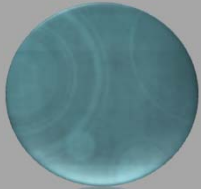




TETRA TECH

Genesee County  
*Municipal and School  
Facilities*



STORMWATER  
POLLUTION  
PREVENTION

MS4



Good Housekeeping

# Agenda

Time	Item
9:30	Introduction
9:45	Good Housekeeping Video
10:15	Good Housekeeping Presentation
10:50	Break
11:00	Contracts
11:15	IDEP Video
11:35	IDEP presentation
12:00	Test
12:15	Conclusion

# Introduction

BMP



# Terms

## **SWPPI-Storm Water Pollution Prevention Initiative**

The plan your Community has in place to meet its permit requirements for preventing storm water pollution

## **SWPPP-Storm Water Pollution Prevention Plan**

A plan for a Facility to meet its permit requirements for preventing storm water pollution

## **BMP-Best Management Practices**

*Everyday practices that prevent stormwater pollution*

# WHY ARE YOU HERE?

- Permit allowing you to discharge stormwater.
- Permit stipulates that existing employees must be trained at least once over the course of the permit cycle – until 2013.
  - New employees in their 1st yr.
  - Contractors before they can perform the contracted work.
- General areas where the permit is specific include:
  - Structural Stormwater Control Maintenance
  - Roadways, Parking Lots, and Bridges
  - Fleet Maintenance and Storage Yards (SWPPP)
  - Managing Vegetated Properties.
- Permittee shall have a certified stormwater operator to oversee all facilities covered by a SWPPP.

# Good Housekeeping & Spill Prevention

BMP



Best Management Practice

# Spill Prevention

1	<b>Fueling Areas</b>
	<i>Protect Nearby Catch Basins/ Storm Sewers. Have absorbent material available. Train Staff to Use Material</i>
2	<b>Parking Areas</b>
	<i>Keep Drip Pans Nearby and Accessible. Have Absorbent Material Available.</i>



# Spill Prevention

3

## Material Loading Areas

*Load or Unload Away From Catch Basins/Storm Sewers. Load indoors if possible.*





# Spill Control & Response

BMP

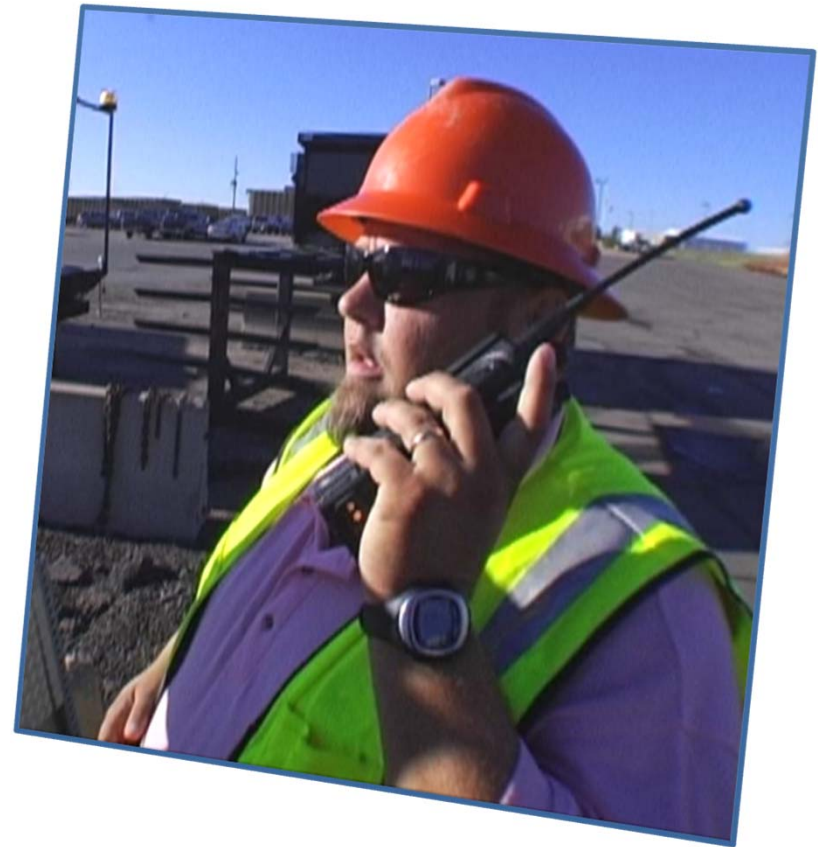


Best Management Practice

# Spill Response

**Have a Spill Response Plan in Place with Contact Names and Numbers in Case of a Spill.**

**Make Spill Control Materials Available and Train Personnel to Use Them.**



# Spill Notification

**Keep Records of All Spills and Retain Records For 3 Years.**

- **What Was Spilled and When**
- **How Much Spilled**
- **When The Spill Occurred**
- **How Was it Cleaned Up**



# Vehicle Fueling

BMP



Best Management Practice

# Vehicle Fueling

**Have a Fuel Spill Kit Available at All Fueling Stations.  
Dispose of Used Absorbent Properly.**

**Store Small Fuel Containers Under Cover in a Fire-proof Cabinet.**



# Vehicle & Equipment Maintenance

BMP



Best Management Practice

**BMP**

# Keep it Neat!



Best Management Practice

# Vehicle & Equipment Maintenance

## Outdoor Maintenance

Mowers, Tractors, Plows

Away from Catch Basins, Catch Drippings, Sweep and Dispose.

## Indoor Maintenance

Trucks and Vehicles

Catch Drippings, Apply Absorbent, Dispose of Waste Properly.



# Vehicle & Equipment Washing

BMP



Best Management Practice

# Vehicle & Equipment Washing

***Never Rinse Wash Water to a Storm Sewer.***

***Rinse Wash Water to a Sanitary Sewer.***

***Use Commercial Wash Facility.***



# Materials Management

BMP



Best Management Practice

# Outdoor Storage



## Road Salt

1

Store Under Roof or  
Tarp

## Mulch or Topsoil

2

Contain with Berm  
Away From Catch Basin

## Fuel

3

Approved Storage,  
Protect Catch Basins

# Indoor Materials Storage Solutions



Order Materials “As Needed” in Small Quantities

1

Store Neatly on Shelving Unit or Pallet

2

Clean up Spills Immediately

3

Haul Waste on a Regular Schedule

4

# Waste Management

BMP



Best Management Practice

# Waste Receptacles

## Problem Areas

*Dumpster Lid Left Open*

*Liquids Put in Dumpster*

*Located Near Catch Basin*



## Solutions

*Close Lid When Not in Use*

*No Liquids in Trash Dumpsters*

*Locate Dumpster Away From Catch Basin*

# Uncontainerized Wastes

## **KEEP OUT of Catch Basins**

*All Wash Water*

*Concrete Wash and  
Asphalt*

*Grass Clippings,  
Landscape Waste*

*Over-Applied Fertilizers,  
Pesticides, and Herbicides*





# Municipal Wastes

**Martial removed from  
Catch Basins**

*dewater at a drying bed*

*ultimate disposal at a local  
landfill*

**Street and Parking lot  
Sweeping material**

*disposal at a local landfill*



# Municipal Facility Maintenance

BMP



Best Management Practice

# Municipal Facility Maintenance

---

## ***Facility***

<b>1</b>	<b>Municipal site</b>
	<i>Garages, Fire/Rescue and Police</i>
<b>2</b>	<b>Office site</b>
	<i>Municipal and Administrative Buildings</i>
<b>3</b>	<b>Open space / Park</b>
	<i>Sport Fields, Playgrounds, Parks</i>
<b>4</b>	<b>Transportation stations</b>
	<i>School Bus, Municipal Transportation Yards</i>

## ***Protection Measures***

<b>1</b>	<i>Wash Water in Sanitary, Keep Dumpster Lids Closed, Proper Material Storage, Spill Kits for Fueling Areas</i>
<b>2</b>	<i>No Liquid Waste in Dumpster, Keep Lids Closed, No Cleaning Waste in Catch Basin</i>
<b>3</b>	<i>Leave buffer when Mowing Around Water Feature, Protect Storm Drains from Clippings, Don't Over-Apply Fertilizer, Pesticides or Herbicides</i>
<b>4</b>	<i>Spill Kits Available, Drip Pans for Leaks, Keep Dumpster Lids Closed</i>

# Landscaping & Grounds Maintenance

BMP



Best Management Practice

# Landscaping



## Mowing

1

*Use Mulching Mower, Blow Clippings Back on Grass, Leave Buffer Around Water, Don't Mow When Ground is Wet*

## Fertilizer and Pesticide Application

2

*Apply Only When Necessary, Sweep Up Excess, Follow Application Guidelines*

## Permits / Certificates

3

*Michigan Department of Agriculture (MDA) Pesticide/Herbicide Application Certificate*

# Landscaping Wastes



## Disposal

1

*Don't Blow Clippings into Street,  
Catch Basin or Water*

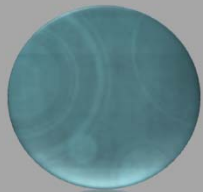
*Mulch When Possible*

## Composting

2

*Compost Leaves and Yard Debris  
Away From Water and Catch  
Basins.*

*Berm Composting Area if Possible*



# STORMWATER POLLUTION PREVENTION

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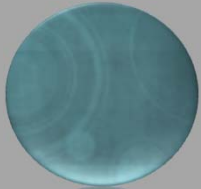


Genesee County SWM





**Genesee County  
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Facilities**



**STORMWATER  
POLLUTION  
PREVENTION**

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**Contracts**



## A GOOD CONTRACT WILL?

- Define the scope of work well
- Define the impacts from work
  - Specifically stormwater impacts
- Identify potential environmental impacts
- Include proper control techniques
- Clarify both parties' expectation and ensure they are reasonable



# The Basics

- **Specify contractors must receive stormwater GHK training. (NPDES Phase II req.)**
- **Specify contractors maintain records for key measures (pounds of debris removed from catch basins, amount of fertilizer applied, number of times streets were swept, etc.)**
- **Provide you with copy.**



# WASTE DOES NOT END AT YOUR PROPERTY BOUNDARY!

- Any waste generated on your property or through activities done as part of your operation, must be disposed of properly.
- Contract needs to address what is proper disposal and how it will be carried out.



# QUESTIONS TO ASK YOURSELF... OR YOUR CONTRACTOR

## Mowing or landscaping:

- Are leaves, woody debris, or grass picked up or left on site (mulched in place)?
- If removed from site, where do they go?



## Parking lot sweeping:

- How much debris is collected?
- Is it being disposed of pursuant to the EPA guidance?

[http://www.gcdcswm.com/Phasell/Permit\\_Forms/Permit\\_Form.htm](http://www.gcdcswm.com/Phasell/Permit_Forms/Permit_Form.htm)

# Questions Continued ...



## Disturbing Ground:

- Do you have an acceptable soil erosion and sedimentation control plan?

## Cleaning out storm water infrastructure:

- Are the catch basin sumps being cleaned out to the MDNRE guidance?
- The spoils coming out of the sediment basin, detention basin being placed where they cannot be washed away or have nutrients/heavy metals being washed back into the storm system?

# Questions Continued ...



## Vehicle Maintenance/ Fueling:

- Is vehicle maintenance done onsite or offsite?
- How are vehicle waste products, specifically liquid waste, being handled and disposed of?
- If a spill occurs because a contractor is picking up, delivering or transporting waste products or fuel, who is responsible, and do they have a cleanup procedure in place?

## Paving:

- Do you have a designated area for your concrete trucks to wash off?



# ACTIVITIES TO ADDRESS IN CONTRACT



## Does the contract:

- Add BMP(s) to storm drains at risk of receiving polluted water due to an activity if needed?
- Have a sedimentation & erosion control plan?
- Identify proper disposal of waste products?
- Identify who is responsible for a spill cleanup?
- Identify documentation necessary for payment?
- Identify limits of application, such as where it will be applied or weather conditions?



# CONTRACTS CAN TAKE MANY FORMS

➤ You don't always have a formal contract with Bid documents, specifications and plans. You may only have a request for proposal (RFP) or even maybe a verbal understanding.

➤ No matter what you have it should be in writing for both the owner's and the contractor's protection. Details and irregularities should be spelled out in the prints or in the scope that would be part of the RFP.





# SOME CONTRACT LANGUAGE

- ***Prior to the start of construction, the contractor shall furnish material certifications to (owner) verifying that all materials used on the project are in accordance with (owner) standards.***
- ***The contractor will protect the storm sewer system from pollutants as outlined in the SESC plan.***
- ***Implementation of temporary soil erosion measures not on the prints may be required in the field. Cost inclusive to SESC pay item.***

# CONTRACT LANGUAGE CONTINUED

➤ ***Periodic maintenance of soil erosion control measures may be necessary and are cost inclusive to SESC pay item.***

➤ ***GCDC has a 13 page specification in our bid documents on Turf Establishment that includes:***

- ***Materials, including seed mix, allowable mulch and fertilizer application***
- ***Application rates***
- ***Time of year it can be applied or reapplied***
- ***Germination rates necessary for payment***

[http://www.gcdcswm.com/Design%20Information/design\\_information.htm](http://www.gcdcswm.com/Design%20Information/design_information.htm)

## CONTRACT LANGUAGE CONTINUED

- ***A disposal plan for street sweeping will be provided by contractor prior to beginning of work. Plan will include collection method, storage and disposal location subject to owner approval.***
- ***Disposal tickets will be made available to owner prior to payment.***
- ***Snow or fertilizer storage will be restricted to areas designated on attached map.***
- ***Contractor will provide cleanup procedures for spills prior to beginning work.***



# STORMWATER POLLUTION PREVENTION

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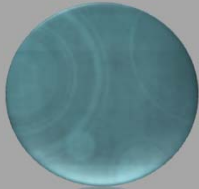


# Contracts



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**Illicit Discharge Elimination Plan**  
**(IDEP)**

# Spotting Sources

- **Dry Weather Flow**
- **Staining**
- **Sanitary Smell or Debris**
- **Small Pipes to Catch Basin or Drain**



# Dry Weather Flow

- **72 Hour “No Rain” Window**
- **Leaking Pipes**
- **High Water Table**



# Observations

- **Staining**
- **Suds or Foam**
- **Smell**





# Laundry Connections

- **Suds**
- **Lint**
- **Surfactants**
- **Odor**



# Leaking Dumpsters

- **Open Lids**
- **Liquids**
- **Overfull**



# Vehicle Washing

- Residential
- Commercial
- Surfactants



# Sewer Overflow

- Backups
- Inflow
- Cross Connections



# Reporting

- **Supervisor**
- **Fire or Police**
- **Hazmat**



# Testing

- **Field Tests**
- **Lab Tests**
- **Action Levels**



# Follow Up

- **Upstream Tracking**
- **Dye Testing**



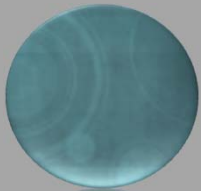
# Construction Sites

- **Sediment Runoff**
- **Spoil Piles**
- **Unprotected CB's**





end of slideshow



# STORMWATER POLLUTION PREVENTION

# MS4

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