APPENDIX E

Athens Full Service Facility
Training Materials

Ohio Department of Transportation Stormwater Pollution Prevention Plan Training

Athens Full Service Facility

September 2017

Training Agenda

- Background on stormwater regulations
- Stormwater Pollution Prevention Plan (SWPPP)
- Recap
- Quiz

Training Agenda

- Attendees:
  - Sign in
  - Ask questions to develop a better understanding
  - Share lessons learned from practical work experiences

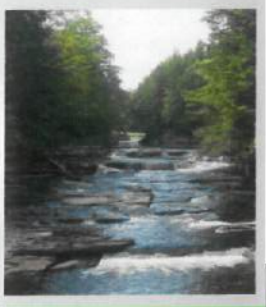
Background

Background

- Clean Water Act History
  - Public concern drove congress to pass legislation
    - 1968: $3 million lost in Chesapeake Bay fishing industry
    - 1969: Cuyahoga River caught on fire from floating oil slick
    - 1972: ⅔ of U.S. waters had become unsafe for fishing or swimming

Background

- Clean Water Act History
  - 1972: modern-day Clean Water Act enacted
    - Makes it illegal to discharge pollutants from point sources (pipes, ditches, etc.) into surface waters (streams, rivers, lakes, wetlands, or oceans)
    - Regulates quality standards for surface waters
    - Permits discharges into surface waters



Background

- **Clean Water Act Goals**
  - Protect human health
  - Support economic and recreational activities
  - Provide healthy habitat for fish, plants, and wildlife

Background

- **Stormwater**
  - Precipitation, including snowmelt
  - Stormwater either infiltrates into the ground through pervious surfaces (soils, gravel, swales) or
  - Stormwater runoff flows over impervious surfaces (concrete, asphalt, rooftops, compacted soil)
    - **Channels into storm sewers, ditches, or other conveyances**
    - **Eventually may discharge into surface waters**

Background

- **Why is stormwater a concern?**
  - Can come into contact with exposed equipment, activities, materials, etc.
  - Can carry associated pollutants into surface waters

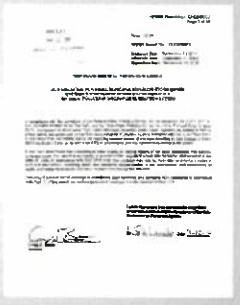
Background

Harmful pollutants can include:

- **Hydrocarbons**
  - Oils, gasoline, diesel, and grease
  - Harmful to organisms even at relatively low concentrations
- **Sediment**
  - Eroded soils and exposed aggregate
  - Alters physical nature of waters and habitat
- **Toxic Pollutants**
  - Pesticides, paints, solvents, machinery fluids, and corroded metals
  - Toxic to organisms and can contaminate drinking water
- **Deicers**
  - Solid salt, brine, and other chlorides
  - Extremely soluble and toxic in high concentrations

Background

- **ODOT has a permit allowing discharge of stormwater runoff from roadways and facilities to surface waters**
- **Requirements:**
  - Facility-specific Stormwater Pollution Prevention Plans (SWPPP) for locations with certain operations and maintenance activities within an urban boundary



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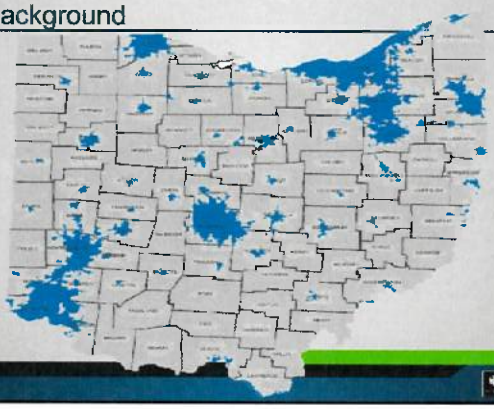


Training

- To ensure awareness and implementation of SWPPP requirements, training must be provided annually for:
  - All employees who work in areas where industrial-type activities or materials are exposed to stormwater and
  - All employees responsible for implementing, inspecting and reporting on SWPPP activities.

Stormwater Pollution Prevention Plan

Stormwater Pollution Prevention Plan

- SWPPP binder maintained by the SWPPP Team Leader
- The key components include:
  - Pollution Prevention Team
  - Site Description
  - Potential Pollutant Sources
  - Stormwater Control Measures
  - Monitoring and Inspections
  - Recordkeeping

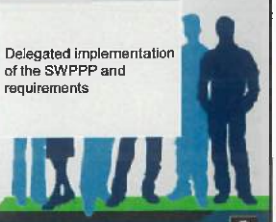
SWPPP Requirements

Key SWPPP Requirements	Frequency
Training	Annual ✓
Comprehensive Site Evaluation	Annual
Facility Inspections	Quarterly
Stormwater Visual Assessment	Quarterly
SWPPP Update	As needed
Implementation of pollution prevention practices	Ongoing

Responsibilities

Pollution Prevention Team

Team Role	Name	Responsibility
Team Leader	Scott Sanders	Overall implementation of the SWPPP and requirements
Team Member	Ami Thompson	Delegated implementation of the SWPPP and requirements
Team Member	Scott Kish	
Team Member	Rich Oster	
Team Member	Others, as assigned	



Your Role

- **Responsibilities**
  - Understand the SWPPP
  - Implement the SWPPP and Best Management Practices
  - Assist with inspections, as needed
  - Notify Pollution Prevention Team of a spill or emergency

Your Role

- **Front line of defense**
  - Involved with daily operations
- **Everyone is responsible for pollution prevention**
- **Good housekeeping is not only helpful in preventing pollution**
  - Safe working environment
  - Inventory control

Site Description

Site Description

- **General description of the facility including drainage information**
- **Figure 1 - USGS general location map**
  - View of the facility and nearby waterways
- **Figure 2 - Detailed site map**
  - Facility layout
  - Stormwater conveyances
  - Drainage direction
  - Locations of potential pollutant sources

Site Description

Site Drainage

- **Drainage Area 001**
  - Encompasses the north portion of the property
  - Stormwater is directed over land to catch basins connected to the underground stormwater drainage system
  - System directs stormwater west to a retention basin

Site Drainage

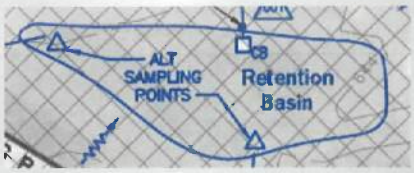
- Drainage Area 001

Site Drainage

- Drainage Area 001
  - The retention pond catch basin (outfall 001) discharges into Margaret Creek
  - Defined as Outfall 001 – critical response point
  - Valve within the catch basin can be closed to stop spills from leaving site

Site Drainage

- Drainage Area 001
  - There are two alternate sampling points located within the retention basin if outfall 001 is not accessible.



Site Drainage

- Drainage Area 002
  - Encompasses a small portion of the property to the south
  - Stormwater flows overland to the west

Site Drainage

- Drainage Area 002
  - Stormwater runoff in Drainage Area 002 flows over vegetated and paved areas through a ditch with concentrated flow to Outfall 002
  - Discharges into the Margaret Creek

Site Drainage

- Interior Drains
  - Building A and Paint/Body shop drains are connected to oil/water separators and then to the sanitary sewer system
  - Interior designed so that liquids flow to interior drains
  - Does not discharge to stormwater but maintenance is necessary

Site Drainage

- Drainage Area 001 and 002
  - The outfalls discharge
    - Into Margaret Creek
    - Into Hocking River
  - Pollutants that enter the drainage system are carried into these receiving waters

Potential Pollutant Sources and Stormwater Controls

Potential Pollutant Sources

- What has the potential to impact stormwater?
  - Vehicle and equipment
    - fueling
    - maintenance
    - storage
    - washing
    - sand blasting
    - painting
  - Oil and chemical storage
  - Deicing material storage
  - Aggregate/solids storage
  - Waste storage
  - Welding and Grinding

Stormwater Controls

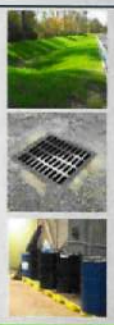
- Stormwater controls must be implemented to prevent, reduce or eliminate pollutants from potential sources
  - Physical structures (dikes, berms, diversion systems, etc.)
  - Best Management Practices which are the procedures and operations (weekly sweeping, preventive maintenance, etc.)

Stormwater Control Categories

- **Minimize exposure**
  - Provide cover so that there is no contact with stormwater
- **Good housekeeping**
  - Maintain areas in clean and orderly manner
- **Preventive maintenance**
  - Test, inspect, and maintain equipment and control measures to prevent spills

Stormwater Control Categories

- **Erosion and sediment controls**
  - Stabilize exposed areas and contain runoff
- **Management of runoff**
  - Divert, infiltrate, reuse runoff to minimize pollutants
- **Spill prevention and response procedures**
  - Have mechanisms/procedures in place to address likely spills
- **Employee training**
  - Ensure employees are aware of SWPPP requirements



Potential Pollutant Source

- **Vehicle and equipment fueling**
  - A steel double-walled multi-compartment tank.
  - Pollutant: Diesel fuel and unleaded gasoline

Stormwater Controls

- **Vehicle and equipment fueling:**
  - Maintain
    - curbing to reduce run-on at dispensers
    - impermeable concrete pad
    - bollards around fuel pumps
    - fueling hoses with check valves
  - Monitor fueling
  - Inspect
    - tank, containment, hoses, valves and connection points
    - overfill alarm and emergency shut-off mechanism
    - spill kits
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- **Vehicle and equipment maintenance:**
  - Maintenance activities performed within maintenance area of garage
  - Pollutants: Oils, fuels, fuel additives, degreasers, etc.

Stormwater Controls

- **Vehicle and equipment maintenance:**
  - Only perform maintenance indoors
  - Maintain garage floor to drain to floor drains
  - Utilize drip pans when transferring liquids
  - Drain fluids into appropriate containers
  - Follow procedures for portable containers
  - Inspect
    - area for leaks or spills
    - spill kits
    - Floor drains
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- **Vehicle and equipment storage:**
  - Vehicles and equipment are stored within Buildings A, B, and C, Paint/body shop and outside around the property
  - Pollutants: Oils, grease, hydraulic fluids, metals, etc.

Stormwater Controls

- **Vehicle and equipment storage:**
  - Store indoors, when possible
  - For leaking vehicles/equipment, drain liquids, repair leak, or provide drip pan
  - Empty drip pans prior to becoming full
  - Inspect
    - area for leaks or spills
    - spill kits
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- **Vehicle and equipment washing:**
  - Washing performed within wash bay of Building A
  - Pollutants: Oils, grease, hydraulic fluids, detergents, deicing materials, solids, solvents, etc.

Stormwater Controls

- **Vehicle and equipment washing:**
  - Washing only allowed in wash bay which drains to the oil/water separator and sanitary sewer
  - Inspect
    - area for leaks or spills
    - spill kits
    - floor drains
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- **Vehicle and equipment Sandblasting**
  - A sand blasting building is utilized for smoothing surfaces of various pieces of equipment.
  - Pollutants: Solids, sediment, general wastes, etc.

Stormwater Controls

- **Vehicle and equipment Sandblasting:**
  - Prohibit sand blasting at any other location aside from the sand blasting area
  - Contain debris and prevent from spilling over outside
  - Sweep any spilled material into the building area after sandblasting activities
  - Dispose of wastes promptly in accordance with waste disposal regulations
  - Inspect and maintain equipment
  - Clean up spills immediately

Potential Pollutant Source

- **Vehicle and Equipment Painting:**
  - One paint spray booth with particulate filtration systems
  - Pollutants: Paint, paint solids, solvents, etc.

Stormwater Controls

- **Vehicle and Equipment Painting:**
  - Confine painting to the paint booth
  - Label all containers
  - Maintain
    - particulate filtration systems per manufacturer's recommendations
    - spill response materials
  - Inspect
    - Floor drains
    - Painting area for leaks
  - Follow portable container procedures for paints and solvents
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- **Oil/chemical storage:**
  - Storage in containers within the oil room in Building A
  - Pollutants: Oils, grease, hydraulic fluids, paint, solvents, detergents, etc.

Stormwater Controls

- **Oil/chemical storage:**
  - Store all containers indoors away from high traffic areas
  - In sensitive locations, store containers on spill pallets
  - Keep containers closed when not in use or when transporting
  - Label all containers
  - Inspect
    - drip pans, spill pallets, or spill caddies prior to becoming full
    - spill kits
    - storage area for leaks or spills
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- **Deicing material handling:**
  - Storage of salt within building and deicing liquids in tanks
  - Pollutants: Salt and deicing fluids

Stormwater Controls

- **Deicing material handling:**
  - Store salt within salt barn
  - Cover temporary piles of salt with waterproof tarps, at a minimum
  - Sweep up spilled salt immediately after loading or unloading
  - Prohibit discharge of deicing fluids into stormwater drainage system
  - Maintain deicing fluid valves in closed position
  - Clearly label deicing fluid containers
  - Inspect
    - storage areas for spills or leaks
    - storage barn, dome and building integrity at least annually
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- **Aggregate/Solids Storage:**
  - Storage of aggregates/solids outside in piles as well as in storage shed
  - Pollutants: Solids and sediment

Stormwater Controls

- **Aggregate/solids storage:**
  - Store aggregate/solids indoors or undercover when possible.
  - Store aggregate/solids on concrete pads to allow for easy cleanup.
  - Sweep any spilled material into the storage area after loading or unloading.
  - Inspect
    - drainage systems to remove solids.
    - storage areas for spills.
  - Clean up spills immediately.
  - Install sediment filters or silt fences to contain aggregate/solids along the perimeter of the storage piles.

Potential Pollutant Source

- **Waste Storage:**
  - Storage of waste within covered trash containers outside or other containers indoors
  - Pollutants: Solids, oils, and other wastes, etc.

Stormwater Controls

- **Waste Storage:**
  - Store general trash indoors or provide with storm-resistant covers
  - Store liquids/hazardous wastes indoors or within secondary containment
  - Follow portable container procedures for liquids/hazardous wastes
  - Keep containers closed
  - Schedule waste pickup to avoid overfilled containers
  - Inspect
    - waste storage areas
    - property for waste/debris
  - Clean up leaks or spills immediately using dry methods
  - Dispose of wastes in accordance with waste disposal regulations

Potential Pollutant Source

- **Grinding and Welding:**
  - Grinding and welding activities are performed indoors within the maintenance area of Building A and the Paint/body shop
  - Pollutants: Particulates and metals

Stormwater Controls

- **Grinding and Welding:**
  - Only perform welding indoors
  - Maintain an organized inventory of materials
  - Keep area clean and free of debris
  - Sweep the area on a regular basis to avoid accumulation of fines and scrap
  - Contain and dispose of swept materials. Prohibit sweeping the materials outside.
  - Clean up metal scrap and dust generated from welding activities immediately using dry methods

Potential Pollutant Sources

- **Non-stormwater discharges are not authorized unless listed as an allowable discharge:**
  - Discharges from unplanned fire-fighting activities
  - Fire hydrant flushings
  - Potable water including water line flushings
  - Uncontaminated condensate from air conditioners
  - Irrigation drainage
  - Building or pavement washwaters without detergents
  - Landscaping watering
  - Uncontaminated groundwater

Spill Response Procedures

Spill Response Procedures

- Effective spill prevention and response is critical for compliance
- Accidents can happen
- Examples:
  - Fuel nozzle drips
  - Corroded drum
  - Tank overfill



Spill Response Procedures

Upon discovery of a spill:

- If an immediate threat, evacuate the area and call emergency responders
- If you can do so safely, evaluate the spill
  - Material
  - Volume
  - Continuous or non-continuous
  - Potential to reach unpaved area or storm drain


Spill Response Procedures

- Get help
  - Contact the Pollution Prevention Team
  - Determine the need for a response contractor
  - Determine if the spill is "reportable"
- Stop the spill source
  - Can involve closing valves, shutting off pumps, turning drums upright, etc.
  - Use appropriate personal protective equipment


Spill Response Procedures

- Contain the spill
  - Prevent spill from spreading
  - Protect surface waters and storm drains
  - Deploy spill pads, booms, and/or drain covers
- Absorb liquids
  - Socks or booms
  - Absorbent pads
  - Absorbent mats
  - Absorbent pillows
  - Dry absorbent
  - Shop vacuums (wet type)



Spill Response Procedures

- Clean up the spill
  - Spilled material
  - Used spill response materials
  - Contaminated soil
- Dispose of all wastes in accordance with waste regulations


Spill Response Procedures

- "Reportable Release" Conditions:
  - Oils (gasoline, petroleum, fuel oil, sludge, etc.)
    - Causes a visible film or sheen on navigable waters (1 drop)
    - 25 gallons or more into other environmental media
  - Extremely Hazardous Substances (40 CFR 355)
  - CERCLA Hazardous Substances (40 CFR 302)

Spill Response Procedures

- For reportable releases, notify the following agencies within 30 minutes:

Agency	Phone Number
National Response Center	1.800.424.8802
Ohio EPA Spill Hotline	1.800.282.9378
Local Emergency Planning Committee	740.594.2261 (Office) 740.592.5444 (24-Hour)
Local Fire Department	911

- File a written incident report within 30 days
- See guidance in Appendix D of the SWPPP

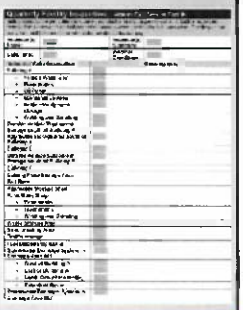
Monitoring and Inspections

Monitoring and Inspections

- The following must be conducted:
  - Quarterly Facility Inspections
  - Quarterly Visual Assessments
  - Annual Comprehensive Site Evaluations

Monitoring and Inspections

- Quarterly Facility Inspections
  - Routine inspection of the facility to ensure SWPPP implementation
    - Utilize form in Appendix F
    - Site Map (Figure 2) can be used as reference
    - Completed form must be signed and maintained in files



Monitoring and Inspections

- Quarterly Facility Inspections
  - Check potential pollutant areas to ensure control measures are working
  - Identify control measures needing repair/replacement
  - Check drainage pathways for evidence of pollutants
  - Evaluate unidentified discharges of pollutants

Monitoring and Inspections

- What do you look for?: Fueling island example

Monitoring and Inspections

- What do you look for?: Fueling island example

Absorbent materials present and adequate?	Valves and hoses working properly and no leaks?	Overfill alarms working properly and not going off?	Area free of spills or staining?

Monitoring and Inspections

- What is wrong in these examples?

• Trash bin overfilled • Trash bin open to precipitation	• Spill kit lid broken • Spill kit filled with ice • Trash on ground	• Salt outside of barn	• Drum outside • No containment • Drum open • Drum unlabeled

Monitoring and Inspections

- Quarterly Visual Assessment
  - Wet-weather sampling to identify any concerns in stormwater flowing off property
    - Utilize Form in Appendix G
    - Site map shows outfall (sample location)
    - Completed form must be signed and maintained in files

Monitoring and Inspections

- Quarterly Visual Assessment
  - Collect a stormwater sample in a clear container from each outfall
    - Within first 30 minutes of a rain event, at least 3 days from previous rain event
    - Capture snowmelt during 1 quarter
    - If not practical to collect within timeframe, take as soon as possible and document reason
    - Assess for indicators of contaminants

Monitoring and Inspections

- Quarterly Visual Assessment
  - Clarity

Clear → Slightly Cloudy → Cloudy → Opaque

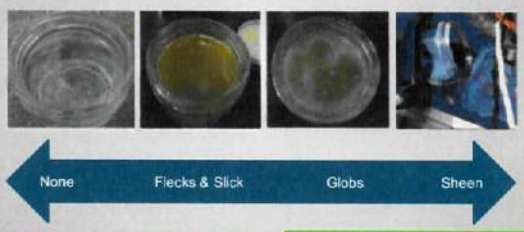
Monitoring and Inspections

- Quarterly Visual Assessment
  - Solids and Foam

Floating Solids | Settled Solids | Suspended Solids | Foam

Monitoring and Inspections

- **Quarterly Visual Assessment**
  - Oil Sheen



Monitoring and Inspections

- **Quarterly Visual Assessment**
  - What if you find something?
    - Notify Pollution Prevention Team
    - Inspect upstream to identify source of pollution
    - Stop the source of pollution
    - Take corrective actions

Monitoring and Inspections

- **Annual Comprehensive Site Evaluation**
  - Thorough review of effectiveness of the SWPPP
    - Utilize Form in Appendix H
    - Completed form must be signed and maintained in files

Monitoring and Inspections

- **Annual Comprehensive Site Evaluation**
  - Complete a comprehensive inspection of the facility
  - Evaluate control measures for effectiveness
  - Review past year's facility inspections and visual assessments for trends
  - Summarize any changes necessary to the SWPPP

Monitoring and Inspections

- **Corrective actions must take place if:**
  - Unauthorized discharges or
  - Control measures are not effective:
    - As determined by an Ohio EPA inspector, routine facility inspections, quarterly visual assessments, or comprehensive site inspection.
- **Within 24 hours, the description must be recorded.**
- **Within 30 days, a summary of the corrective action must be recorded.**

SWPPP Administration

SWPPP Amendment

- **The SWPPP must be amended when:**
  - There is a modification to or addition of control measures as part of a corrective action (within 30 days);
  - There is construction or a change in design, operation, or maintenance at the facility that has a significant effect on the discharge, or the potential for the discharge, of pollutants from the facility; or
  - There is a new or revised permit or MS4 requirement

Recordkeeping

- **Maintain records on file for at least 3 years:**
  - The final SWPPP
  - The general permit
  - Quarterly Facility Inspection Records
  - Quarterly Visual Assessment Records
  - Annual Comprehensive Site Evaluations
  - Employee Training Records
  - Documentation of any incidences and corrective actions

Recap

SWPPP Recap

- **Key points to remember:**
  - Everyone has a role in preventing pollution
  - Pollution prevention starts with good housekeeping
  - Clean up spills immediately!

Quiz

SWPPP Quiz Questions with Answers

1. **What does CWA stand for?**
   a) Clean Water Authority
   b) Clean Water Agency
   c) Clean Water Act
   d) Clean Water Association
2. **Which of the following is NOT a goal of the CWA:**
   a) Protect human health
   b) Ensure water availability for agriculture
   c) Support economic and recreational activities
   d) Provide healthy habitat for fish, plants, and wildlife
3. **True or False: ODOT has a stormwater permit that allows ODOT to discharge stormwater runoff from storm sewer systems and road side ditches.**
   - True

SWPPP Quiz Questions with Answers

4. **True or False: Stormwater runoff is defined as – precipitation and snowmelt runoff.**
   - True
5. **The stormwater outfall is the point at which stormwater:**
   a) Runs on to ODOT property or right of ways
   b) Evaporates
   c) Flows into the receiving water
   d) Leaves ODOT property or right of ways
6. **What is the smallest amount of oil on a surface water that is considered a "reportable quantity?"**
   - One drop

SWPPP Quiz Questions with Answers

7. **How often must facility SWPPP inspections be conducted?**
   - Quarterly
8. **For the stormwater visual assessment, within what time frame of the start of a storm event must a sample be taken?**
   - Within the first 30 minutes
9. **True or False: At least one stormwater visual assessment sample must capture snowmelt runoff.**
   - True
10. **Which of the following are associated with your responsibilities in regards to implementation of the SWPPP?**
    a) Understand the SWPPP, implement the SWPPP and Best Management Practices, assist with inspections, notify the team leader of a spill or emergency, and notify the team leader when there is a change in operations.
    b) Revise the SWPPP based on permit or facility changes and update site maps.
    c) Sign off on the SWPPP and ensure overall implementation of the plan.
    d) Contact the Ohio Environmental Protection Agency

Questions/Comments

GRESHAM SMITH AND PARTNERS

Ohio Department of Transportation Stormwater Pollution Prevention Plan Training

Athens Full Service Facility

August 2018

Road Clean Water

Training Agenda

- Background on stormwater regulations
- MS4 Permit Requirement
- Stormwater Pollution Prevention Plan (SWPPP)
- Recap
- Quiz

Training Agenda

- Attendees:
  - Sign in
  - Ask questions to develop a better understanding
  - Share lessons learned from practical work experiences

Background

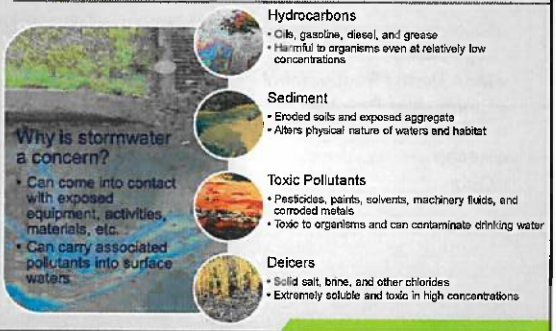
Background

- **The Federal Water Pollution Control Act of 1948** - the first major U.S. law to address water pollution.
- **Clean Water Act 1969** The Cuyahoga River catches fire in Cleveland, drawing national attention and helping the passage of major revisions to Federal Water Pollution Control Act – became known as Clean Water Act.
- **National Pollutant Discharge Elimination System (NPDES) Permits** - 1992 Ohio became a delegated state.
- **MS4 Permit** – (Municipal Separate Storm Sewer System)

Background

- Stormwater runoff
  - Rain or snowmelt flows untreated into surface waters
  - May contact exposed materials or processes and carry associated pollutants into surface waters
  - Other pollutants may discharge into the storm systems

Background



Hydrocarbons
- Oils, gasoline, diesel, and grease
- Harmful to organisms even at relatively low concentrations

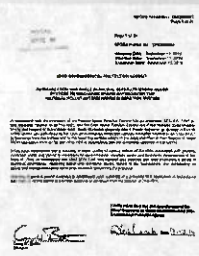
Sediment
- Eroded soils and exposed aggregate
- Alters physical nature of waters and habitat

Toxic Pollutants
- Pesticides, paints, solvents, machinery fluids, and corroded metals
- Toxic to organisms and can contaminate drinking water

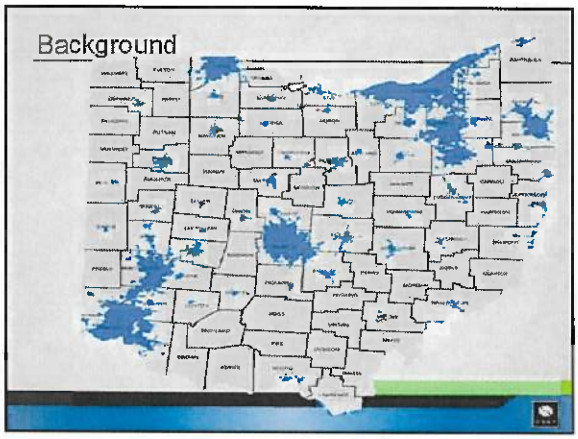
Deicers
- Solid salt, brine, and other chlorides
- Extremely soluble and toxic in high concentrations

Background

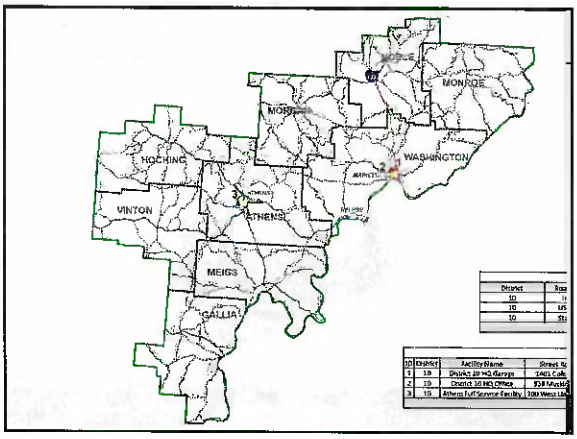
- ODOT has a MS4 permit allowing discharge of stormwater runoff from roadways and facilities to surface waters
- MS4 Requirements:
  - Establish Minimum Control Measures (MCM)
  - The MCM are to be used to limit the pollution discharging into waters of the state



Background



Background



Background

- MS4 Requirements:

MCM 1
- Public Participation and Outreach

MCM 2
- Public Involvement/Participation

MCM 3
- Illicit Discharge Detection and Elimination

MCM 4
- Construction Site Storm Water Runoff Control

MCM 5
- Post-Construction Storm Water Management in New Development and Re-development

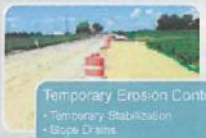
MCM 6
- Pollution Prevention and Good Housekeeping for Municipal Operations

Minimum Control Measure 4

Construction Sites

Construction Sites

- Common Erosion and Sediment Controls



Temporary Erosion Control
- Temporary Stabilization
- Slope Drains
- Berms or Dikes
- Erosion Control Mat
- Rock Ditch Checks
- Construction Entrance

Temporary Sediment Control
- Inlet Protection
- Sediment Dams or Traps
- Sediment Basin
- Perimeter Filter Fabric Fence
- Filter Fabric Ditch Check

Temporary Erosion Controls

- Temporary Erosion Controls
- Used to **prevent** the displacement of soil particles during construction.

Note: Erosion Controls typically are:
1) Installed as needed by current construction activity
2) Located internally throughout work areas
3) Installed to protect work areas. keeping soil in place

Temporary Erosion Control

What the Temporary controls are doing

Prevent soil movement

Protects soil by:
- Slowing down water
- Minimizing interaction between rainwater and soil

Keeps the soil in place

Sediment Controls

- Sediment Controls
  - Sediment Controls are controls used to promote sedimentation and remove sediment from stormwater runoff.

Note: **Sediment Controls typically are:**
1) **Installed early in the project phasing**
2) **Located at the project perimeters**
3) **Generally stationary throughout construction**

Sediment Control

What Sediment Controls do

Intercepting stormwater runoff

Slowing down the storm water

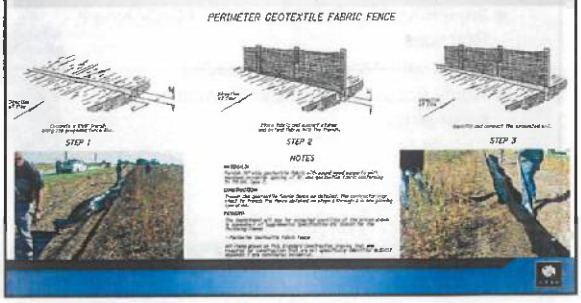
Secondary Filtering

Encouraging Sedimentation on-site

BMP - Perimeter Filter Fabric Fence

Installation

Perimeter Filter Fabric Fence (SCD DM-4.4)



MCM 6

Stormwater Pollution Prevention Plans

Stormwater Pollution Prevention Plan

- SWPPP binder maintained by the SWPPP Team Leader
- The key components include:
  - Pollution Prevention Team
  - Site Description
  - Potential Pollutant Sources
  - Stormwater Control Measures
  - Monitoring and Inspections
  - Recordkeeping

SWPPP Requirements

Responsibilities

Your Role

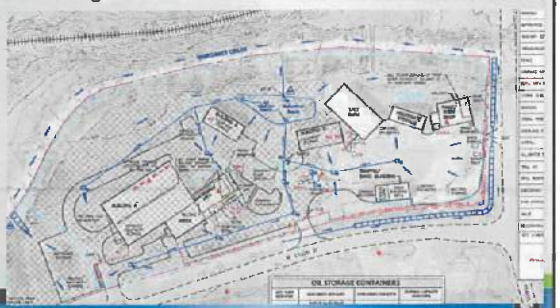
- Responsibilities
  - Understand the SWPPP
  - Implement the SWPPP and Best Management Practices
  - Assist with inspections, as needed
  - Notify Pollution Prevention Team of a spill or emergency

Site Description

Site Description

Site Drainage

- Drainage Area 001

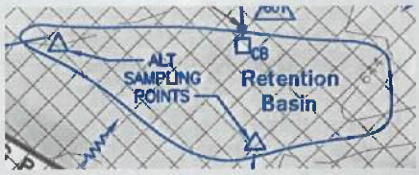


Site Drainage

- Drainage Area 001
  - The retention pond catch basin (outfall 001) discharges into Margaret Creek
  - Defined as Outfall 001 – critical response point
  - Valve within the catch basin can be closed to stop spills from leaving site

Site Drainage

- Drainage Area 001
  - There are two alternate sampling points located within the retention basin if outfall 001 is not accessible.



Site Drainage

- Drainage Area 002
  - Encompasses a small portion of the property to the south
  - Stormwater flows overland to the west

Site Drainage

- Drainage Area 002
  - Stormwater runoff in Drainage Area 002 flows over vegetated and paved areas through a ditch with concentrated flow to Outfall 002
  - Discharges into the Margaret Creek

Site Drainage

- Drainage Area 001 and 002
  - The outfalls discharge
    - Into Margaret Creek
    - Into Hocking River
  - Pollutants that enter the drainage system are carried into these receiving waters

Site Drainage

- Interior Drains
  - Building A and Paint/Body shop drains are connected to oil/water separators and then to the sanitary sewer system
  - Interior designed so that liquids flow to interior drains
  - Does not discharge to stormwater but maintenance is necessary

Potential Pollutant Sources and Stormwater Controls

Potential Pollutant Sources

- What has the potential to impact stormwater?
  - Vehicle and equipment
    - fueling
    - maintenance
    - storage
    - washing
    - sand blasting
    - painting
  - Storage
    - Oil and chemical storage
    - Deicing material storage
    - Aggregate/solids storage
    - Waste storage
  - Welding and Grinding

Stormwater Controls

- Stormwater controls must be implemented to prevent, reduce or eliminate pollutants from potential sources
  - Physical structures (dikes, berms, diversion systems, etc.)
  - Best Management Practices which are the procedures and operations (weekly sweeping, preventive maintenance, etc.)

Potential Pollutant Source

- Vehicle and equipment fueling
  - A steel double-walled multi-compartment tank.
  - Pollutant: Diesel fuel and unleaded gasoline

Stormwater Controls

- Vehicle and equipment fueling:
  - Maintain
    - curbing to reduce run-on at dispensers
    - impermeable concrete pad
    - bollards around fuel pumps
    - fueling hoses with check valves
  - Monitor fueling
  - Inspect
    - tank, containment, hoses, valves and connection points
    - overfill alarm and emergency shut-off mechanism
    - spill kits
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- Vehicle and equipment maintenance:
  - Maintenance activities performed within maintenance area of garage
  - Pollutants: Oils, fuels, fuel additives, degreasers, etc.

Stormwater Controls

- Vehicle and equipment maintenance:
  - Only perform maintenance indoors
  - Maintain garage floor to drain to floor drains
  - Utilize drip pans when transferring liquids
  - Drain fluids into appropriate containers
  - Follow procedures for portable containers
  - Inspect
    - area for leaks or spills
    - spill kits
    - Floor drains
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- Vehicle and equipment storage:
  - Vehicles and equipment are stored within Buildings A, B, and C, Paint/body shop and outside around the property
  - Pollutants: Oils, grease, hydraulic fluids, metals, etc.

Stormwater Controls

- Vehicle and equipment storage:
  - Store indoors, when possible
  - For leaking vehicles/equipment, drain liquids, repair leak, or provide drip pan
  - Empty drip pans prior to becoming full
  - Inspect
    - area for leaks or spills
    - spill kits
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- Vehicle and equipment washing:
  - Washing performed within wash bay of Building A
  - Pollutants: Oils, grease, hydraulic fluids, detergents, deicing materials, solids, solvents, etc.

Stormwater Controls

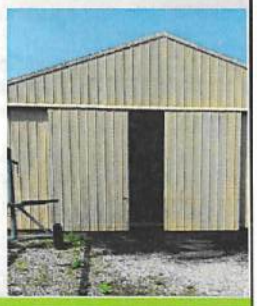
- Vehicle and equipment washing:
  - Washing only allowed in wash bay which drains to the oil/water separator and sanitary sewer
  - Inspect
    - area for leaks or spills
    - spill kits
    - floor drains
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- Vehicle and equipment Sandblasting
  - A sand blasting building is utilized for smoothing surfaces of various pieces of equipment.
  - Pollutants: Solids, sediment, general wastes, etc.

Stormwater Controls

- Vehicle and equipment Sandblasting:
  - Prohibit sand blasting at any other location aside from the sand blasting area
  - Contain debris and prevent from spilling over outside
  - Sweep any spilled material into the building area after sandblasting activities
  - Dispose of wastes promptly in accordance with waste disposal regulations
  - Inspect and maintain equipment
  - Clean up spills immediately



Potential Pollutant Source

- Vehicle and Equipment Painting:
  - One paint spray booth with particulate filtration systems
  - Pollutants: Paint, paint solids, solvents, etc.

Stormwater Controls

- Vehicle and Equipment Painting:
  - Confine painting to the paint booth
  - Label all containers
  - Maintain
    - particulate filtration systems per manufacturer's recommendations
    - spill response materials
  - Inspect
    - Floor drains
    - Painting area for leaks
  - Follow portable container procedures for paints and solvents
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- Oil/chemical storage:
  - Storage in containers within the oil room in Building A
  - Pollutants: Oils, grease, hydraulic fluids, paint, solvents, detergents, etc.

Stormwater Controls

- Oil/chemical storage:
  - Store all containers indoors away from high traffic areas
  - In sensitive locations, store containers on spill pallets
  - Keep containers closed when not in use or when transporting
  - Label all containers
  - Inspect
    - drip pans, spill pallets, or spill caddies prior to becoming full
    - spill kits
    - storage area for leaks or spills
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- Deicing material handling:
  - Storage of salt within building and deicing liquids in tanks
  - Pollutants: Salt and deicing fluids

Stormwater Controls

- Deicing material handling:
  - Store salt within salt barn
  - Cover temporary piles of salt with waterproof tarps, at a minimum
  - Sweep up spilled salt immediately after loading or unloading
  - Prohibit discharge of deicing fluids into stormwater drainage system
  - Maintain deicing fluid valves in closed position
  - Clearly label deicing fluid containers
  - Inspect
    - storage areas for spills or leaks
    - storage barn, dome and building integrity at least annually
  - Clean up leaks or spills immediately using dry methods

Potential Pollutant Source

- Aggregate/Solids Storage:
  - Storage of aggregates/solids outside in piles as well as in storage shed
  - Pollutants: Solids and sediment

Stormwater Controls

- Aggregate/solids storage:
  - Store aggregate/solids indoors or undercover when possible.
  - Store aggregate/solids on concrete pads to allow for easy cleanup.
  - Sweep any spilled material into the storage area after loading or unloading.
  - Inspect
    - drainage systems to remove solids.
    - storage areas for spills.
  - Clean up spills immediately.
  - Install sediment filters or silt fences to contain aggregate/solids along the perimeter of the storage piles.

Potential Pollutant Source

- Waste Storage:
  - Storage of waste within covered trash containers outside or other containers indoors
  - Pollutants: Solids, oils, and other wastes, etc.

Stormwater Controls

- Waste Storage:
  - Store general trash indoors or provide with storm-resistant covers
  - Store liquids/hazardous wastes indoors or within secondary containment
  - Follow portable container procedures for liquids/hazardous wastes
  - Keep containers closed
  - Schedule waste pickup to avoid overfilled containers
  - Inspect
    - waste storage areas
    - property for waste/debris
  - Clean up leaks or spills immediately using dry methods
  - Dispose of wastes in accordance with waste disposal regulations

Potential Pollutant Source

- Grinding and Welding:
  - Grinding and welding activities are performed indoors within the maintenance area of Building A and the Paint/body shop
  - Pollutants: Particulates and metals

Stormwater Controls

- Grinding and Welding:
  - Only perform welding indoors
  - Maintain an organized inventory of materials
  - Keep area clean and free of debris
  - Sweep the area on a regular basis to avoid accumulation of fines and scrap
  - Contain and dispose of swept materials. Prohibit sweeping the materials outside.
  - Clean up metal scrap and dust generated from welding activities immediately using dry methods

Potential Pollutant Sources

- Non-stormwater discharges are not authorized unless listed as an allowable discharge:
  - Discharges from unplanned fire-fighting activities
  - Fire hydrant flushings
  - Potable water including water line flushings
  - Uncontaminated condensate from air conditioners
  - Irrigation drainage
  - Building or pavement washwaters without detergents
  - Landscaping watering
  - Uncontaminated groundwater

Spill Response Procedures

Spill Response Procedures

- Effective spill prevention and response is critical for compliance
- Accidents can happen
- Examples:
  - Fuel nozzle drips
  - Corroded drum
  - Tank overfill

Spill Response Procedures

Upon discovery of a spill:

- If an immediate threat, evacuate the area and call emergency responders
- If you can do so safely, evaluate the spill
  - Material
  - Volume
  - Continuous or non-continuous
  - Potential to reach unpaved area or storm drain

Spill Response Procedures

- Stop the spill source
  - Can involve closing valves, shutting off pumps, turning drums upright, etc.
  - Use appropriate personal protective equipment
- Get help
  - Contact the Pollution Prevention Team
  - Determine the need for a response contractor
  - Determine if the spill is "reportable"

Spill Response Procedures

- Contain the spill
  - Prevent spill from spreading
  - Protect surface waters and storm drains
  - Deploy spill pads, booms, and/or drain covers
- Absorb liquids
  - Socks or booms
  - Absorbent pads
  - Absorbent mats
  - Absorbent pillows
  - Dry absorbent
  - Shop vacuums (wet type)
- Clean up the spill
  - Spilled material
  - Used spill response materials
  - Contaminated soil
- Dispose of all wastes in accordance with waste regulations

Spill Response Procedures

- "Reportable Release" Conditions:
  - Oils (gasoline, petroleum, fuel oil, sludge, etc.)
    - Causes a visible film or sheen on navigable waters (1 drop)
    - 25 gallons or more into other environmental media
  - Extremely Hazardous Substances (40 CFR 355)
  - CERCLA Hazardous Substances (40 CFR 302)

Spill Response Procedures

- For reportable releases, notify the following agencies within 30 minutes:

Agency	Phone Number
National Response Center	1.800.424.8802
Ohio EPA Spill Hotline	1.800.282.9378
Local Emergency Planning Committee	740.594.2261 (Office) 740.592.5444 (24-Hour)
Local Fire Department	911

- File a written incident report within 30 days
- See guidance in Appendix D of the SWPPP

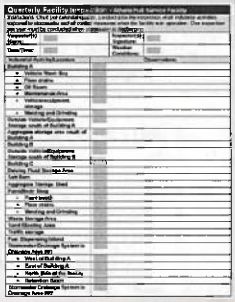
Monitoring and Inspections

Monitoring and Inspections

- The following must be conducted:
  - Quarterly Facility Inspections
  - Quarterly Visual Assessments
  - Annual Comprehensive Site Evaluations

Monitoring and Inspections

- Quarterly Facility Inspections
  - Routine inspection of the facility to ensure SWPPP implementation
    - Utilize form in Appendix F
    - Site Map (Figure 2) can be used as reference
    - Completed form must be signed and maintained in files



Monitoring and Inspections

- Quarterly Facility Inspections
  - Check potential pollutant sources and drainage pathways
    - Ensure control measures are working
    - Identify control measures needing repair/replacement
    - Check for evidence of pollutants

Monitoring and Inspections

- What do you look for?: Fueling island example

Monitoring and Inspections

- What do you look for?: Fueling island example

Absorbent materials present and adequate?

Valves and hoses working properly and no leaks?

Overfill alarms working properly and not going off?

Area free of spills or staining?

Monitoring and Inspections

- What is wrong in these examples?

- Trash bin overfilled
- Open to precipitation
- Trash on ground

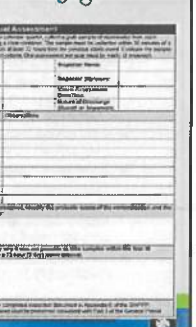
- Fuel leaking
- Staining on concrete
- No spill kit

- Salt outside of barn and not swept up

- Drum outside
- No containment
- Drum unlabeled

Monitoring and Inspections

- Quarterly Visual Assessment
  - Wet-weather sampling to identify any concerns in stormwater flowing off property
    - Utilize Form in Appendix G
    - Site map shows outfall (sample location)
    - Hard copy maintained on site
      - SWPPP binder
    - Scan and send to MS4 Liaison



Monitoring and Inspections

- Quarterly Visual Assessment
  - Collect a stormwater from each outfall
    - Use a clean jar
    - Within 30 min. of a rain event, 3 days from previous rain event
    - Capture snowmelt during 1 quarter
    - If not practical to collect within timeframe, take as soon as possible and document reason
  - Visually assess sample for indicators of contaminants
    - Sampler and assessor can be different
    - Sample does not need to be analyzed by a third party

Monitoring and Inspections

- Quarterly Visual Assessment
  - Clarity

Clear | Slightly Cloudy | Cloudy | Opaque

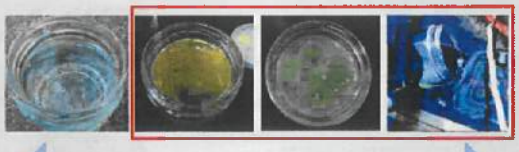
Monitoring and Inspections

- Quarterly Visual Assessment
  - Solids and Foam

Floating Solids | Settled Solids | Suspended Solids | Foam

Monitoring and Inspections

- Quarterly Visual Assessment
  - Oil Sheen



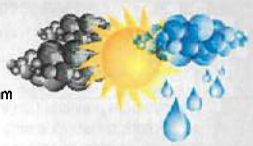
None | Flecks & Slick | Globs | Sheen

Monitoring and Inspections

- Quarterly Visual Assessment
  - Color
  - Odor
  - Any other obvious indicators of pollutants

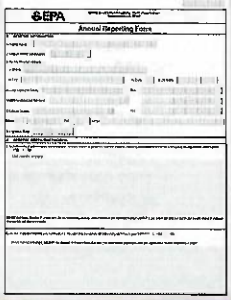
Monitoring and Inspections

- Quarterly Visual Assessment
  - What if you find something?
    - Notify Pollution Prevention Team
    - Inspect upstream to identify source of pollution
    - Stop the source of pollution
    - Take corrective actions
  - Visual Assessment Suggestions
    - Keep eye on the weather
    - Complete as early in the quarter as possible
    - Documentation is key



Monitoring and Inspections

- Annual Comprehensive Site Evaluation
  - Thorough review of effectiveness of the SWPPP
    - Utilize Form in Appendix H
    - Completed form must be signed and maintained in files
  - Complete a comprehensive inspection of the facility
  - Evaluate control measures for effectiveness
  - Review past year's facility inspections and visual assessments for trends
  - Summarize any changes necessary to the SWPPP



Monitoring and Inspections

- Corrective actions must take place if:
  - Unauthorized discharges or
  - Control measures are not effective:
    - As determined by an Ohio EPA inspector, routine facility inspections, quarterly visual assessments, or comprehensive site inspection.
- Within 24 hours, the description must be recorded.
- Within 30 days, a summary of the corrective action must be recorded.

SWPPP Administration

SWPPP Amendment

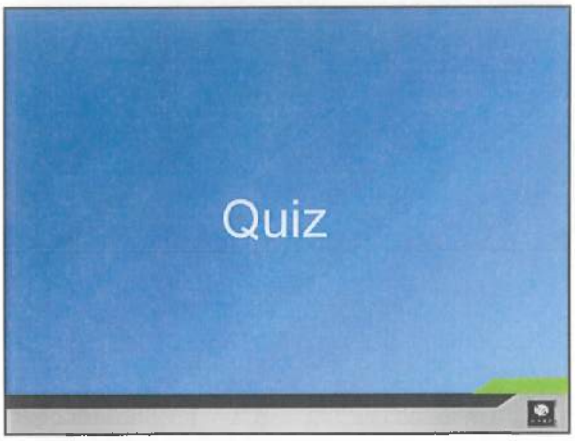
- The SWPPP must be amended when:
  - There is a modification to or addition of control measures as part of a corrective action (within 30 days);
  - There is construction or a change in design, operation, or maintenance at the facility that has a significant effect on the discharge, or the potential for the discharge, of pollutants from the facility; or
  - There is a new or revised permit or MS4 requirement

Recordkeeping

- Maintain records on file for at least 3 years:
  - The final SWPPP
  - Quarterly Facility Inspection Records
  - Quarterly Visual Assessment Records
  - Annual Comprehensive Site Evaluations
  - Employee Training Records
  - Documentation of any incidences and corrective actions

SWPPP Recap

- Key points to remember:
  - Everyone has a role in preventing pollution
  - Pollution prevention starts with good housekeeping
  - Clean up spills immediately!



SWPPP Quiz Questions with Answers

1. What does CWA stand for?
   a) Clean Water Authority
   b) Clean Water Agency
   c) Clean Water Act
   d) Clean Water Association
2. Which of the following is NOT a goal of the CWA:
   a) Protect human health
   b) Ensure water availability for agriculture
   c) Support economic and recreational activities
   d) Provide healthy habitat for fish, plants, and wildlife
3. True or False: ODOT has a stormwater permit that allows ODOT to discharge stormwater runoff from storm sewer systems and road side ditches.
   - True

SWPPP Quiz Questions with Answers

4. True or False: Stormwater runoff is defined as – precipitation and snowmelt runoff.
   - True
5. The stormwater outfall is the point at which stormwater:
   a) Runs on to ODOT property or right of ways
   b) Evaporates
   c) Flows into the receiving water
   d) Leaves ODOT property or right of ways
6. What is the smallest amount of oil on a surface water that is considered a "reportable quantity?"
   - One drop

SWPPP Quiz Questions with Answers

7. How often must facility SWPPP inspections be conducted?
   - Quarterly
8. For the stormwater visual assessment, within what time frame of the start of a storm event must a sample be taken?
   - Within the first 30 minutes
9. True or False: At least one stormwater visual assessment sample must capture snowmelt runoff.
   - True
10. Which of the following are associated with your responsibilities in regards to implementation of the SWPPP?
    a) Understand the SWPPP, implement the SWPPP and Best Management Practices, assist with inspections, notify the team leader of a spill or emergency, and notify the team leader when there is a change in operations.
    b) Revise the SWPPP based on permit or facility changes and update site maps.
    c) Sign off on the SWPPP and ensure overall implementation of the plan.
    d) Contact the Ohio Environmental Protection Agency


Questions/Comments
GRESHAM
SMITH AND
PARTNERS