?”</p> <p>“Provide your procedure for determining priority sites for inspection?”</p>		
Overall Program Assessment of Construction Site Run-off	<p>“How often do you inspect a site?”</p> <p>“How do you enforce inspection violations?”</p> <p>“How many inspections have been performed in the past year?”</p> <p>“How many warnings, fines and Stop Work Orders have been issued?”</p>		
Overall Program Assessment of Post-Construction Site Run-off	<p>“What training have staff completed in the past year?”</p> <p>“How often do you review your construction site run-off program?”</p>		



AUDIT PREPARATION	OFFICE AUDIT	CONSTRUCTION SITE	POST-AUDIT ACTIONS
MS4 Program Information	<p>“Do you direct growth away from sensitive areas?”</p> <p>“Do you manage selection of measures in wellhead protection areas?”</p> <p>“Do you regulate projects that install new or replace existing fuel tanks?”</p>		
Overall Program Assessment of Construction Site Run-off	<p>“How do you review Post-Construction plans?”</p> <p>“Do you require written Operational &amp; Maintenance Plans?”</p> <p>“What are your procedures for inspecting post-construction BMPs?”</p> <p>“How many post-construction BMPs inspections have been performed?”</p>		
Overall Program Assessment of Post-Construction Site Run-off	<p>“How many post-construction warnings/violations have been issued?”</p> <p>“What training have staff completed in the past year?”</p> <p>“How often do you review your construction site run-off program?”</p>		

**MS4 Coordinator: “Let’s go to the South Ridge Subdivision for our construction site audit.”**

MS4 Coordinator: “Let’s go to the South Ridge Subdivision for our construction site audit.”

**Auditor: “Before we go there, as I was checking directions on how to get to the Engineering Department Office and I saw this huge land disturbance right next door. Let’s go there first.”**

MS4 C  
constr

Auditor  
to get  
distur

our

now  
and



Eng. Dept.



**Section D: Audit Summary****Action Items:**

- **Recommendations:**

B(7): MS4 personnel responsible for field inspections should pursue additional training related to construction site run-off. This training is available through courses that focus entirely on construction site run-off (i.e. local county Contractor workshop and online webinars)

C(7): No enforcement mechanism is in place should an owner refuse to correct a post-construction non-compliance issue, should one arise. While the MS4 has yet to have a compliance issue with an owner or facility, it is recommended that language should be inserted into county Code to address lack of enforcement mechanisms in place.

- **Required Actions:**

C(7): Identify policy and procedures for the routine inspection of post-construction measures in addition to those currently implemented based on complaints. This item must be completed and the policy and procedures submitted to IDEM no later than December 29, 2017.

**Attachments:**

**Action by IDEM:** Failure to address and/or respond to deficiencies and/or violations may result in further action by IDEM including, but not limited to a compliance meeting and/or a non-compliance letter. As warranted, IDEM will perform follow-up inspections for projects owned and operated by the MS4 as they are permitted and will periodically revisit sites regulated by the MS4.

NPDES PHASE II -- STORMWATER QUALITY MANAGEMENT PROGRAM  
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

MS4 STANDARD OPERATING PROCEDURE (SOP) FOR:

CONSTRUCTION/POST-CONSTRUCTION  
STORMWATER RUNOFF CONTROL

SOP Number: MCM-4/5  
October 2017

SOP No. MCM-4/5 for Construction/Post-Construction Stormwater Runoff Control

October 2017

BACKGROUND

State and Federal regulations require that MS4 operators shall develop and implement a Stormwater 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 more acres of land within the MS4 area (Minimum Control Measure 4); and includes developing, implementing, managing, and enforcing a program to address discharges of **postconstruction storm water run-off** from new development and redevelopment areas that disturb one or more acres of land (Minimum Control Measure 5). Specifically, State regulations for Construction Site Stormwater Runoff (MCM 4) and Post-Construction Stormwater Runoff (MCM 5) for the City of Crown Point National Pollutant Discharge Elimination System (NPDES) MS4 stormwater permit require the following:

**327 IAC 15-13-15(f):** "The MS4 operator, or a designated MS4 entity, shall meet the following:

- (1) Develop requirements for the implementation of appropriate BMPs on construction sites to control sediment, erosion, and other waste.
- (2) Review and approve the construction plans submitted by the construction site operator before construction activities commence.
- (3) Develop procedures for site inspection and enforcement to ensure that BMPs are properly installed.
- (4) Establish written procedures to identify priority sites for inspection and enforcement based on, at a minimum, the nature and extent of the construction activity, topography, and the characteristics of soils and receiving water quality.
- (5) Develop procedures for the receipt and consideration of public inquiries, concerns, and information submitted regarding local construction activities.
- (6) Implement, at a minimum, a tracking process in which submitted public information, both written and verbal, is documented and then given to appropriate staff for follow-up."

**327 IAC 15-13-16(c):** "The MS4 operator, or a designated MS4 entity, shall meet the following:

- (1) Infiltration practices will not be allowed in wellhead protection areas.
- (2) Discharges from an MS4 area will not be allowed directly into sinkholes or fractured bedrock without treatment that results in the discharge meeting Indiana ground water quality standards as referenced in 327 IAC 2-11.
- (3) Any storm water practice that is a Class V injection well must ensure that the discharge from such practices meets Indiana ground water quality standards as referenced in 327 IAC 2-11.
- (4) As site conditions allow, the rate at which water flows through the MS4 conveyances shall be regulated to reduce outfall scouring and stream bank erosion.
- (5) As site conditions allow, a vegetated filter strip of appropriate width shall be maintained along unvegetated swales and ditches.
- (6) New retail gasoline outlets, new municipal, state, federal, or institutional refueling areas, or outlets and refueling areas that replace their existing tank systems shall be required by MS4 ordinance or other regulatory means to design and install appropriate practices to reduce lead, copper, zinc, and polyaromatic hydrocarbons in storm water run-off."

Failure to implement the state regulations cited above in 327 IAC 15-13-15(f) and 327 IAC 15-13-16(c) will result in non-compliance with Crown Point's NPDES MS4 stormwater permit. An accepted practice for establishing written documentation of program implementation activities is through the use of Standard Operating Procedures, or SOPs. This SOP has been prepared and issued for Crown Point's Construction Site and Post-Construction Site Runoff control programs (Item 327 IAC 15-13-15(f) and 327 IAC 15-13-16(c) noted above) and has been named Crown Point SOP No. MS4-MCM-4/5.

- 2.2.2.1 Installation and maintenance of a stable construction site access.
- 2.2.2.2 Installation and maintenance of appropriate perimeter erosion and sediment control measures prior to land disturbance.
- 2.2.2.3 Minimization of sediment discharge and tracking from the lot.
- 2.2.2.4 Clean-up of sediment that is either tracked or washed onto roads. Bulk clearing of sediment shall not include flushing the area with water. Cleared sediment must be redistributed or disposed of in a manner that is in compliance with all applicable statutes and rules.
- 2.2.2.5 Implementation of concrete washout practices that securely contain and allow for the proper disposal of washout waste.
- 2.2.2.6 Adjacent lots disturbed by an individual lot operator must be repaired and stabilized with temporary or permanent surface stabilization.
- 2.2.2.7 Self-monitoring program including plan and procedures.
- 2.2.3 **Certification of Compliance** stating that the individual lot plan is consistent with the Stormwater Management Permit, as approved by the City, for the larger project (if the individual lot is part of a larger permitted project).
- 2.2.4 **Trained Individual:** name, address, telephone number, and list of qualifications of the trained individual in charge of the mandatory stormwater pollution prevention self-monitoring program for the project site.
- 2.2.5 **Implementation:** The individual lot operator is responsible for installation and maintenance of all erosion and sediment control measures until the site is stabilized.
- 2.2.6 **Individual Lot Plot Plan Permit Approval:** Crown Point MS4 staff will provide approval of Individual Lot Plot Plan Permit.
- 2.2.7 **TRACKING:** The number of Individual Lot Plot Plan Permits approved shall be tracked using Programmatic Indicator #13 and this information will be included with the Crown Point MS4 Annual Report.

### 3 CONSTRUCTION SITE INSPECTION & ENFORCEMENT

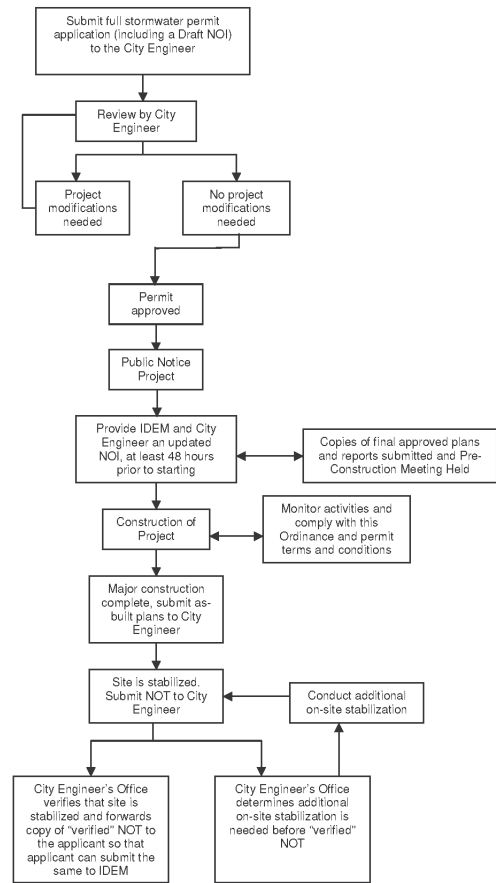
**Indiana Administrative Code:** "Develop procedures for site inspection and enforcement to ensure that BMPs are properly installed" (327 IAC 15-13-15(f)(3))."

*Note: this Section applies to "Non-MS4 Owned and Operated" and "MS4 Owned and Operated" projects.*

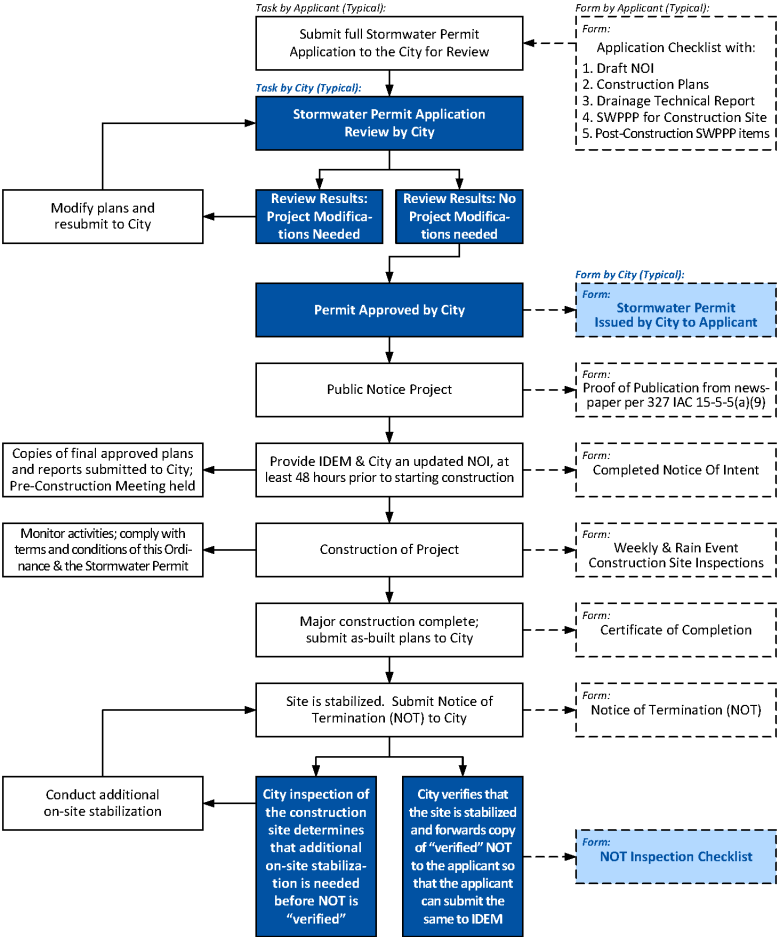
- 3.1 **Pre-Construction Meeting:** The Project Owner must schedule a Pre-Construction Meeting with the Crown Point MS4 staff to discuss and review the following items: construction site posting requirements, construction schedule, construction work sequence, self-monitoring requirements and the prioritization of MS4 staff site inspections correlated to critical construction periods/activities. A Pre-Construction Meeting Agenda template is attached in Appendix B of this SOP.
- 3.2 **Notice of Intent (NOI) & Proof of Public Notice:** The signed NOI, accompanied by proof of publication in a newspaper of general circulation in the affected area that notified the public that a construction activity is to commence, will need to be resubmitted later after the Stormwater Management Permit is granted and at least 48 hours prior to commencement of construction.
- 3.3 **Notice of Intent Posting:** The project site owner shall post the following near the main entrance of the project site: completed NOI; name, company name, telephone number, e-mail address (if available), and address of the project site owner or local contact person; and location of the construction plan if the project site does not have an on-site location to store the plan.

- 3.4 **Initial Inspection:** At the start of construction, Crown Point MS4 staff will conduct an initial inspection of the construction site to verify that perimeter controls have been installed properly and that the SWPPP is being implemented. A sample Inspection Form is included in Appendix B of this SOP.
- 3.5 **Self-Monitoring:** A self-monitoring program must be implemented by the project site owner to ensure the stormwater pollution prevention plan is working effectively. A trained individual, acceptable to the City, shall perform a written evaluation of the project site by the end of the next business day following each measurable storm event. A measurable storm event is defined as a precipitation event that results in a total measured precipitation accumulation equal to, or greater than, one-half (0.5) inch of rainfall. If there are no measurable storm events within a given week, the site should be monitored at least once in that week. Weekly inspections by the trained individual shall continue until the entire site has been stabilized and a Notice of Termination has been issued. The trained individual should look at the maintenance of existing stormwater pollution prevention measures, including erosion and sediment control measures, drainage structures, and construction materials storage/containment facilities, to ensure they are functioning properly. The trained individual should also identify additional measures, beyond those originally identified in the stormwater pollution prevention plan, necessary to remain in compliance with all applicable statutes and regulations. The resulting evaluation reports must include the name of the individual performing the evaluation, the date of the evaluation, problems identified at the project site, and details of maintenance, additional measures, and corrective actions recommended and completed.
- 3.6 **Inspections by Crown Point MS4 Staff:** After the initial construction site inspection to verify perimeter controls and required posting are in place, Crown Point MS4 staff will schedule future site inspections quarterly, with additional inspections for shorter duration projects and additional inspections associated with priority sites having defined critical inspection periods.
  - 3.6.1 After a construction site inspection is completed by Crown Point MS4 staff, if any Corrective Action items are deemed necessary, the required Corrective Action items and timelines will be communicated to the construction project's person responsible for onsite erosion control.
  - 3.6.2 After the issuance of a Corrective Action notification, Crown Point MS4 staff will conduct a follow-up inspection to verify that the Corrective Actions have been satisfactorily addressed.
  - 3.6.3 If a follow-up inspection by Crown Point MS4 staff determines that the identified Corrective Actions were not addressed satisfactorily, the City of Crown Point has enforcement and violation provisions as defined in the Stormwater Ordinance (Chapter 8). The Escalating enforcement actions identified in the Stormwater Ordinance include provisions for: fines, Stop Work Orders and the suspension of access to the City's storm drain system.
  - 3.6.4 **TRACKING:** The number of construction sites inspected shall be tracked using Programmatic Indicator #14 and this information will be included with the Crown Point MS4 Annual Report.
  - 3.6.5 **TRACKING:** The number and type of enforcement actions taken against construction site operators shall be tracked using Programmatic Indicator #15 and this information will be included with the Crown Point MS4 Annual Report.
- 3.7 **Notice of Termination (NOT):**
  - 3.7.1 Upon completion of construction activities, as-built plans must be submitted to the City of Crown Point.
  - 3.7.2 Upon achieving site stabilization and all temporary construction site erosion and sediment control measures have been removed, an NOT shall be submitted to the Crown Point MS4 staff.
  - 3.7.3 Upon receipt of an NOT from a Project Owner, the Crown Point MS4 staff will conduct an inspection of the site to ensure full compliance with the provisions of the Stormwater Ordinance and the terms and conditions of the site's approved SWPPP. After the NOT site inspection is completed by Crown Point MS4 staff, if any corrective action items are deemed necessary, the required corrective action items and timelines will be communicated to the person responsible for onsite erosion control. Upon verification by Crown Point MS4 staff that the requirements for an NOT have been met,

Figure 1: Permit Approval Process



(Ordinance Chapter 7, Figure 1)



# What are the requirements? 327 IAC 15-13(f) & (g)!

**327 IAC 15-13-15(f):** “The MS4 operator, or a designated MS4 entity, shall meet the following:

- (1) Develop requirements for the implementation of appropriate BMPs on construction sites to control sediment, erosion, and other waste.
- (2) Review and approve the construction plans submitted by the construction site operator before construction activities commence.
- (3) Develop procedures for site inspection and enforcement to ensure that BMPs are properly installed.
- (4) Establish written procedures to identify priority sites for inspection and enforcement based on, at a minimum, the nature and extent of the construction activity, topography, and the characteristics of soils and receiving water quality.
- (5) Develop procedures for the receipt and consideration of public inquiries, concerns, and information submitted regarding local construction activities.
- (6) Implement, at a minimum, a tracking process in which submitted public information, both written and verbal, is documented and then given to appropriate staff for follow-up.”

**327 IAC 15-13-16(c):** “The MS4 operator, or a designated MS4 entity, shall meet the following:

- (1) Infiltration practices will not be allowed in wellhead protection areas.
- (2) Discharges from an MS4 area will not be allowed directly into sinkholes or fractured bedrock without treatment that results in the discharge meeting Indiana ground water quality standards as referenced in 327 IAC 2-11.
- (3) Any storm water practice that is a Class V injection well must ensure that the discharge from such practices meets Indiana ground water quality standards as referenced in 327 IAC 2-11.
- (4) As site conditions allow, the rate at which water flows through the MS4 conveyances shall be regulated to reduce outfall scouring and stream bank erosion.
- (5) As site conditions allow, a vegetated filter strip of appropriate width shall be maintained along unvegetated swales and ditches.
- (6) New retail gasoline outlets, new municipal, state, federal, or institutional refueling areas, or outlets and refueling areas that replace their existing tank systems shall be required by MS4 ordinance or other regulatory means to design and install appropriate practices to reduce lead, copper, zinc, and polyaromatic hydrocarbons in storm water run-off.”

# MS4 Construction & Post-Construction Program Audits

## Lessons Learned



Heather Buck  
*hbuck@cbbel-in.com*  
(317) 266-8000