



# SPC's Water Resource Center Workshop

## MS4 – Minimum Control Measure #3



August 23, 2016



# MCM#3 Illicit Discharge Detection and Elimination

## • Federal Regulations

- *Develop, implement, and enforce a program to detect and eliminate illicit discharges into the MS4 .*
- *Develop a storm sewer system map, showing the location of all outfalls and the names and locations of all surface waters of the Commonwealth that receive discharges from those outfalls.*
- *To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges into your storm sewer system and implement appropriate enforcement procedures and actions .*
- *Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping, to your system.*
- *Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste .*

# Illicit Discharge Detection and Elimination

## • Department of Environmental Protection

- Best Management Practices (BMPs) and Measurable Goals are to be implemented and achieved:
  1. Develop, implement and maintain a written Public Education and Outreach Program
  2. Develop procedures for identifying priority areas, screening outfalls, eliminating illicit discharges
  3. Develop and maintain a map of regulated small MS4
  4. Conduct outfall field screening inspections
  5. Stormwater management ordinance includes prohibition of non-stormwater discharges

# Illicit Discharge Detection and Elimination (IDD&E)

## Written Plan

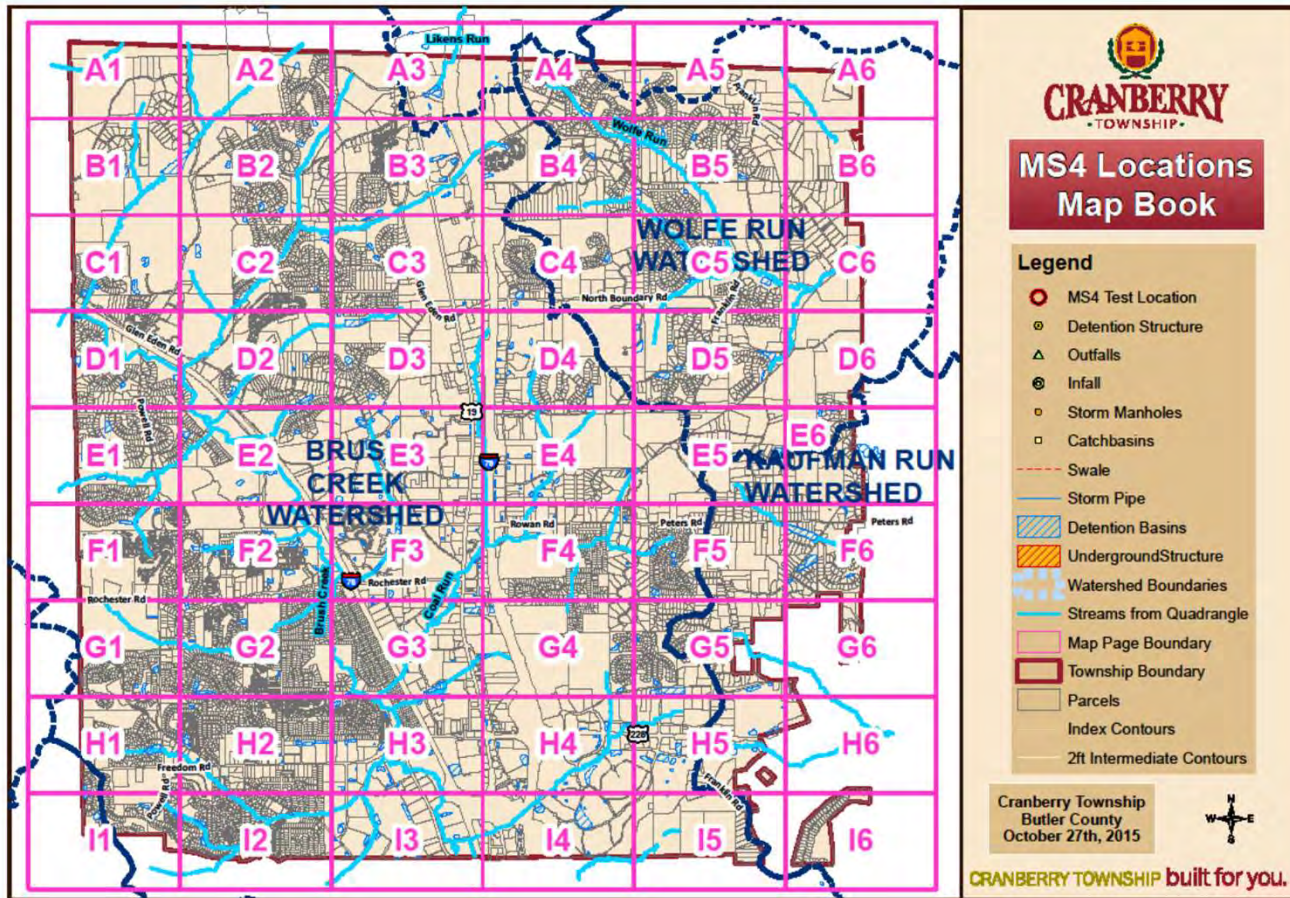
- **Identify Procedures**
  - **Priority Area**
  - **Screening outfall**
  - **Determine source of an illicit discharge**
  - **Eliminate illicit discharge**
  - **Gaining access to private property**
  - **Addressing complaints from public**

# **Illicit Discharge Detection and Elimination (IDD&E)**

## **Develop and Maintain Maps**

- **Urbanized Area Boundaries**
- **Location of Outfalls (Observation Points)**
- **Names of surface waters**
- **Entire storm sewer collection system including privately-owned components**

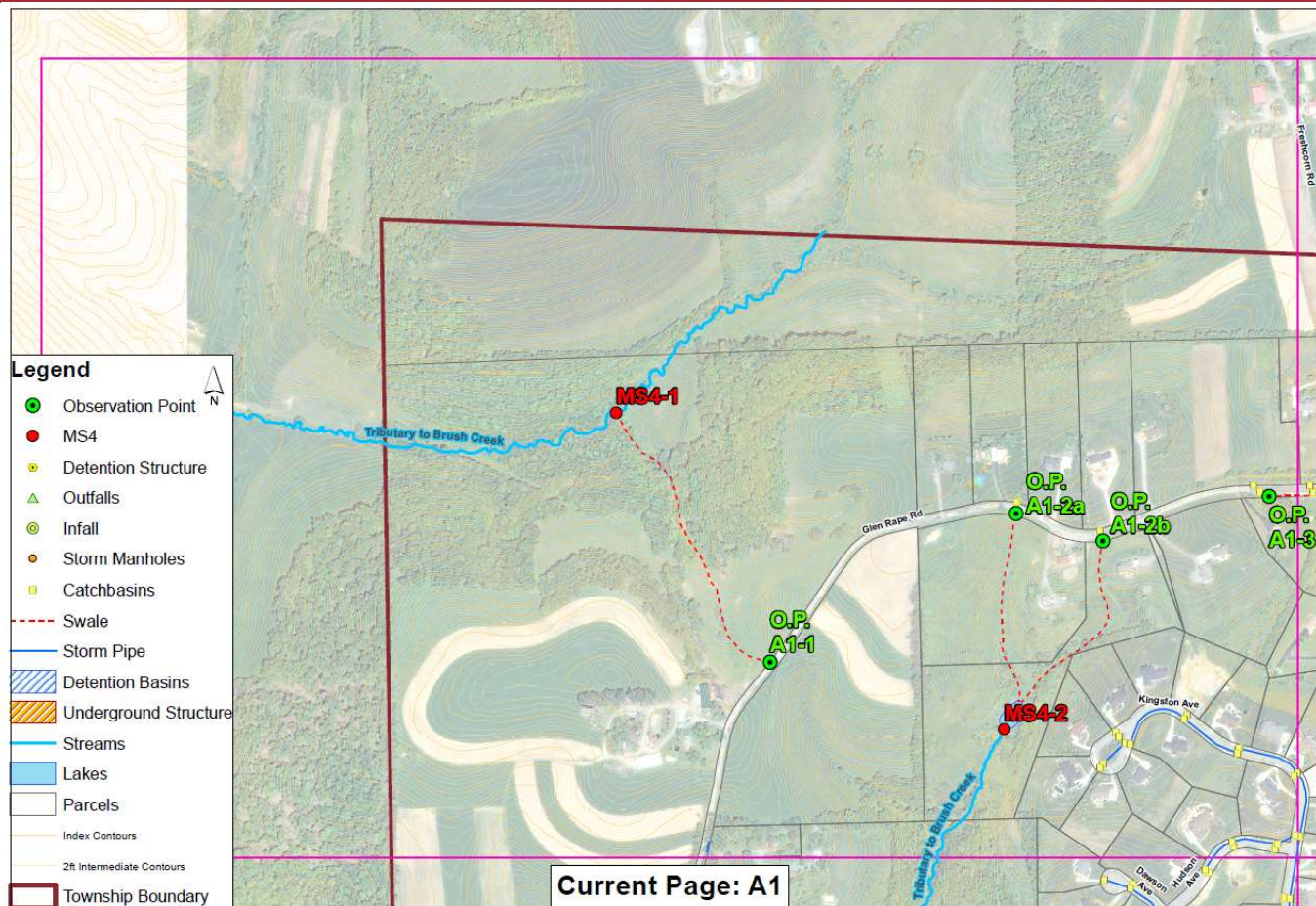
# MS4 Outfall Map



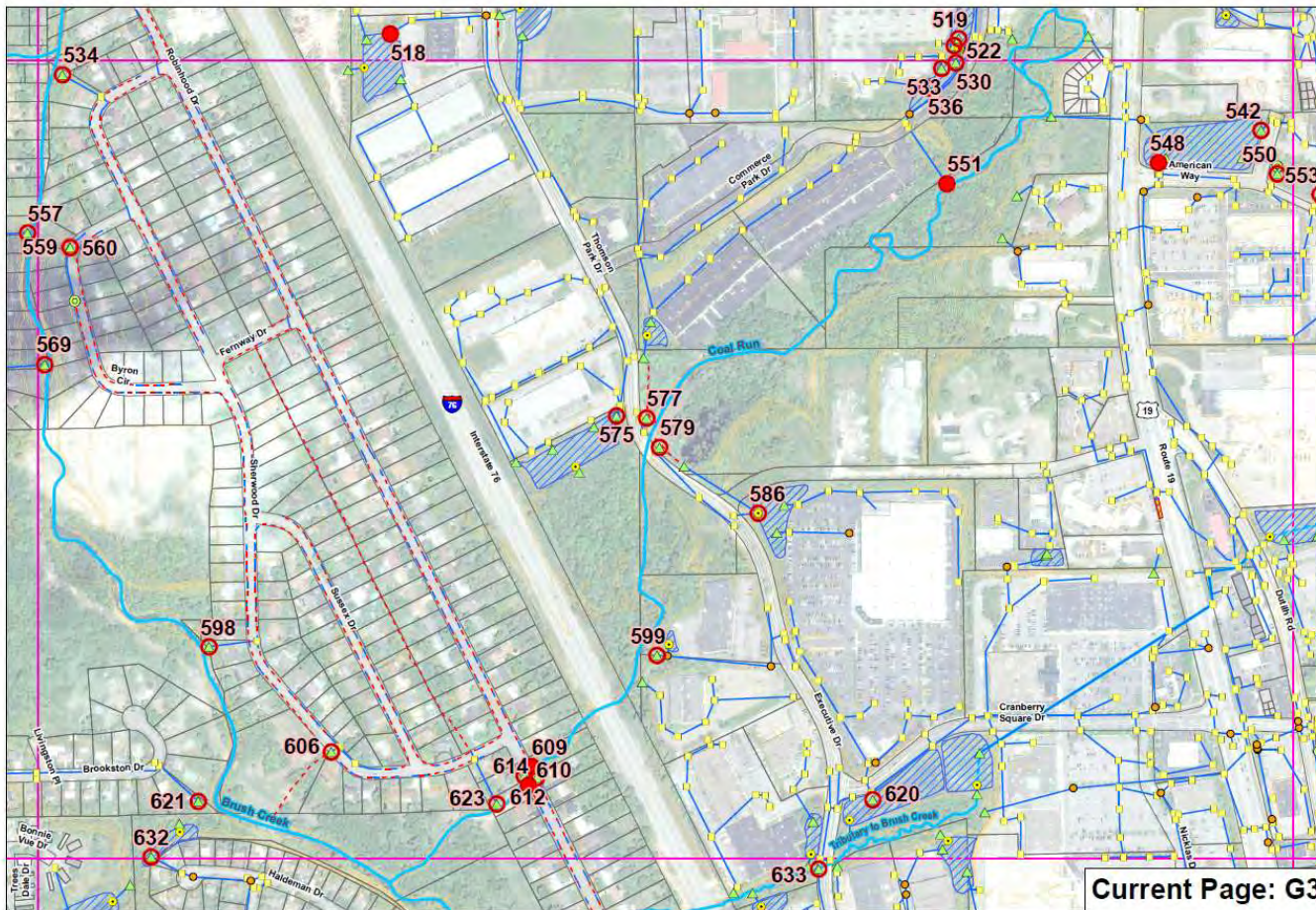
**2013 NOI**  
**148 Outfalls**

**2016**  
**658 Outfalls**

# MS4 Outfall Map

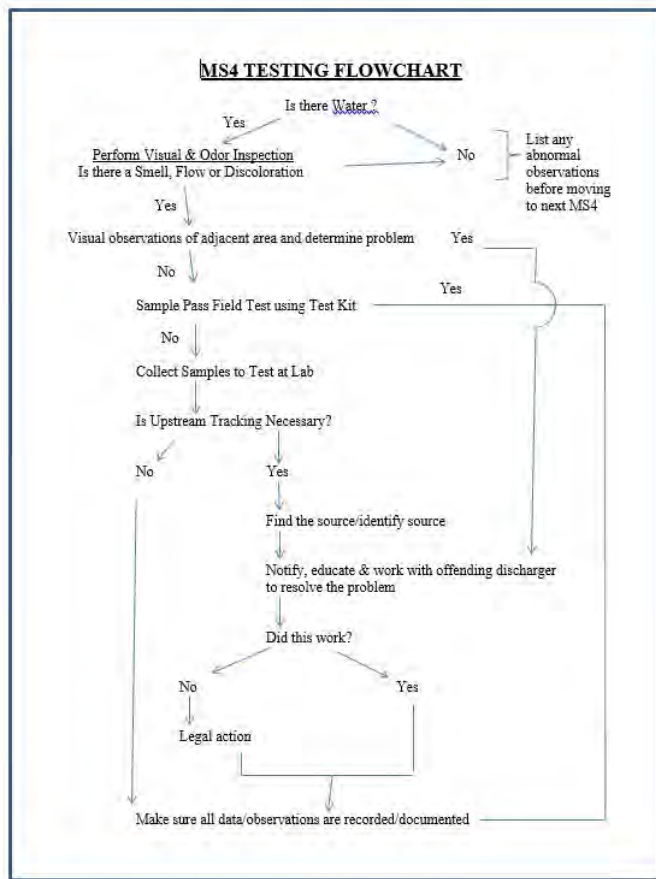


# MS4 Outfall Map





# Dry Weather Screenings



## Definitions/Notes:

Dry Weather Sampling – 72 hours necessary after a significant rainfall.

Illicit Discharge – release of non-stormwater to stormwater drainage system.

Visible Observations – color, odor, turbidity, sheen/scum.

Testing – water temperature, pH, total chlorine, total copper/total phenol, detergents/surfactants.

Other Observations – Floatables, vegetative growth, stains, settled solids, suspended solids, foam, oil, suds, acidity, conductivity, hardness, other abnormal conditions.

Various Ways to Find/Identify the Source – dye-testing buildings, dye or smoke testing buildings at time of sale, trace discharge upstream, employ certification program that shows that buildings have been checked for illicit connections, implement an inspection program of existing septic system, using video to inspect storm sewers.

Land Use – Residential, commercial, industrial, agricultural.

Receiving Waters – Brush Creek, Wolfe Run Creek, Breakneck Creek.

Public Complaint – open text.

Hours/Days after Rainfall – numeric.

Color – clear, red, yellow, brown, green, grey, other.

Odor – none, musty, sewage, rotten eggs, sour milk, other.

Turbidity – low, medium, high.

# Dry Weather Screenings

**Outfalls screened at least once during permit and inspected for:**

- **Color**
- **Odor**
- **Floating solids**
- **Scum**
- **Sheen**
- **Substances that result in observed deposits in the surface water**

# Dry Weather Screening Form

**ILLEGAL DISCHARGE FIELD SCREENING PROGRAM  
Data Collection Form**

OUTFALL #: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

TIME SINCE LAST RAIN: 272 hours < 72 hours  
 QUANTITY OF LAST RAIN: 20.1 inches < 0.1 inches  
 INSPECTION TEAM: \_\_\_\_\_

**SITE DESCRIPTION:**  
 LOCATION (Narrative Description): \_\_\_\_\_

STRUCTURE TYPE: OPEN CHANNEL    MANHOLE    OUTFALL    OTHER: \_\_\_\_\_

DOMINANT WATERSHED LAND USES: INDUSTRIAL    COMMERCIAL    RESIDENTIAL    UNKNOWN  
 OTHER: \_\_\_\_\_

**FLOW ESTIMATION:**  
 WAS FLOW OBSERVED? NO    YES    IF YES, PLEASE ANSWER a. - d. BELOW  
 a. WIDTH OF WATER SURFACE (feet): \_\_\_\_\_  
 b. APPROXIMATE DEPTH OF WATER (feet): \_\_\_\_\_  
 c. APPROXIMATE FLOW VELOCITY (feet per second): \_\_\_\_\_  
 d. FLOW RATE (cubic feet per second)  $a \times b \times c =$  \_\_\_\_\_

**VISUAL OBSERVATIONS:**  
 WAS A PHOTO TAKEN? NO    YES (Roll and Photo Number: \_\_\_\_\_)

ODOR: NONE    MUSTY    SEWAGE    ROTTEN EGGS    SOUR MILK    OTHER: \_\_\_\_\_

COLOR: CLEAR    RED    YELLOW    BROWN    GREEN    GREY    OTHER: \_\_\_\_\_

CLARITY: CLEAR    CLOUDY    OPAQUE

FLOATABLES: NONE    OILY SHEEN    GARBAGE/SEWAGE    OTHER: \_\_\_\_\_

DEPOSITS/STAINS: NONE    SEDIMENTS    OILY    OTHER: \_\_\_\_\_

VEGETATION CONDITION: NONE    NORMAL    EXCESSIVE GROWTH    INHIBITED GROWTH

STRUCTURAL CONDITION: NORMAL    CONCRETE CRACKING    METAL CORROSION    OTHER: \_\_\_\_\_

BIOLOGICAL: MOSQUITO LARVAE    BACTERIA/ALGAE    OTHER: \_\_\_\_\_

**FIELD ANALYSIS:**  
 WATER TEMP: \_\_\_\_\_ °C/°F    CHLORINE (Total): \_\_\_\_\_ mg/l  
 pH: \_\_\_\_\_    COPPER: \_\_\_\_\_ mg/l  
 PHENOL: \_\_\_\_\_ mg/l    DETERGENTS: \_\_\_\_\_ mg/l

WAS A LABORATORY SAMPLE COLLECTED? NO    YES  
 (if yes attach copy of chain-of-custody record)

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

DATA SHEET FILLED OUT BY: \_\_\_\_\_ (signature)    DATE: \_\_\_\_\_  
 \_\_\_\_\_ (print name)

This form was modified from the original "Illegal Discharge Field Screening Data Collection Form" developed by the County of San Diego. Copyright © 2008 by the County of San Diego. All rights reserved. This form is provided to you as a courtesy. It is not to be used for any other purpose. For more information, please contact the County of San Diego, Department of Public Works, 1500 La Jolla Village Drive, San Diego, CA 92161, (619) 491-6000. (3/08)

# Site Inspections



# Site Inspection Forms



## Erosion and Sediment Inspection Report

Project Site Name: \_\_\_\_\_ Inspection Date: \_\_\_\_\_

Address: \_\_\_\_\_ Lot #: \_\_\_\_\_

Inspector Name / Title: \_\_\_\_\_

Inspection Type (Check One):

Code Inspection  Stormwater Event  Bond Release  Random  Resident Call

No Site Representative or NA Yes No

1. Approved (Stamped) E & S plan and PCSM plan present on site
2. Visual Site Inspection Report Completed and on site
3. Rock Entrance - Erosion and Sediment Control In Place
4. Silt Protection - Erosion and Sediment Control In Place
5. Sediment Discharged Controlled On Site
6. Identify plan of action if No was checked for any above boxes.  
\_\_\_\_\_  
\_\_\_\_\_

7. Follow Up action performed from violation  
\_\_\_\_\_  
\_\_\_\_\_

Inspector's Signature: \_\_\_\_\_

**Typical Initial Inspection by  
Codes or Engineering Department**

<http://www.cranberrytownship.org>  
2825 Rochester Road  
Cranberry Township, PA 16066-6499

Administration suite 400 p 724.776.480 / 724.776.5488  
Police suite 500 s 724.776.5180 / 724.776.0237  
Public Works suite 400 p 724.776.4806 / 724.776.6199

## SITE INSPECTION REPORT

Project Name: \_\_\_\_\_ Project Developer: \_\_\_\_\_  
 Project Location: \_\_\_\_\_ Project No: \_\_\_\_\_  
 Inspector Name: \_\_\_\_\_ Inspection Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Inspection Attendee: \_\_\_\_\_ Company Name: \_\_\_\_\_  
 Inspection Attendee: \_\_\_\_\_ Company Name: \_\_\_\_\_

**PROJECT PHASE**

Timber Harvest  Building Construction  Construction of SWM Facilities   
 Clearing & Grubbing  Finish Grading  Maintenance of SWM Facilities   
 Rough Grading  Final Stabilization  Other

Number	Typ. Code Reference Number	Violation		Description (Problem/Violation), Location on Site, Required or Recommended Corrective Actions, and Additional Comments
		Initial	Repeat	

REQUIRED CORRECTIVE ACTION DEADLINE DATE: \_\_\_\_\_ RE-INSPECTION DATE: \_\_\_\_\_  
(DDMMYY) (DDMMYY)

§ 17.308 - This inspection report shall serve a notice of violation to the developer or utility company responsible for the violation. The Township shall set a time limit for the corrective action deadline date that will apply to all violations as defined in this report. Failure to comply within the time specified shall subject such person to Penalties Provisions.

§ 17.309 - If noted violation(s) currently constitute non-compliance and/or required corrective actions are not completed by the set deadline, a NOTICE TO STOP WORK ORDER, and/or other enforcement actions may be issued to the entity responsible for ensuring compliance on the above project.

Township Inspector: \_\_\_\_\_ Signature \_\_\_\_\_ Date \_\_\_\_\_

**Inspection by  
Waterworks Coordinator**



# Violation Notice



724 | 776 | 4806  
724 | 776 | 5488  
CranberryTownship.org

## NOTICE OF VIOLATION

CONTROL NO.: XXX

YOU ARE IN VIOLATION OF THE CODE OF CRANBERRY TOWNSHIP AS SPECIFIED BELOW:

A. Name (s) and Mailing Address (es) of Owner/Violator (s):

XXXXX

B. Location of Property in Violation:

Street Address: XXXX

Tax Parcel ID#: XXXX

Zoning District: XXX

C. Date & Time of Violation: XXXXXX

D. Details of Violation:

XXXXXX

E. Code of the Township Section (s) and Description of Requirement (s) not met:

XXXXXXX

F. You shall Commence Compliance within **XX (X)** days from receipt of this Notice by obtaining the required inspections and by addressing all issues to bring into compliance with the code, resulting in the issuance of the Certificate of Occupancy and CEASE OR CURE VIOLATION within **thirty (30)** days from receipt of this Notice by obtaining the required inspections and by addressing all issues to bring the single family residence into compliance with the code, resulting in the issuance of the Certificate of Occupancy. If you fail to comply, Criminal enforcement action may be taken against you. See Sanctions below:

G. I verify that the facts set forth in this Notice are true and correct to the best of my knowledge and belief.

\_\_\_\_\_  
XXXXXXXX  
XXXXXXXX

\_\_\_\_\_  
Date

H. I hereby acknowledge receipt of this Notice by signing and returning same to Cranberry Township Department of Community Development, 2525 Rochester Road, Suite 400, Cranberry Township, PA 16066.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

Certified Mail Receipt No.: XXXXXXXXXXXX  
*via regular mail*

SANCTIONS: \$1,000.00 per day maximum plus court costs and reasonable attorney fees.

**High Priority Problems or  
Unresponsive Action from Owner**

2525 Rochester Road | Ste 400 | Cranberry Township | PA | 16066



# **Information Stored in Digital and/or Paper Form**

## **Munis Software Package (Tyler Technology)**

- **Work Orders assigned to Staff**
- **Property Information**

## **Township Property File Room or Engineering**

## **Departments MS4 Program Designated Shelf**

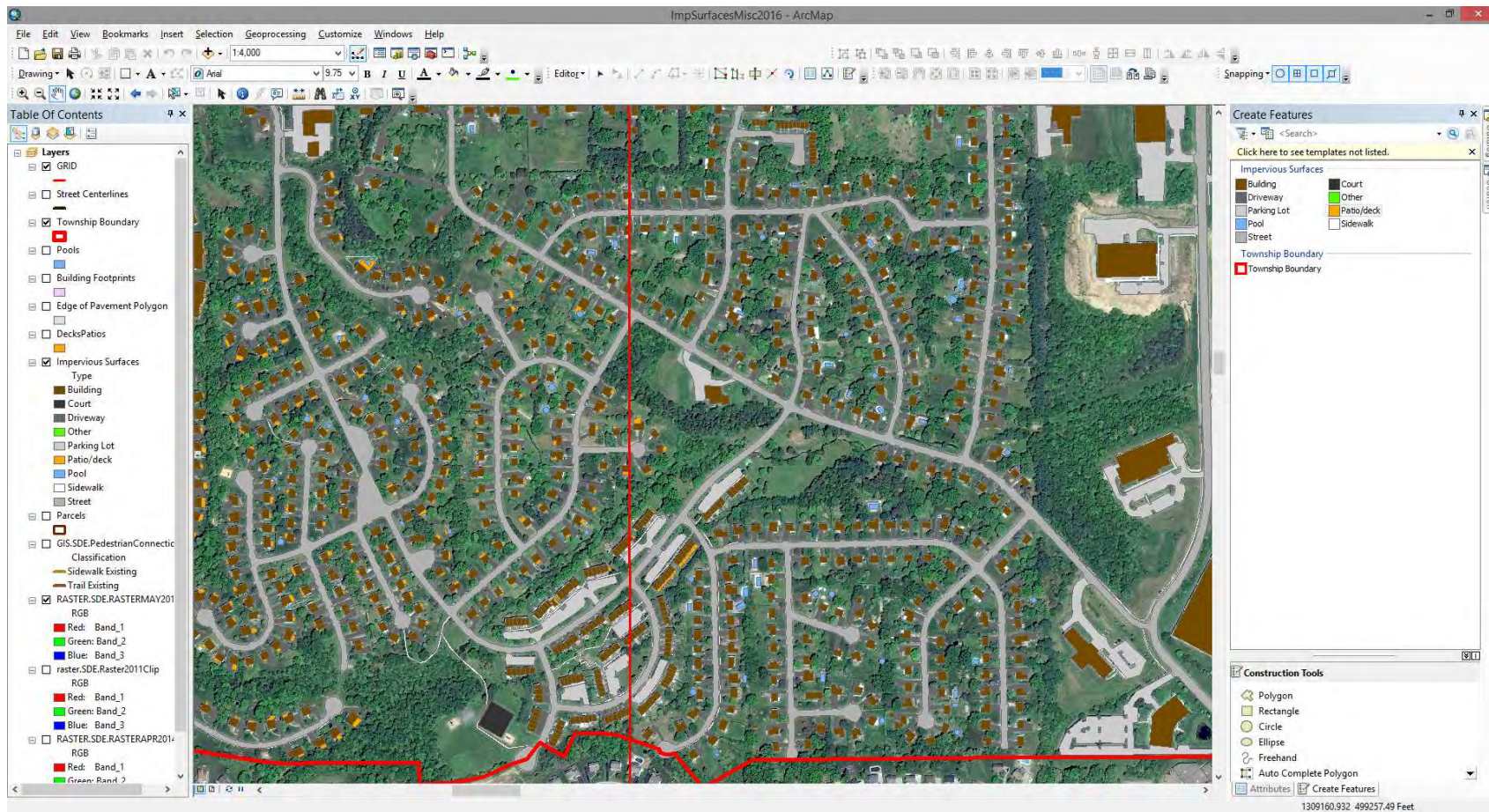
# Future Requirements

## Impaired Streams

- **Pollution Reduction Plan**
  - **Mapping Drainage Area**
  - **Determine Land Use**



# Mapping Impervious Surface Area



# Questions





# SPC's Water Resource Center Workshop

## MS4 – Minimum Control Measure #4



August 23, 2016



# MCM#4 Construction Site Stormwater Runoff Control

## Federal Regulations

- *Develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale that equals one acre or more .*
- *Develop and implement an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State or local law.*
- *Require construction site operators to implement appropriate erosion and sediment control best management practices (BMPs).*
- *Develop and implement requirements for construction site operators to control waste at the construction site that may cause adverse impacts to water quality. These wastes can include discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste.*
- *Develop and implement procedures for site plan review which incorporate consideration of potential water quality impacts.*
- *Develop and implement procedures for site inspections and enforcement of control measures .*

# Construction Site Stormwater Runoff Control

## • Department of Environmental Protection

- Best Management Practices (BMPs) and Measurable Goals are to be implemented and achieved:
  1. Develop, implement and maintain a written how will coordinate with DEP's NPDES Construction Stormwater Permitting Program
  2. Enforce the requirement of implementation of erosion and sediment control
  3. Requirements for construction site operators to control waste at construction site
  4. Procedures for addressing public inquires and concerns on local construction activities

# Construction Site Stormwater Runoff Control

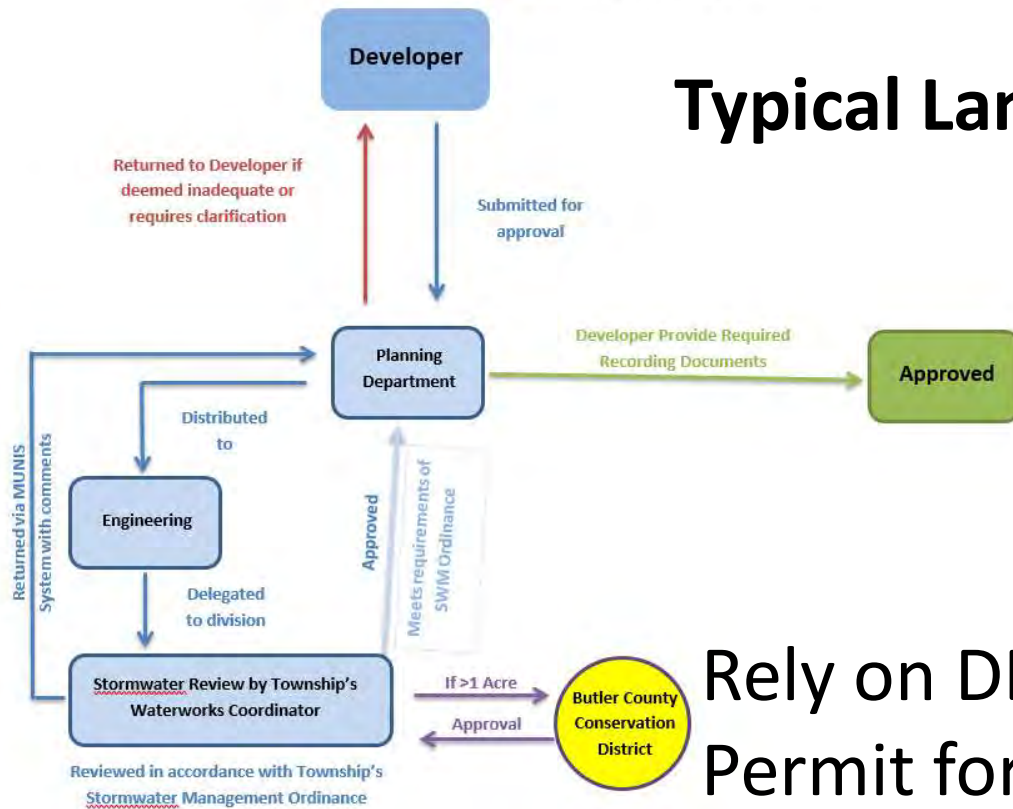
## Public and Private Improvement Code (PPIC)

- **Stormwater Management Regulations**
  - **In accordance with 25 Pa. Code Chapter 102**
    - **Obtain a NPDES Permit for disturbance over an acre**
      - **Butler County Conservation District**
    - **Obtain a grading permit for disturbance over 1,000 sq. ft. or four feet depth**
    - **Applicant provide a plan to control erosion**

# Construction Site Stormwater Runoff Control

## Stormwater Review Process

## Typical Land Developments Projects



Rely on DEP's Program for Issuing NPDES Permit for Stormwater Discharges

# Construction Site Stormwater Runoff Control

## Land Development Projects with NPDES Permit

- **BCCD Performs a Pre Construction Meeting**
- **Township May Perform Random Inspections**
- **Township and/or BCCD addresses public complaints during construction**
- **BCCD Performs Post Construction Permit Closeout Inspection**



# Construction Site Stormwater Runoff Control

## During Construction Phase

- **Under NPDES Permit**
  - **Inspection (Visual Site Inspection Report)**
    - Weekly
    - Within 24 hours after each measureable stormwater event
  - **Licensed Professional or a designee shall be on site and be responsible for oversight of critical stages of implementation of the approved PCSM Plan**

# Monthly Tracking of Open Grading Permits



Open Grading Permit Summary

CRANBERRY TOWNSHIP built for you.

**Active Grading Applications**

App #	Work	Address	App Date	Issue Date	NPDES Expire Date	Days Remaining
10024	DUTILH ROAD OFFICE DEVELOPEMENET GRADING	47 DUTILH RD	1/16/2013	3/13/2013	11/1/2019	1187

App Role	Applicant Info
ENGINEER/ARCHITECT	Name: [REDACTED]

**Active Grading Applications**

App #	Work	Address	App Date	Issue Date	NPDES Expire Date	Days Remaining
10282	PARK PLACE PHASE 2 19.5 ACRES	0 KETTLECREEK DR	2/13/2013	3/14/2013	10/5/2019	1160

App Role	Applicant Info
OWNER	[REDACTED]

**Closed Grading Applications**

App #	Work	Address	App Date	Issue Date	NPDES Expire Date	Days Remaining
10582	KIDS CASTLE GRADING	121 PARK RD	3/28/2013	4/8/2013	1/1/9999	2915518

App Role	Applicant Info
OWNER	Name: [REDACTED]

**Active Grading Applications**

App #	Work	Address	App Date	Issue Date	NPDES Expire Date	Days Remaining
10767		34 BURKE RD	4/18/2013		1/1/9999	2915518

App Role	Applicant Info
GENERAL CONTRACTOR	Name: [REDACTED]

# Questions





# SPC's Water Resource Center Workshop

## MS4 – Minimum Control Measure #5



*August 23, 2016*



# MCM#5 Post-Construction Stormwater Runoff Management

## Federal Regulations

- *Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program shall ensure that controls are in place that would prevent or minimize water quality impacts.*
- *Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community.*
- *Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law.*
- *Ensure adequate long-term operation and maintenance of BMPs .*

# Post-Construction Stormwater Management

## • Department of Environmental Protection

- Best Management Practices (BMPs) and Measurable Goals are to be implemented and achieved:
  1. Develop, implement and maintain a written plan how to address requirements
  2. Enforce the requirement of implementation of structural and non-structural BMPs
  3. Ensure that controls are installed that prevent or minimize water quality impacts
  4. Procedures for enforce ordinance
  5. Encourage use of Low Impact Development
  6. Ensure adequate operation of post-construction management BMPs

# **Post-Construction Stormwater Runoff Management**

## **Stormwater BMPs Management**

- **Construction Phase**
  - **Butler County Conservation District**
    - **NPDES Permit**
      - **Requires qualified individual to inspect BMPs during construction**
- **Post Construction Phase**
  - **Township requires As-Built report and drawings**
- **Annual Notice Sent to HOA and discussed during HOA Forum**

# Construction Site Stormwater Runoff Control

## Land Development Projects under an acre but required a Small Project Permit

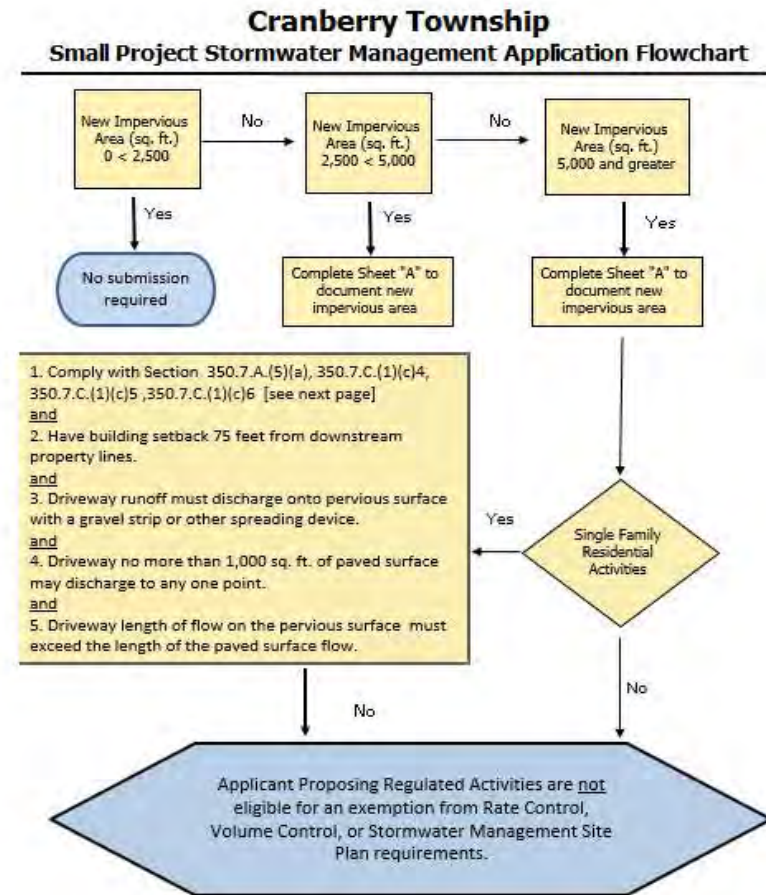
- Township Issues a permit through planning department
- Township or BCCD address public complaints during construction
- Township Performs Post Construction Permit Closeout Inspection



# Construction Site Stormwater Runoff Control

## Small Project Flow Chart

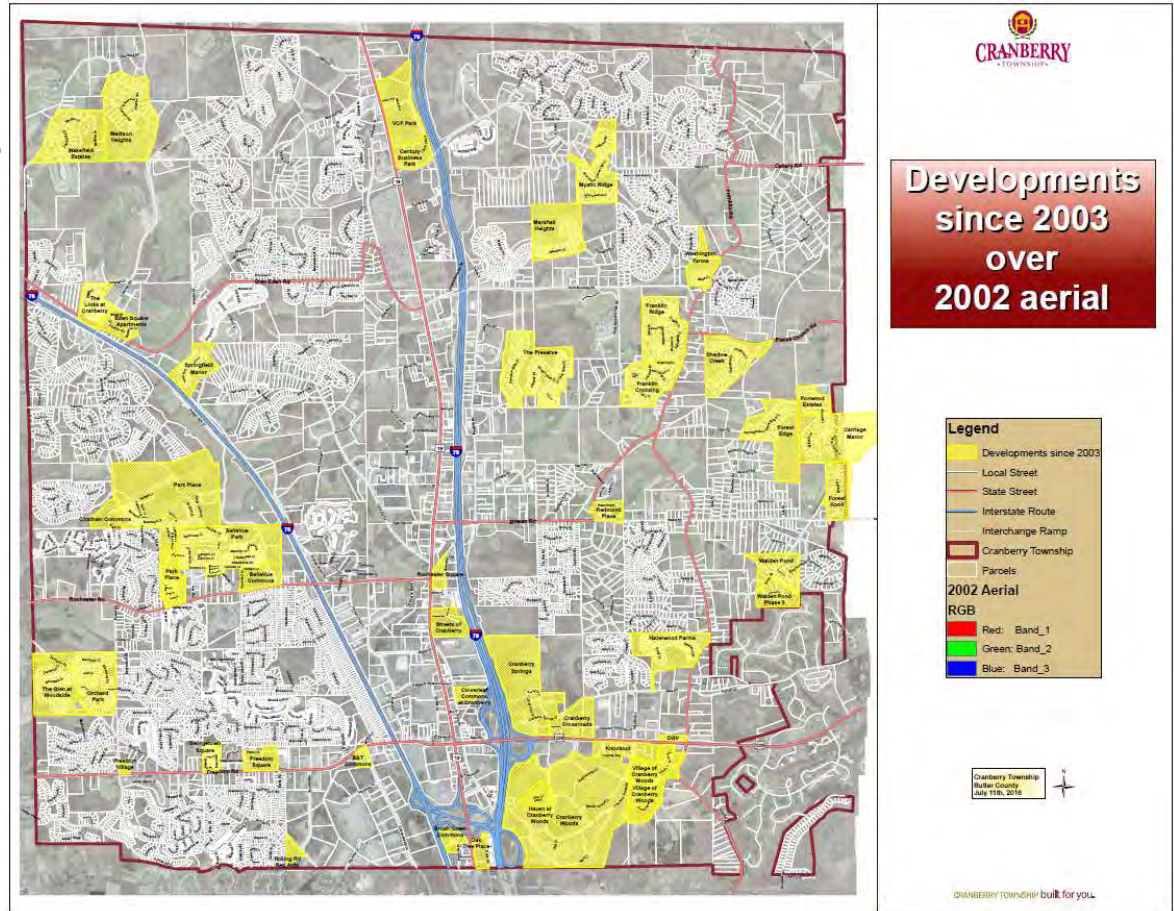
5,000 sq. ft. to 1 acre



# Post-Construction Stormwater Runoff Management

## Township Tracking BMPs

Projects approved since  
March 10, 2003



# Township Tracking BMPs

## Required Information

- **Name**
- **Address**
- **Phone Number**
- **Type of BMP**
- **Year Installed**

# Current Township Ordinance - Inspections

- **Inspection of BMPs (Landowner) 17-317**
  - Inspected according to inspection schedule
  - Township may require copies of inspection reports
  - If inspection not conducted Township may conduct such inspection and charge owner appropriate fees.

# DEP Model Ordinance - Inspections

- **Minimum Inspection of BMPs (Landowner)**
  - Annual for the first 5 years
  - Once every 3 years thereafter
  - During or immediately after cessation of a 10-year or greater storm
- **Written Inspection Report**
  - Submitted to Municipality within 30 days following completion of the inspection

# Questions





# SPC's Water Resource Center Workshop

## MS4 – Minimum Control Measure #6



*August 23, 2016*



# MCM#6 Pollution Prevention/Good Housekeeping For Municipal Operations

## Federal Regulations

- *Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.*
- *Provide employee training to prevent and reduce stormwater pollution from activities such as parks and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.*



# Pollution Prevention/Good Housekeeping for Municipal Operations

## • Department of Environmental Protection

- Best Management Practices (BMPs) and Measurable Goals are to be implemented and achieved:
  1. Identify and document all facilities and activities that have potential for generating runoff to regulated MS4
  2. Develop, implement and maintain a written operation and maintenance program
  3. Develop and implement a employee training program

# Pollution Prevention / Good Housekeeping

CRANBERRY TOWNSHIP 2015 ~2016 MS4 ACTIVITY CHART												
NPDES Permit No. PAG138318 - Approved April 19, 2013 and will expire at midnight April 18, 2018												
Event	April	May	June	July	August	September	October	November	December	January	February	March
1 Annual Progress Report												
<b>MCM #1 Public Education &amp; Outreach</b>												
2 Stencil Program - Presentation (Haine Middle School)												
3 Compost Training Class Video												
4 Rain Barrel Classes												
5 MS4 Poster and Handouts in Lobby Municipal Building												
6 Message On Community Sign SR 19 & 228												
7 Public Presentation												
8 Article in Cranberry Today Magazine or Local Newspaper												
9 Post Information on Township Website												
10 Addressing Public Storm Water Concerns												
11 Notice to Home Owner Associations												
12 Handout Provided with Construction Permit Application												
13 Post Information of Township Facebook & Twitter												
14 Dumpster and Grease Trap Program Information												
<b>MCM #2 Public Involvement/ Participation</b>												
15 Stencil Program - Paint Message												
16 Adopt A Highway Clean Up Program												
17 Discussion during Homeowner Association Forum												
18 Inspection of Detention Facilities with HOA												
<b>MCM #3 Illicit Discharge Detection and Elimination</b>												
19 Sewage Complaint												
20 Inspect Twp. MS4 Outfalls												
21 Update MS4 Base Map												
22 Inspect from Storm Water Complaint												
<b>MCM #4 Construction Site Runoff</b>												
23 Update Development List (Active Grading Permits)												
24 Construction Site Inspection with Bond Release												
25 Random Inspection of Commercial Development												
26 Response to Notification of Possible Problem												
<b>MCM #5 Post Construction of Stormwater Management in New Development</b>												
27 Plan Review of Stormwater Design												
28 Review As Built Drawings												
<b>MCM #6 Pollution Prevention/Good Housekeeping</b>												
29 Training Public Works Employees												
30 Training of Engineering Employees												
31 Inspect Twp. Facilities												
32 Training of Code Department Employees												
33 Inspect Twp. Owned BMPs												
34 Storm Sewer System Repairs												
35 Cleaning Out Storm Sewer Inlets												
36 Street Sweeping												
37 Storm Sewer System Inspection (PW)												
38 Fuel Station Inspection												

# Pollution Prevention / Good Housekeeping

- **Develop and Implement an O&M Program**
  - **Tracking Public Works Daily Operation**
    - **Street Sweeping**
    - **Storm Sewer Repairs and Cleaning**
    - **Fuel Station Inspection**
    - **Earth disturbance Activities**
  - **Training**
  - **Facility Inspection**
  - **Township Maintained BMPs Inspection**

# Tracking Public Works Daily Operation

## Reporting on Work Orders

Home > Work Orders > MS4 Work Order Summary

Start Date (mm/dd/yyyy):  End Date (mm/dd/yyyy):

1 of 27 100%



### MS4 Work Order Summary

Activity	Activity Desc	Total WO's
160100	MS4 CATCHBASIN	49
161200	MS4STRMLINECLEA	4
161400	MS4 STRLNMAINT	3
200630	STORM COMPLAINT	17

CRANBERRY TOWNSHIP built for you.

Page: 1




Activity	Activity Desc	WO #	Description	Rec Date
	MS4 CATCHBASIN	<a href="#">233601</a>	WORK PREVIOUSLY COMPLETED MS4 CATCHBASIN	7/1/2016
<b>161200</b>	<b>MS4STRMLINECLEA</b>	<b>Total: 4</b>		
	MS4STRMLINECLEA	<a href="#">225533</a>	8616 Peters Rd - dean out 4 basins that are full of silt. Insight Pipe contractor using sewer jet	5/24/2016
	MS4STRMLINECLEA	<a href="#">225537</a>	2292 Powell Rd - dean out the catch basin near this address. insight pipe to use sewer jet	5/24/2016
	MS4STRMLINECLEA	<a href="#">225539</a>	131 Hunter Dr - dean out storm sewer basin. Insight pipe using sewer jet	5/24/2016
	MS4STRMLINECLEA	<a href="#">226933</a>	Commons at RIDC, pipe outlet riprap needs restored where washout and erosion have begun. Email Conrady , Rich conrady@elmhurstgroup.com and Holcomb Jim jholcomb@elmhurstgroup.com when work is scheduled.	6/15/2016
<b>161400</b>	<b>MS4 STRLNMAINT</b>	<b>Total: 3</b>		
	MS4 STRLNMAINT	<a href="#">225535</a>	1593 Garvin Rd - inspect the 15" cross pipe in front of this address to try to locate the outlet. Currently, the outlet is covered and can't locate, the inlet of the pipe is across from the above address.	5/24/2016
	MS4 STRLNMAINT	<a href="#">225541</a>	Monmouth at Brandywine - inspect storm sewer line using Insight Pipe inspection camera.	5/24/2016
	MS4 STRLNMAINT	<a href="#">225545</a>	2525 Rochester Rd - inspect the storm line in front of the admin building, the line running parallel with Rochester Rd in the front parking lot	5/24/2016
<b>200630</b>	<b>STORM COMPLAINT</b>	<b>Total: 17</b>		
	STORM COMPLAINT	<a href="#">222933</a>	SUSAN ALWARD IS CONCERNED THAT THE RETENTION POND BEHIND HER HOUSE CONTINUES TO RISE & IS NOT DRAINING. SHE WOULD LIKE SOMEONE TO COME OUT AND LOOK AT IT TO MAKE SURE IT IS NOT CLOGGED.	4/6/2016
	STORM COMPLAINT	<a href="#">222934</a>	CHRISTINE GALEY 204 WILBURN	4/13/2016




# Facility Inspection

- **Annual Inspection of Maintenance Garages**
  - **Maintenance Facility**
  - **Graham Park**
  - **Golf Course**

# Facility Inspection

 <b>Cranberry Township Public Works - Maintenance Garage Facility</b> Annual Inspection Form			
Inspector(s):		Date:	
Potential Pollutant Sources	Yes	No	Describe Action Required
A. Material and waste storage areas are maintained in good condition to minimize discharge of pollutants.			
B. Oil leaks or spills present are properly contained by drip pans or absorbents. Absorbents are picked up and properly disposed.			
C. Containers and aboveground storage tanks are in sound condition (check for corroded or damaged containers, supports and valves). (Also See Fuel Station Check List)			
D. Emergency Response Equipment in Township Vehicles.			
E. Road salt is stored properly.			
F. Vehicle and equipment maintenance areas in sound condition.			
G. Grounds around site are stable and not showing signs of significant erosion.			
H. Stormwater Basin is clear of debris and earth embankment is stable.			
I. Stormwater Basin's Outlet Structure is in good condition.			
J. Catch basins in good working order.			
K. Dumpsters covered.			

 <b>Public Works Maintenance Garage Fuel Station</b> Site Inspection Check List		
Date of Inspection: _____		
Inspector Name: _____		
	Yes	No
1 Spill Clean Up Instructions Posted Near Pumps	<input type="checkbox"/>	<input type="checkbox"/>
2 Emergency Contact Phone Numbers Posted Near Pumps	<input type="checkbox"/>	<input type="checkbox"/>
3 No Oil or Gasoline Puddle On Site	<input type="checkbox"/>	<input type="checkbox"/>
4 Spill Absorbent Material On Site	<input type="checkbox"/>	<input type="checkbox"/>
5 Spill Clean Up Container On Site Including:	<input type="checkbox"/>	<input type="checkbox"/>
6     Gloves	<input type="checkbox"/>	<input type="checkbox"/>
7     Broom	<input type="checkbox"/>	<input type="checkbox"/>
8     Shovel	<input type="checkbox"/>	<input type="checkbox"/>
9     Absorbent Mat	<input type="checkbox"/>	<input type="checkbox"/>
10 Disposal Container For Used Absorbent Material On Site	<input type="checkbox"/>	<input type="checkbox"/>
11 Fire Extinguisher On Site	<input type="checkbox"/>	<input type="checkbox"/>
12 No Holes in Overhang Structure	<input type="checkbox"/>	<input type="checkbox"/>
13 Additional Comments:	_____ _____ _____	
<small>NPDES MS4 Permit - Minimum Control Measure #6 - Pollution Prevention / Good Housekeeping</small>		

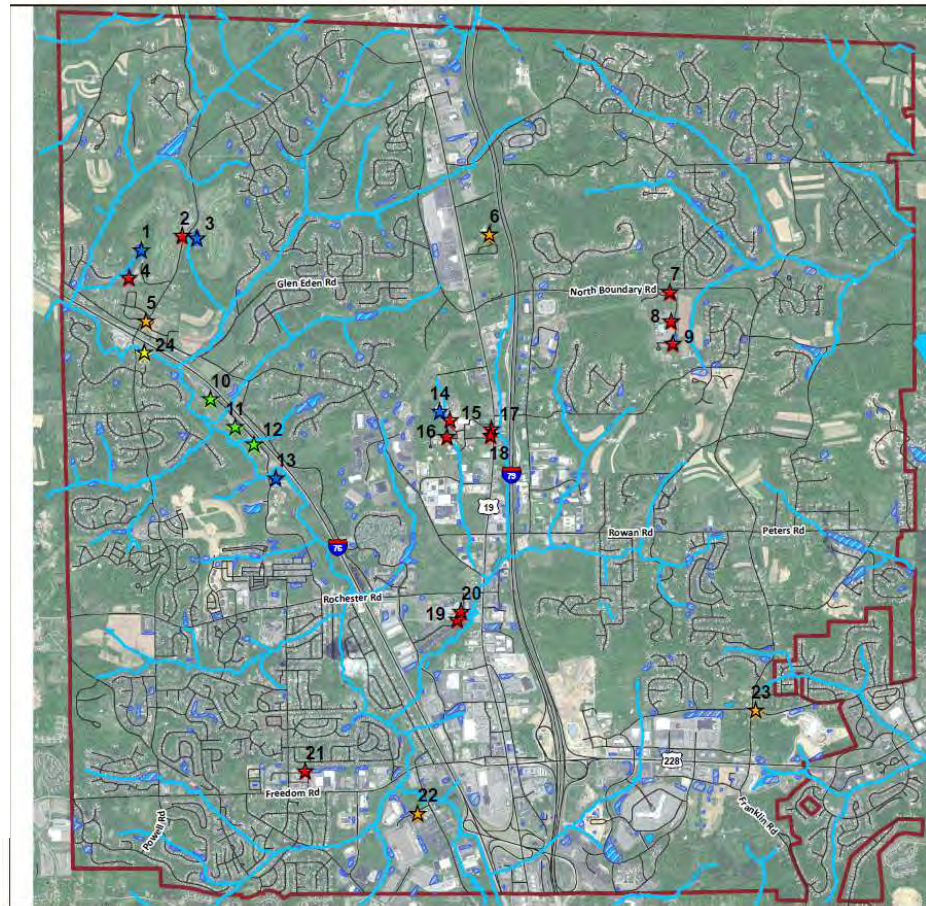
# Fuel Station – Spill Response Procedures



# Township Maintained BMPs Inspection

## Best Management Practice Facilities

Number	Description	Type
1	Cranberry Highlands Hole 3	Wet Pond
2	Cranberry Highlands by Club House	Dry Pond
3	Cranberry Highlands Hole 12	Wet Pond
4	Cranberry Highlands Turfgrass Dr	Dry Pond
5	Freshcorn Rd	Underground Detention
6	North Water Tank	Underground Detention
7	North Boundary Park North	Dry Pond
8	North Boundary Park middle	Dry Pond
9	North Boundary Park South	Dry Pond
10	Graham Park Football	Underground Infiltration
11	Graham Park Soccer North	Underground Infiltration
12	Graham Park Soccer South	Underground Infiltration
13	Graham Park Fishing Pond	Wet Pond
14	Community Park Lindner Field	Wet Pond
15	Public Works Maintenance Garage	Dry Pond
16	Community Park Ernie Mashuda Dr	Dry Pond
17	EMS/Fire Station North	Dry Pond
18	EMS/Fire Station South	Dry Pond
19	Municipal Center South	Dry Pond
20	Municipal Center North	Dry Pond
21	Haine Fire Station	Dry Pond
22	Commonwealth Water Booster Station	Underground Detention
23	Hillmont Dr	Underground Detention
24	Graham Park Walking Trail (North Sect)	Vegetated-Swales & Wetland



## Township Owned Storm Water Control Facilities

### Legend

#### Cranberry's Facilities

- ★ Dry Pond
- ★ Wet Pond
- ★ Underground Detention
- ★ Underground Infiltration
- ★ Vegetated Swale
- Other Detention Basins
- Lakes
- Stream
- Streets
- Township Boundary

Cranberry Township  
Butler County  
December 14th, 2015



CRANBERRY TOWNSHIP built for you.



# North Boundary Park BMPs Inspection Sheet

## Cranberry Township – North Boundary Park (Detention Facilities) Quarterly Inspection Checklist - BMPs #7, #8, and #9

Date: \_\_\_\_\_  
 Inspector: \_\_\_\_\_  
 Department: \_\_\_\_\_

**History:**  
 The North Boundary Park was constructed in the year 19\_\_ on a 128 acre parcel. Three dry detention stormwater facility were constructed to control surface water from the site. The basins outlet structure were designed to detain runoff from the road, parking lots, ball fields, picnic area, etc. Quarterly inspection procedures (O&M Manual - Appendix "A"), site plan, and rating system description is provide on additional sheet.

**Rating system based on visual inspection.**

**Rating System:**  
 Good – No Structural Deficiencies (No further action required during quarterly inspection).  
 Fair - Low Risk Structural Deficiencies (No immediate action required at this time).  
 Poor – High Risk Structural Deficiencies (Further action required contact Engineering Department).

**A. Storm Outlet Structure Inspection:**

- |   |      |      |      |
|---|------|------|------|
|   | Good | Fair | Poor |
| 1. Structural Condition (Concrete Deteriorating, Metal Frame or Trash Rack Damaged) | ___  | ___  | ___  |
| 2. Stability (Ground Settling, Structure Sinking, etc.)                             | ___  | ___  | ___  |
| 3. Volume Capacity (Sediment Buildup, Debris, Obstructions, etc.)                   | ___  | ___  | ___  |
| 4. Protrusions (Roots, Rebar, etc.)   | ___  | ___  | ___  |
| 5. Other: _____   | ___  | ___  | ___  |

Additional Comments: \_\_\_\_\_

	Pond "7"			Pond "8"			Pond "9"		
	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor
1									
2									
3									
4									
5									

Pond "\_\_\_" Other: \_\_\_\_\_

Pond "\_\_\_" Other: \_\_\_\_\_

Additional Comments Pond "\_\_\_": \_\_\_\_\_

Additional Comments Pond "\_\_\_": \_\_\_\_\_

**B. Earth Pond Inspection:**

- |  |      |      |      |
|--|------|------|------|
|  | Good | Fair | Poor |
| 1. Embankment Structural Condition (Possible Breach)                     | ___  | ___  | ___  |
| 2. Stability (Ground Settling, Slope Slide, Burrows in Embankment, etc.) | ___  | ___  | ___  |
| 3. Volume Capacity (Sediment Buildup, Debris, Obstructions, etc.)        | ___  | ___  | ___  |
| 4. Protrusions (Tree Growing in Embankment, etc.)                        | ___  | ___  | ___  |
| 5. Low Flow Channel (Open for flow, No Ponding)                          | ___  | ___  | ___  |
| 6. Erosion (Vegetation Reduced by 10% should be reestablished)           | ___  | ___  | ___  |
| 7. Landscaping (Trimming and/or Mowing to Remove Unwanted Growth)        | ___  | ___  | ___  |
| 8. Spillway (Overflow Unobstructed, Section of Embankment Stabilized)    | ___  | ___  | ___  |
| 9. Inlet Pipes (Unobstructed, Erosion Control Functioning)               | ___  | ___  | ___  |
| 10. Endwall (Structural, Stable, Attached to Pipe)                       | ___  | ___  | ___  |
| 11. Other: _____   | ___  | ___  | ___  |

Additional Comments: \_\_\_\_\_

	Pond "7"			Pond "8"			Pond "9"		
	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									

Pond "\_\_\_" Other: \_\_\_\_\_ Pond "\_\_\_" Other: \_\_\_\_\_

Pond "\_\_\_" Other: \_\_\_\_\_

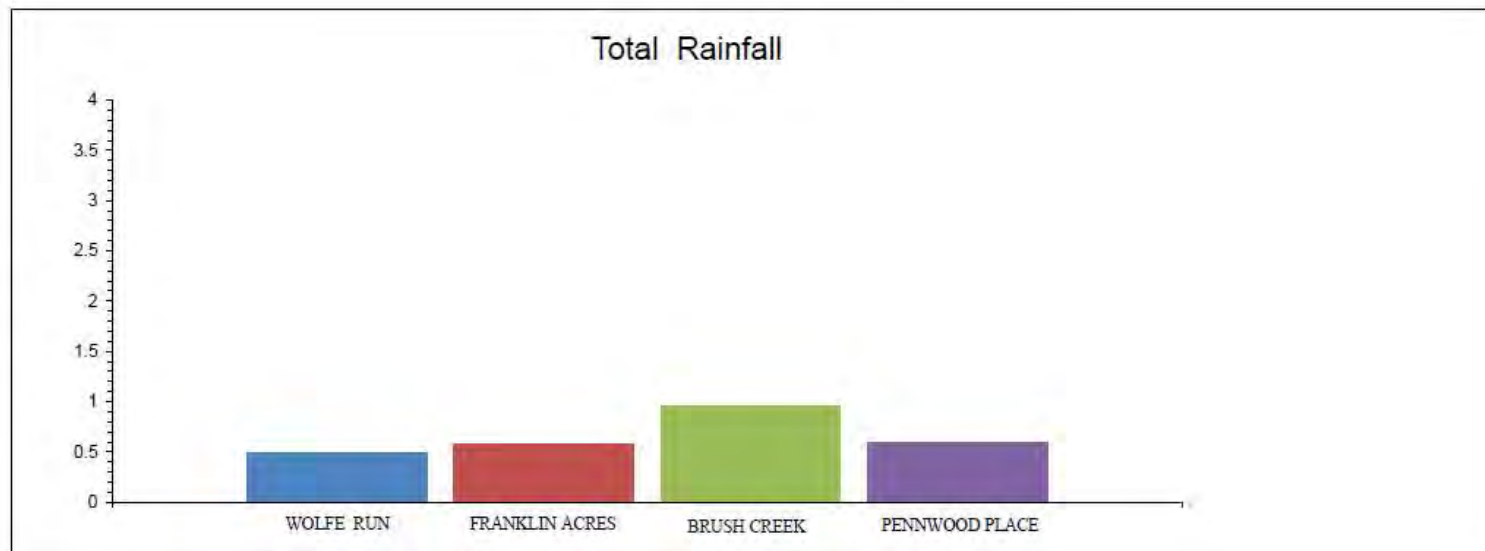
Additional Comments Pond "\_\_\_": \_\_\_\_\_

Additional Comments Pond "\_\_\_": \_\_\_\_\_

Additional Comments Pond "\_\_\_": \_\_\_\_\_

# Township Maintained BMPs Inspection

Township System Rain Data for  
July 30, 2016



7/30/2016

Wolfe Run Rain  
0.49

Franklin Acres Rain  
0.58

Brush Creek Rain  
0.96

Pennwood Place Rain  
0.60

# Township Projects



JWS 19-000001 2016  
 COMMONWEALTH OF PENNSYLVANIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 BUREAU OF WATERWAYS ENGINEERING AND RETAILANCE  
 VISUAL SITE INSPECTION REPORT

Note: It is a condition of National Pollutant Discharge Elimination System and Erosion and Sediment permits that a maintenance program be conducted to provide for the operation and maintenance of all BMPs to be inspected on a weekly basis and after each stormwater event. Please list in the space provided commands to take if repairs or replacements are needed or have been made for BMPs as a result of the inspection. Failure to conduct the required inspection may result in permit suspension or the imposition of civil penalties. If supplemental monitoring is required as part of a permit condition this form may be used to meet those monitoring requirements.

Project Site Name: Cranberry WTP Date: 7/22/16 Inspection #: 1  
 Time: 9:20 Weather: Overcast 70%  
 Permit #: PA0 02 00015005 Photos Taken (Yes/No)   
 Inspector/Title: Don Attala / PG  
 Municipality: Cranberry  
 County: Butler

Inspection Type (check one): Weekly  Stormwater Event

1. Are the approved (stamped) E & S plan and PCSM plan present on site?  Y  N  
 2. Are there activities occurring outside of the limits of disturbance shown on the plan drawings? (If yes, notify conservation district and explain.)  Y  N  
 3. Is Construction Sequence being followed? (If No, notify conservation district and explain.)  Y  N  
 4. E & S BMPs (and BMPs not used if installed and maintained as per the plan.)

Dist.	Silt Fence	Silt Basin	Roll Netting
1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Were repairs/maintenance/replacement BMPs necessary (If so, describe): \_\_\_\_\_

Were or will be earth stabilization activity (e.g., mulch, or a first grade) (preventing 4 feet treated) with appropriate BMPs?  Y  N  
 Is being protected from compaction? (Installed and maintained as per the plan.)  Y  N  
 Has been verified within 24 hours of non-compliance, if needed?  Y  N  
 Have been taken or will be taken on this site.  
E & S Attala  
 Date: 7/22/16  
 Inspector: Don Attala  
 Title: PG  
 For comments/updates/remedial measures, if necessary.

# Operation and Maintenance Manual

- **Maintenance Group (With Responsible Department)**
  - **Stormwater Collection and Conveyance**
  - **Roads, Highway and Parking Lots**
  - **Vehicle Fleets**
  - **Inspection of Twp.'s BMP Facilities**
  - **Construction Projects**
  - **Industrial and Commercial Activities**
  - **Flood Management Projects**

# Training Staff

- **Public Works, Code, Operations, and Engineering**
  - **Annual PSATS and 3 Rivers Wet Weather Conferences**
  - **Webinars**
  - **Youtube Video**
    - [Stormwater Strategies- Erosion & Sediment Control.mp4](#)
    - [Stormwater Strategies- Housekeeping.mp4](#)

# Training Staff

## Cranberry Township MS4 Program

### Good House Keeping (Public Works Staff Training 2014~2015)

This year's training for Public Works Employees was achieved by showing a 14 minute training video produced to create awareness of proper maintenance procedures at a public works facility in San Diego, California. During our research we found this video addressing a lot of our current day to day operations. Last year training focused on refreshing the public works employees on the requirements for the Township MS4 permit. This year's training focused on practical every day operations and how to manage our work while minimizing the potential for pollutant discharge into the waters of the Commonwealth.

The Video Title and link is listed below.

### Stormwater Strategies: Housekeeping



County San Diego

<https://www.youtube.com/watch?v=Ux0am2GEVgQ>



The You Tube video was produced to educate the San Diego Department of Public Works. The 14 minute video includes instruction and recommendations from Tony Barry (Civil Engineer with County of San Diego) and Christine Sloan (Project Coordinator with Watershed Protection Agency).

**Video shown to public Works Employees on 1/14/2015: Sign Up Sheet Attached**

# Questions

