



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)

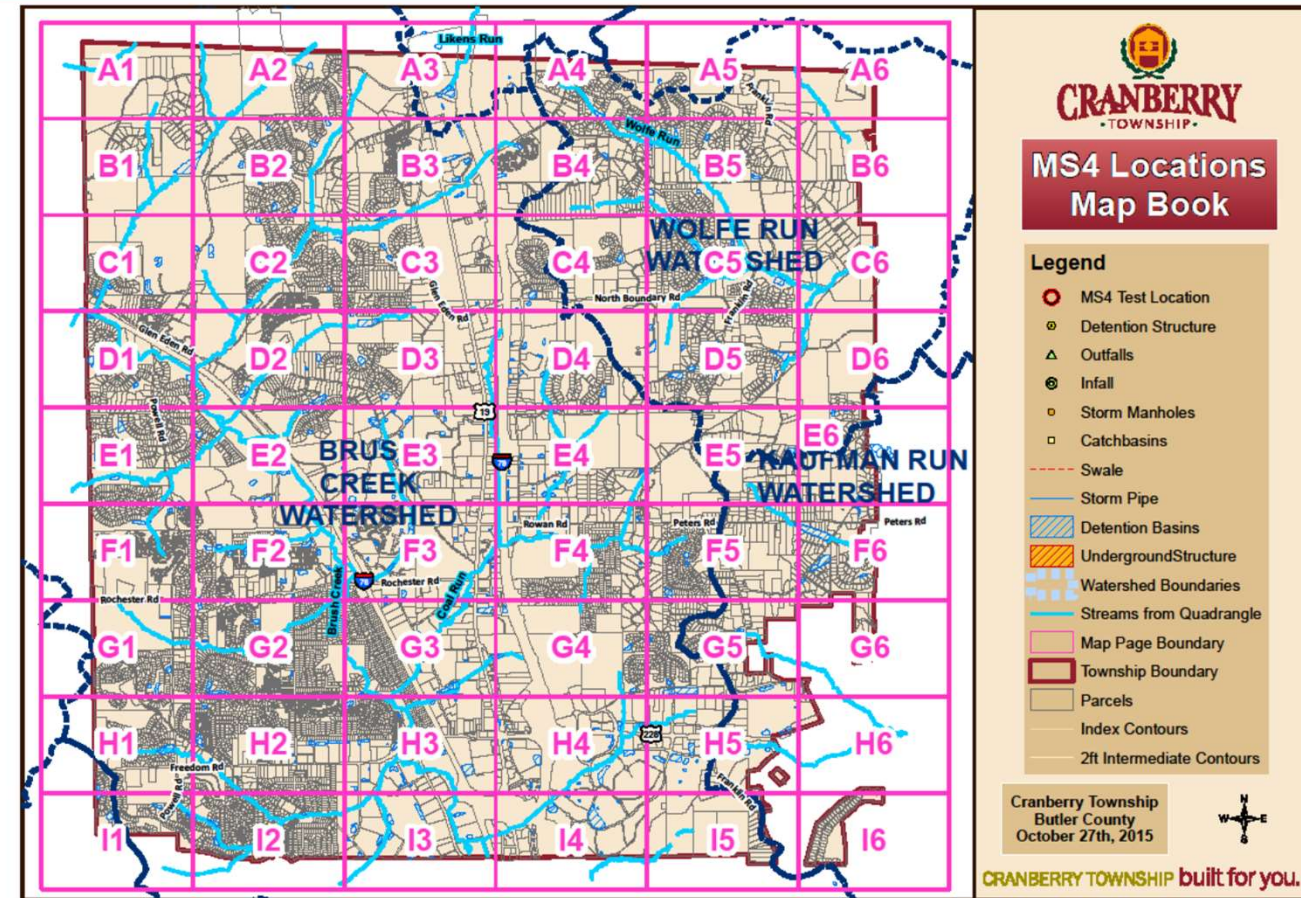
Written Plan

- **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

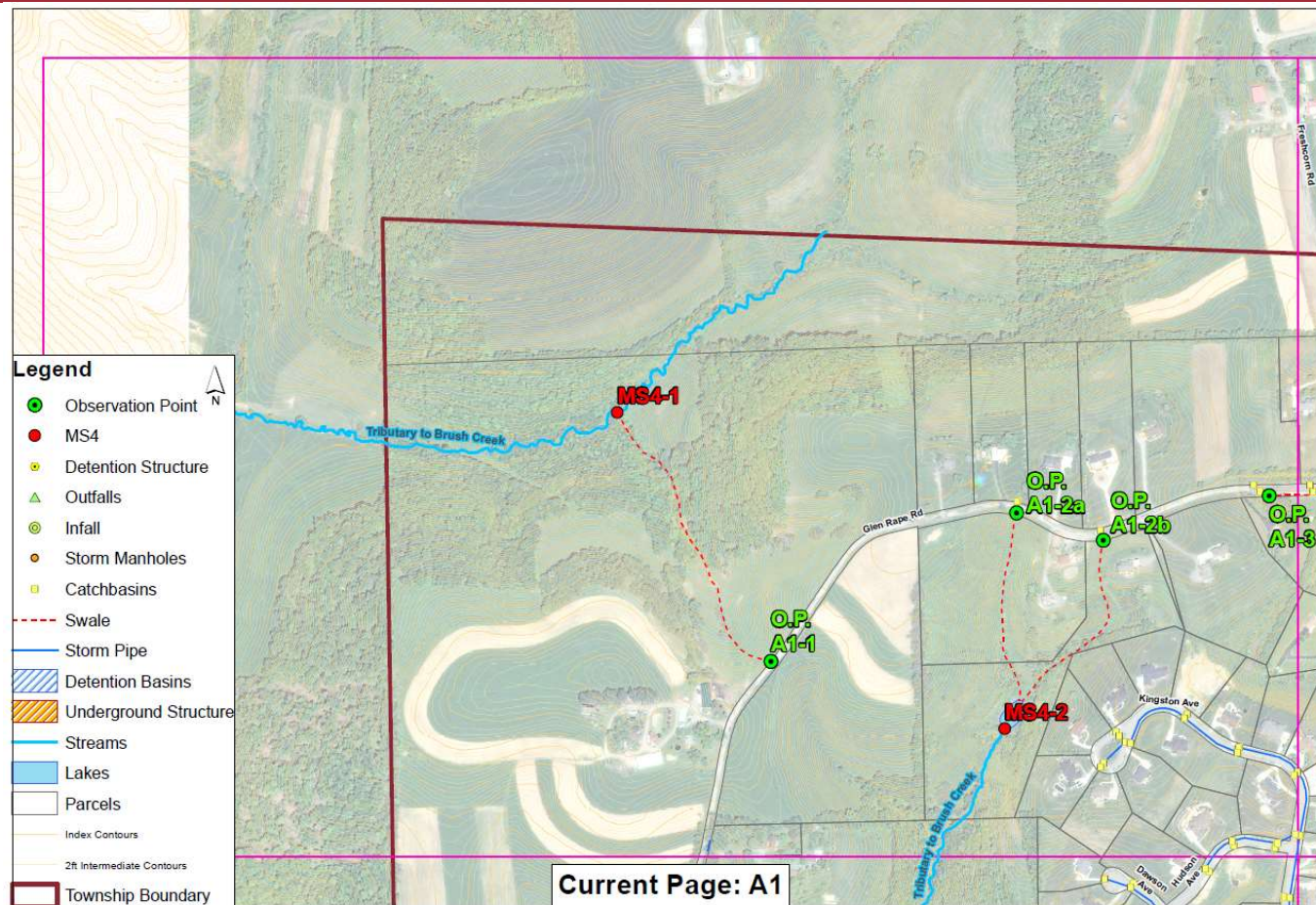
- **Urbanized Area Boundaries**
- **Location of Outfalls (Observation Points)**
- **Names of surface waters**
- **Entire storm sewer collection system including privately-owned components**



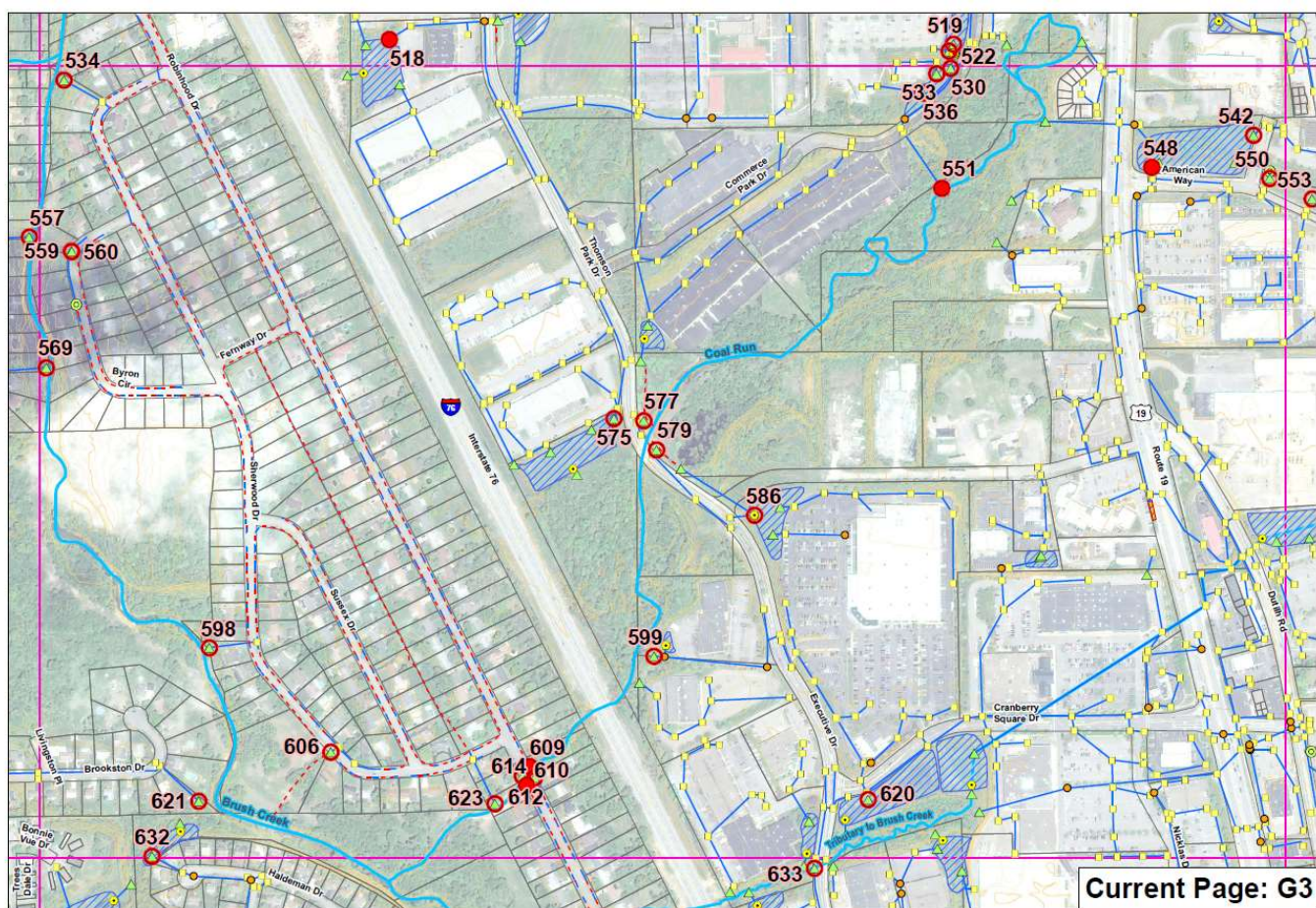
2013 NOI 148 Outfalls

2016
658 Outfalls

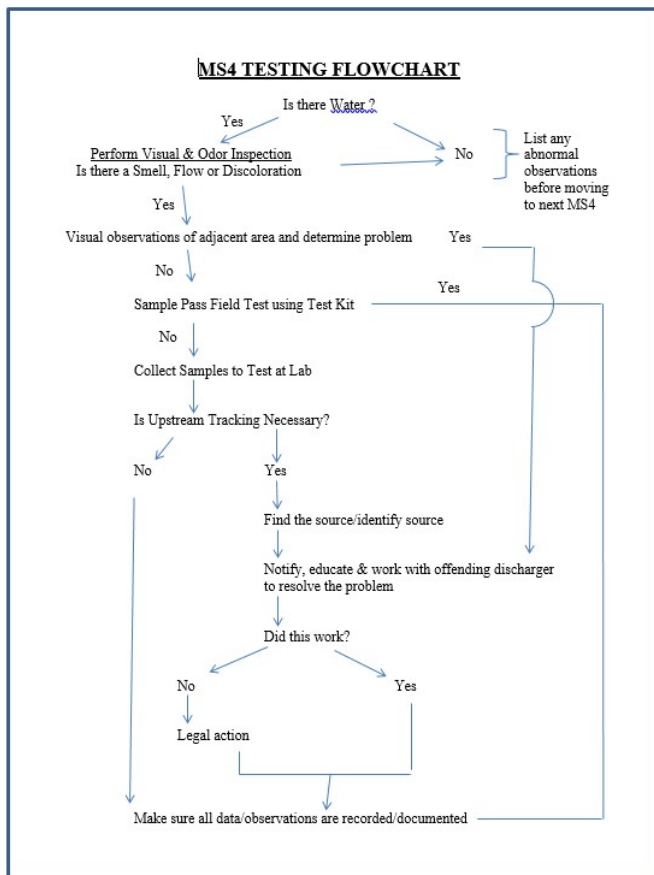
MS4 Outfall Map



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) $s_a \times b \times c =$ _____

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: _____ °F _____ °C 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 Municipal Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities, by the City of Monterey, City of Santa Cruz, California Central Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, and Central Coast Regional Water Quality Control Board, 1998.

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>
2525 Rochester Road
Cranberry Township, PA 16066-6499

Administration suite 400 p 724.776.480 / 724.776.5488
Police suite 500 p 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 ☐
Clearing & Grubbing ☐
Rough Grading ☐

Building Construction ☐
Finish Grading ☐
Final Stabilization ☐

Construction of SWM Facilities ☐
Maintenance of SWM Facilities ☐
Other ☐

Number	Twp. 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 _____

Sheet _____ of _____
**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.

XXXXXX
XXXXXX

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.: XXXXXXXX
via regular mail

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

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

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



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

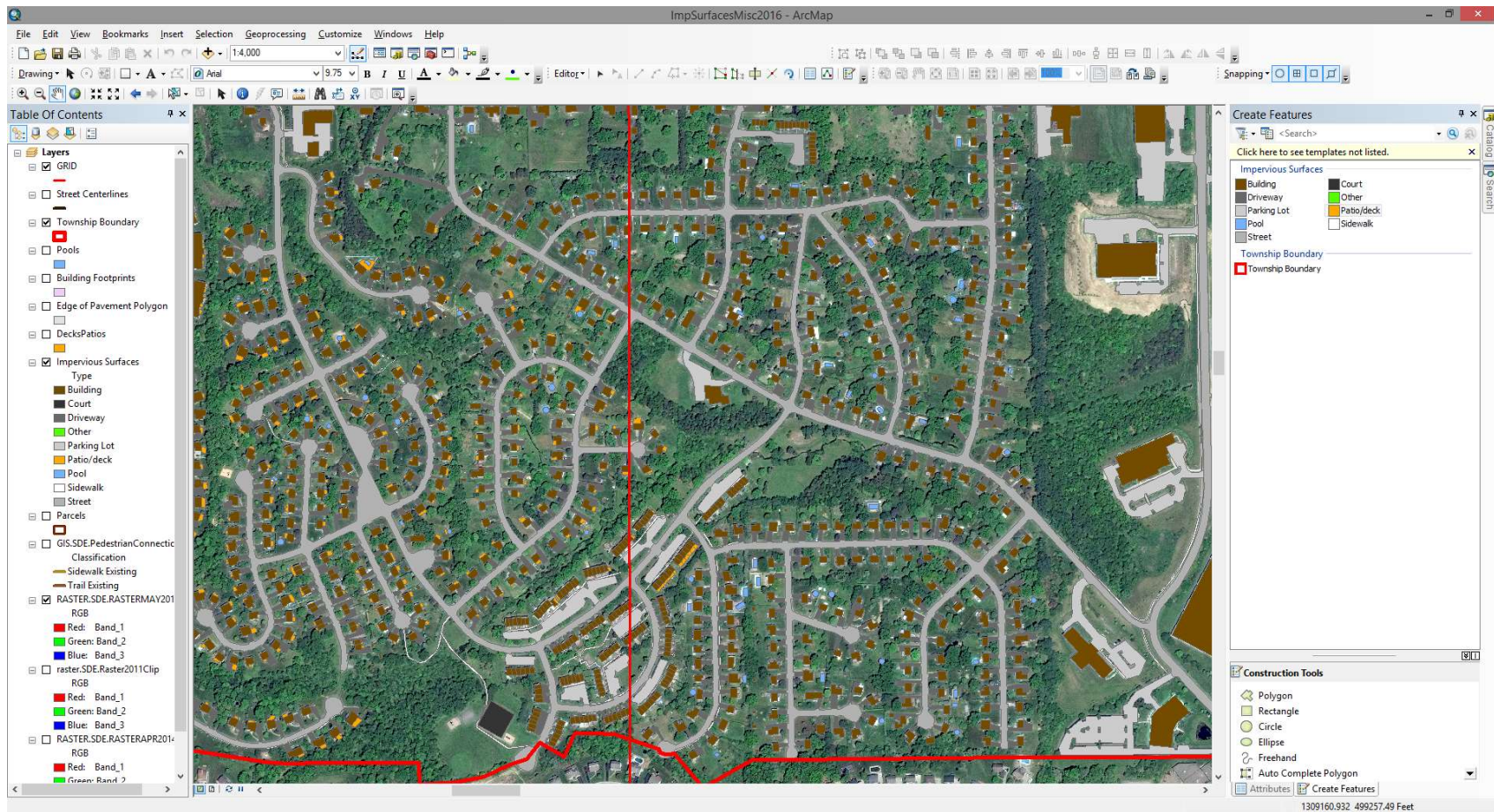
Departments MS4 Program Designated Shelf

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

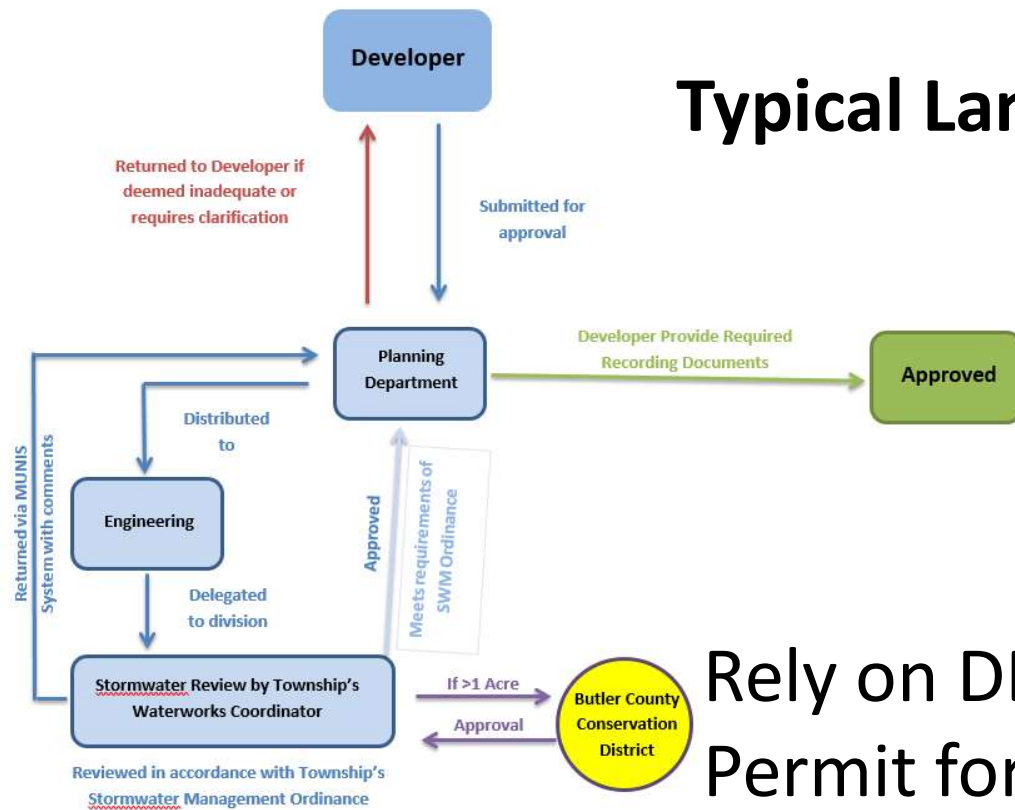
Construction Site Stormwater Runoff Control

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 DEVELOPMENET GRADING	47 DUTILH RD	1/16/2013	3/13/2013	11/1/2019	1187

App Role

ENGINEER/ARCHITECT

Applicant Info

Name: S

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

OWNER

Applicant Info

Name: C

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

OWNER

Applicant Info

Name: C

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

GENERAL CONTRACTOR

Applicant Info

Name: V

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

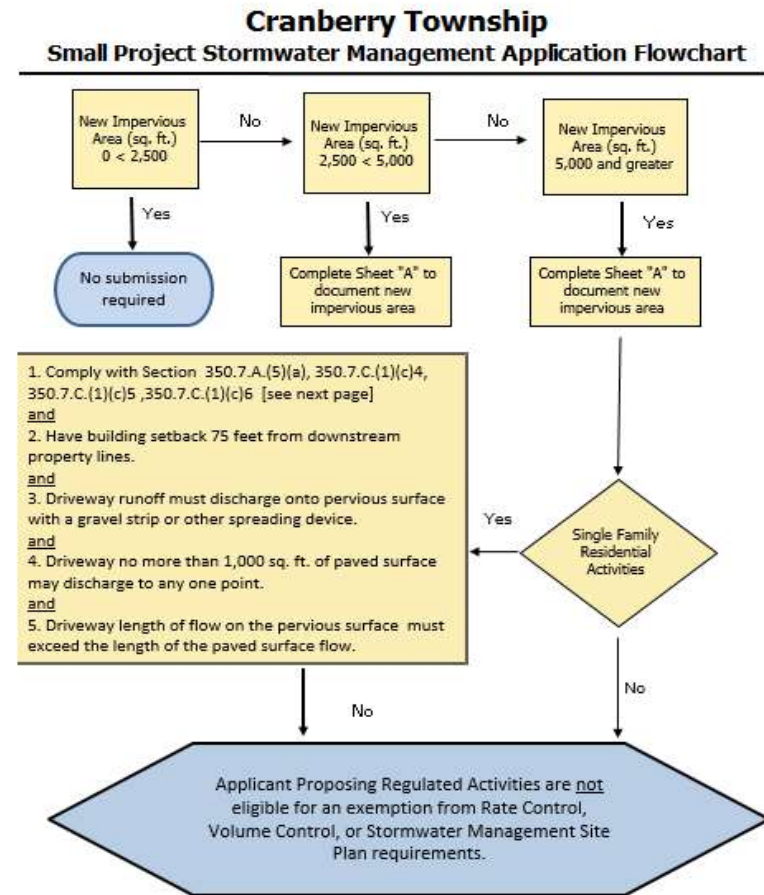
Land Development Projects under an acre but required a Small Project Permit

- **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

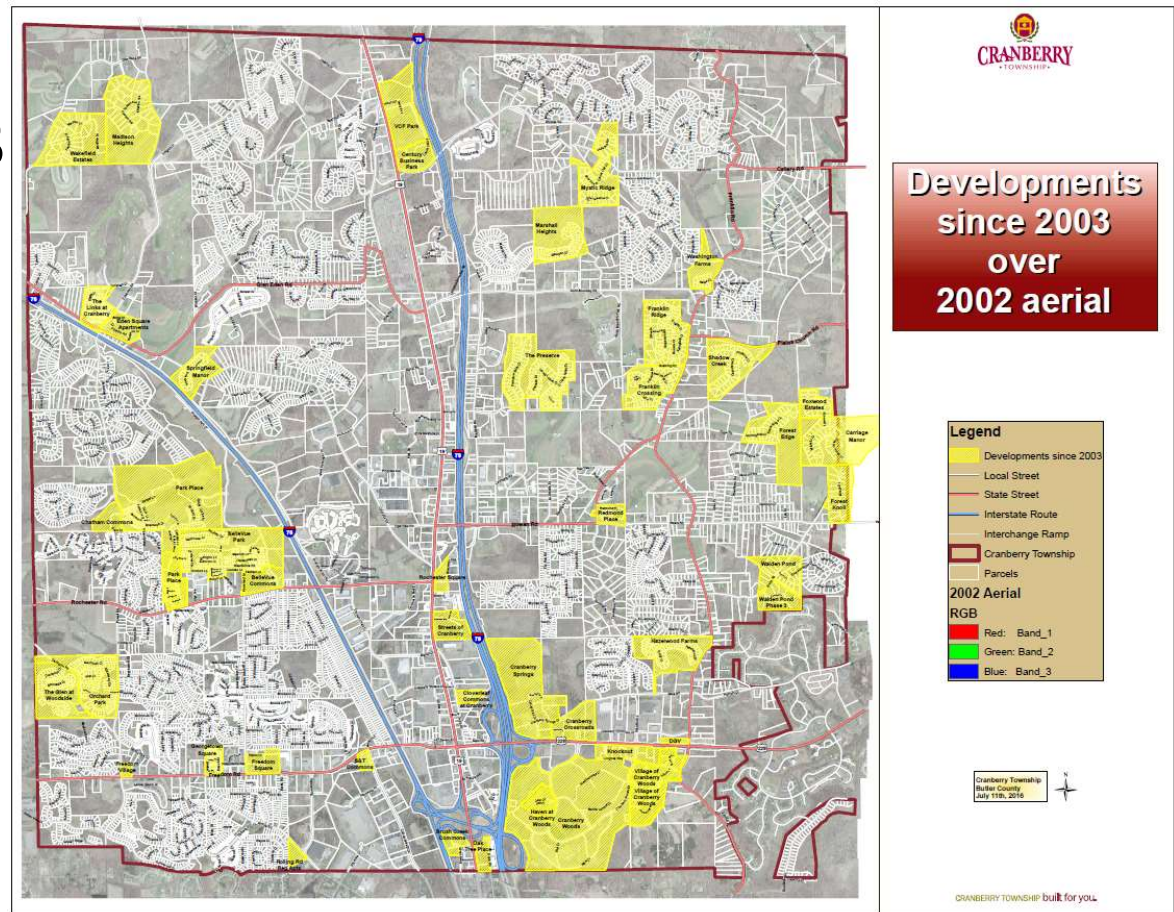
5,000 sq. ft. to 1 acre



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													
MCM #1 Public Education & Outreach													
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													
MCM #2 Public Involvement/ Participation													
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													
MCM #3 Illicit Discharge Detection and Elimination													
19 Sewage Complaint													
20 Inspect Twp. MS4 Outfalls													
21 Update MS4 Base Map													
22 Inspect from Storm Water Complaint													
MCM #4 Construction Site Runoff													
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													
MCM #5 Post Construction of Stormwater Management In New Development													
27 Plan Review of Stormwater Design													
28 Review As Built Drawings													
MCM #6 Pollution Prevention/Good Housekeeping													
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 2 ? 100% Find | Next



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	233601	WORK PREVIOUSLY COMPLETED MS4 CATCHBASIN	7/1/2016
161200	MS4STRMLINECLEA	Total: 4		
	MS4STRMLINECLEA	225533	8616 Peters Rd - dean out 4 basins that are full of silt. Insight Pipe contractor using sewer jet	5/24/2016
	MS4STRMLINECLEA	225537	2292 Powell Rd - dean out the catch basin near this address. insight pipe to use sewer jet	5/24/2016
	MS4STRMLINECLEA	225539	131 Hunter Dr - dean out storm sewer basin. Insight pipe using sewer jet	5/24/2016
	MS4STRMLINECLEA	226933	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
161400	MS4 STRLNMAINT	Total: 3		
	MS4 STRLNMAINT	225535	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	225541	Monmouth at Brandywine - inspect storm sewer line using Insight Pipe inspection camera.	5/24/2016
	MS4 STRLNMAINT	225545	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
200630	STORM COMPLAINT	Total: 17		
	STORM COMPLAINT	222933	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	222936	CHRISTINE GALT 204 WHITEHALL	4/13/2016




Facility Inspection

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

Facility Inspection

 Cranberry Township Public Works - Maintenance Garage Facility 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.			

 Public Works Maintenance Garage Fuel Station 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:	
_____ _____ _____		
NPDES MS4 Permit - Minimum Control Measure #6 - Pollution Prevention / Good Housekeeping		

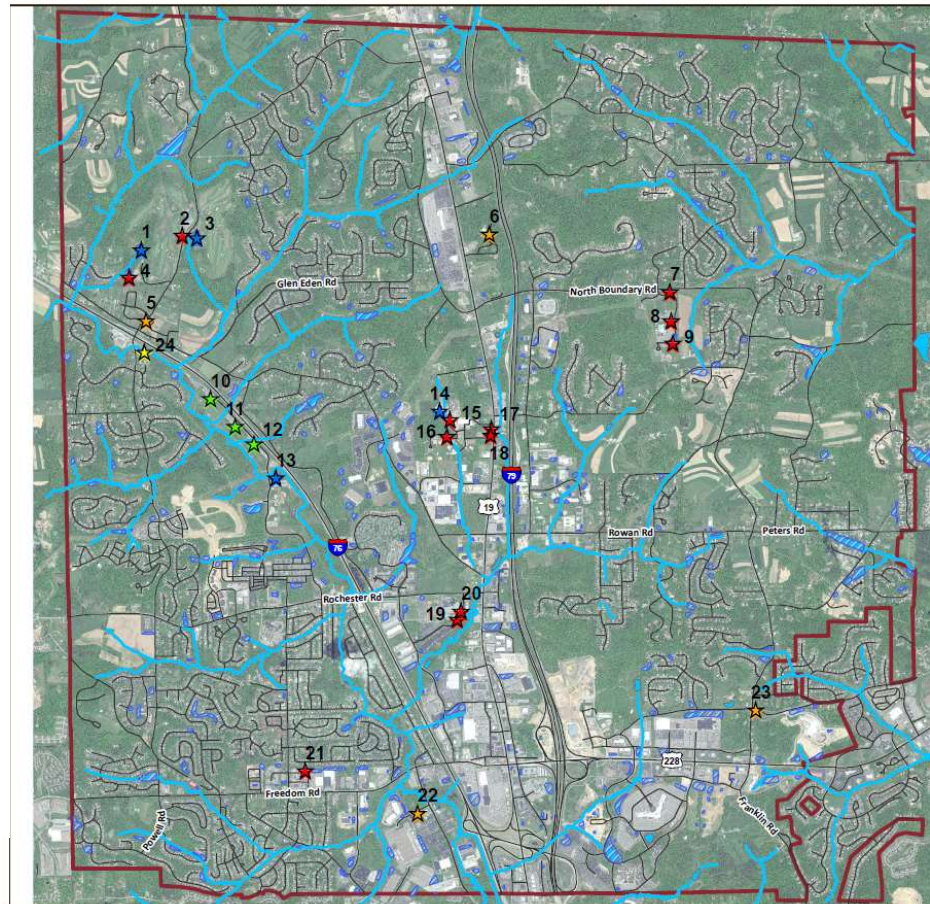
Fuel Station – Spill Response Procedures



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: _____

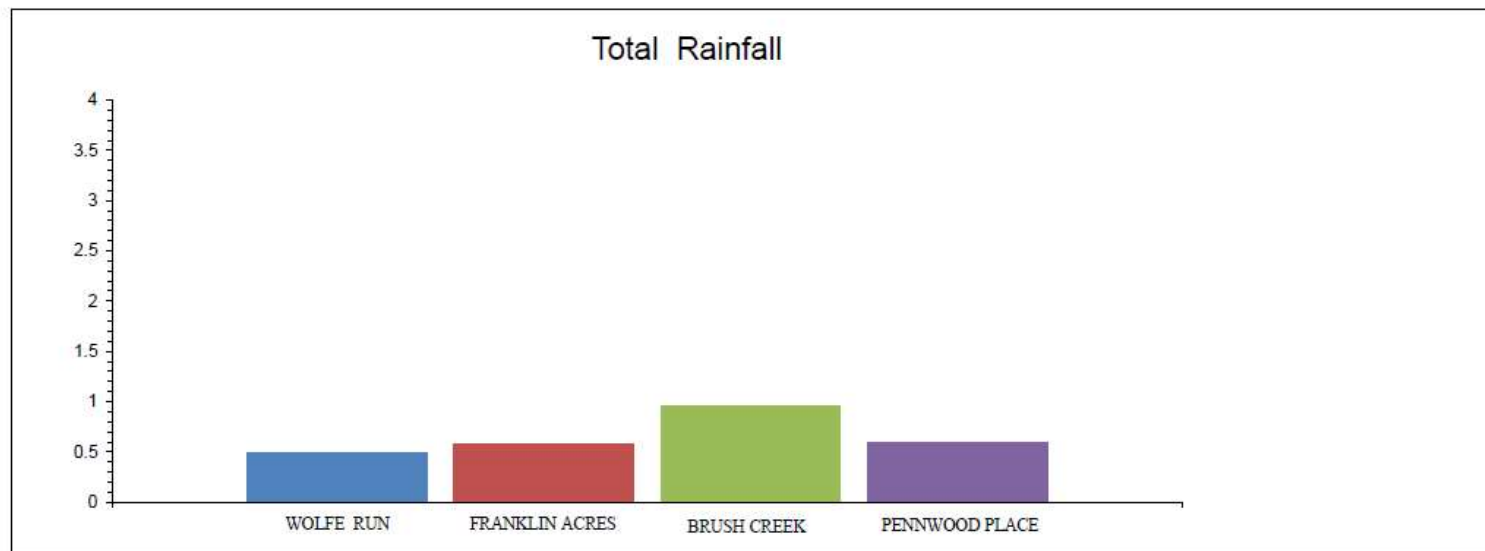
Additional Comments Pond "___": _____

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

[illegible]

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=UxOam2GEVgQ>



The YouTube 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

