

# Storm Water Pollution Prevention

PFW Annual Training

# Objectives

- General awareness about stormwater pollution problems
- Prevent contaminated stormwater from entering natural waters
- Understand the significance of BMPs
- Understanding your role in PFW's Stormwater Pollution Prevention Plan



# Stormwater



- Stormwater runoff is the result of precipitation flowing over everyday exposed surfaces such as equipment, roofs, and streets.
- As the water flows over urbanized areas, it has the potential to pick up a number of contaminants such as oil, sediment, chemicals, and litter that is transported to nearby waterways.
- Polluted stormwater draining from urbanized areas is one of the leading causes of water pollution in our lakes, streams, and oceans.

# History

- In the 1970s, Congress attempted to tackle the growing water pollution problem by passing the Clean Water Act which sets quality standards for contaminants in surface waters and made it unlawful to discharge pollutants into water ways unless a permit was obtained.
- Under the Clean Water Act, the EPA was authorized to regulate nationwide discharges through a permit program called the National Pollution Discharge Elimination System or NPDES.
  - This program is focused on reducing pollution at the source



# NPDES - SWPPP

- As part of the requirements for the NPDES program, each facility subject to regulation must develop and implement a Storm Water Pollution Prevention Plan or SWPPP.
- The development of this plan is a key component in protecting water ways from contaminated stormwater runoff.

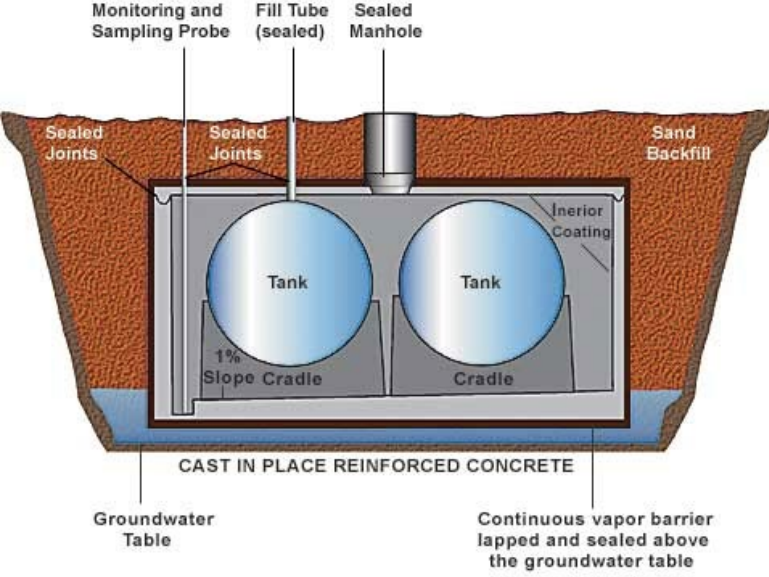
# BMPs

- The EPA uses the term Best Management Practices (BMPs) to describe the preventative source control measures that are implemented to prevent stormwater contamination.
- They are referred to as either
  - Structural BMPs or
  - Operational BMPs

# Structural BMPs

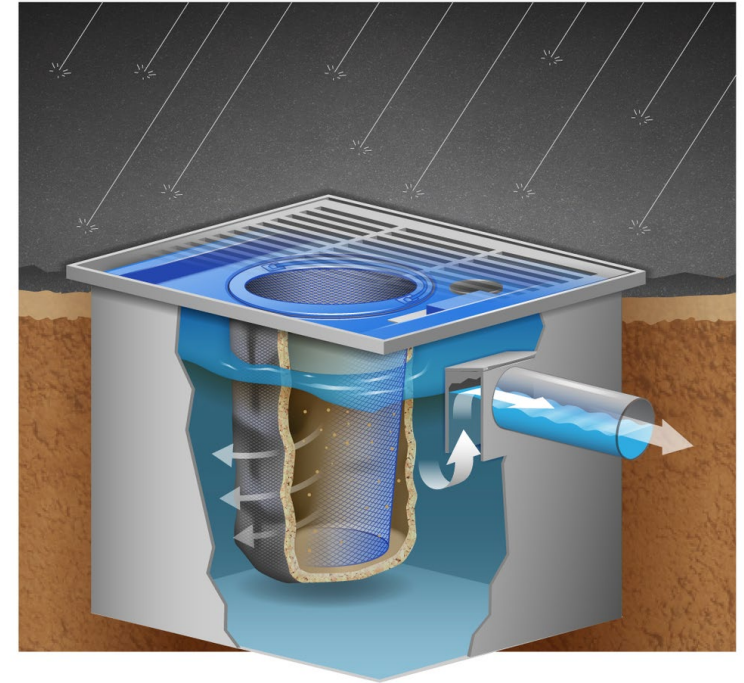
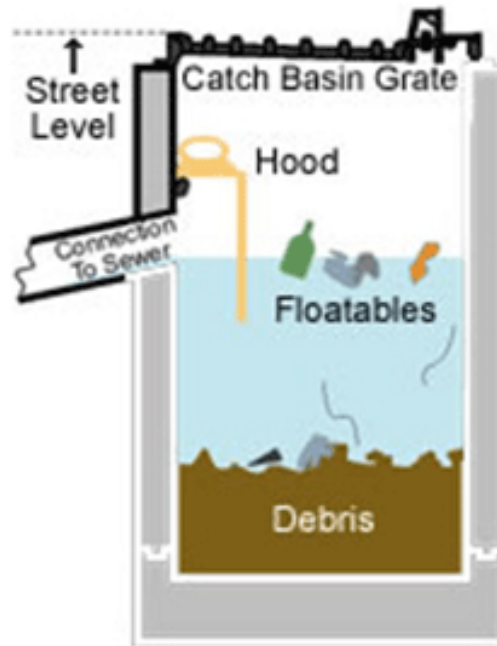
- Structural BMPs – Physical features, designed into the landscape or new construction that are meant to contain or control spills and leaks
  - Ex. Containment enclosures, filtration systems, debris and sediment controls, spill response equipment and waste water treatment

# Containment enclosures

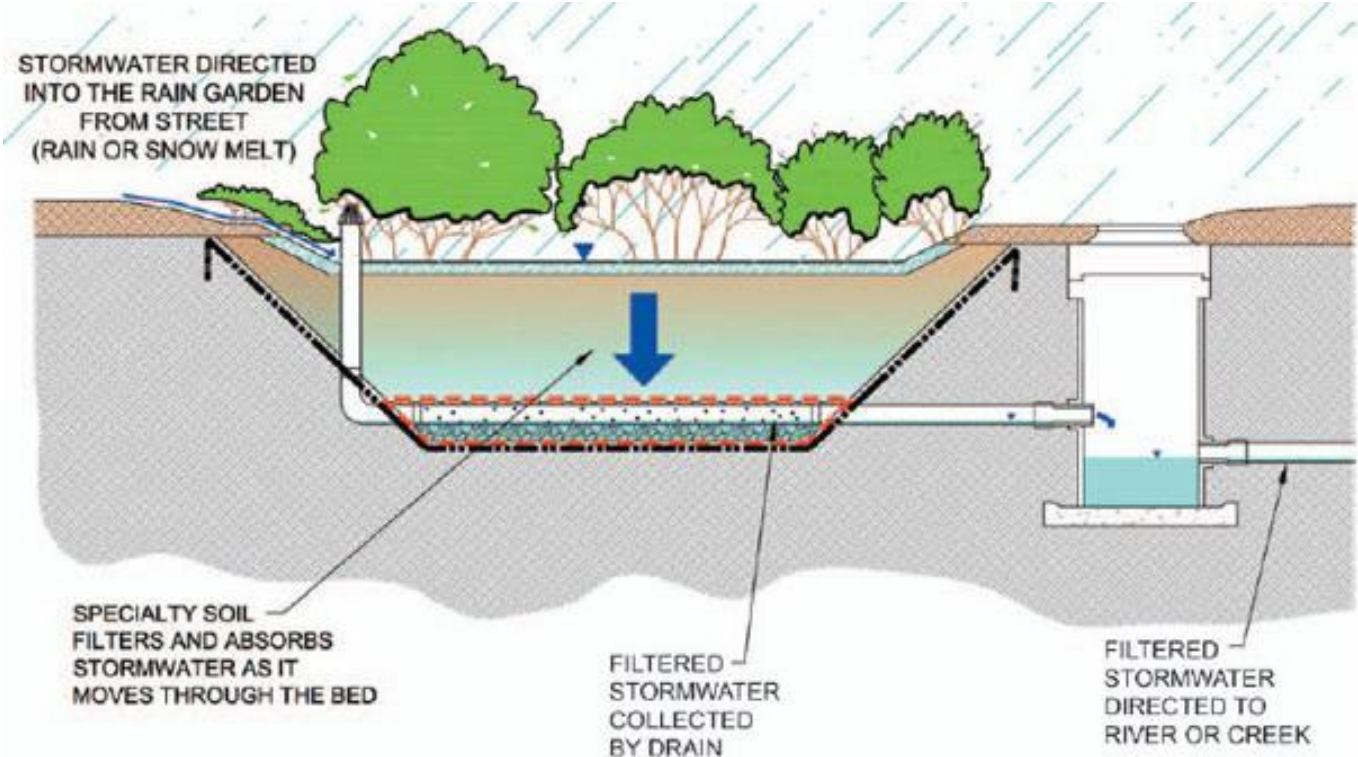




# Debris / Sediment catch basins



# Rain Gardens



# Operational BMPs

- Operational BMPs – administrative procedures that are put into practice by you and your co-workers, which are designed to eliminate or reduce contaminants at the source
  - Good housekeeping procedures
  - Regular equipment inspections
  - Preventative maintenance programs
  - Material management practices
  - Spill response methods
  - Outdoor work practices
  - Waste management

# Operational BMPs

- We each have to do our part to reduce pollution by taking the extra time to comply with Operational BMPs
- These everyday practices can help prevent stormwater pollution at the source



# Good Housekeeping

- Good housekeeping is the most effective and least costly control method.
  - Common sense BMP – implemented on a daily basis by making sure work areas stay clean and organized
    - Keeping containers clean, tightly closed
    - Properly storing trash undercover
    - Cleaning your work area on a regular basis
    - Cleaning up spills and addressing the source
    - Keeping signs and labels clean and readable
    - Covering stockpiles of exposed materials
    - Properly cleaning tools and disposing of rags

# Inspections / PMs

- Visual inspections and preventative maintenance are also efficient operational BMPs
  - Regular inspection, testing, repair and replacement of equipment, lead to normal operations and reduce the likelihood of environmental incidents
    - Routine inspections of containment areas, stormwater detention areas, treatment systems
    - Periodic inspection/maintenance of all process piping or equipment with potential to leak
    - Prompt resolutions of leaks on mobile equipment used outdoors
    - Organized/detailed record keeping of inspections and maintenance operations

# Material Management

- Using proper material management practices will also greatly reduce the amount of pollutants that find their way into stormwater drainage systems.
  - Practices for material management:
    - Keeping an inventory of hazardous materials
    - Labeling and organizing materials
    - Moving materials into covered storage facilities
    - Sealing containers, monitoring condition
    - Using proper handling techniques

# Spill Prevention & Response

- Spill prevention and response is one of the most important pieces in eliminating stormwater pollution. Structural BMPs are helpful but cannot clean up a spill if they were to fail.
  - Whenever a spill occurs, the focus should remain on source control practices rather than end of pipe treatment
    - Clean up spills immediately – if the spill is hazardous, secure your own safety first and then contact University Police by dialing 911 who will then contact PFW's Environmental Health & Safety (EHS) department
    - Know the spill containment and cleanup kits located around campus
    - Use dry absorbent materials
    - Never wash chemicals into storm drains!!
    - Cover storm drains when cleaning spills
    - Contact EHS at x14193 or x14197 [steels@pfw.edu](mailto:steels@pfw.edu) or [mckieno1@pfw.edu](mailto:mckieno1@pfw.edu) for proper disposal of spill clean up material – **DO NOT THROW ANYTHING IN THE REGULAR TRASH**



# Spill Prevention & Response



- Placing absorbent material or created a barrier around a storm drain are options when attempting to prevent a spill from entering a storm drain.

# Outdoor work

- While working outdoors, follow these BMPs to ensure pollutants are not reaching stormwater drains
  - Outdoor Operational BMPs
    - Use a drop cloth or tarp under your work area
    - Avoid sanding/painting in windy or rainy conditions
    - Fix lids securely when not in use
    - Use drip pans under containers
    - Clean up entire work area when finished

# Waste Management

- Waste Management Practices
  - Move dumpsters to covered areas and make sure lids are always moved to the down position
  - Never clean a dumpster into a street or storm drain
  - Avoid overflow problems
  - Avoid throwing liquids into dumpsters



# Conclusion



- Storm water pollution presents a serious threat to the quality of our lakes, rivers, and streams. Because of this Congress and the EPA have taken action to try and reduce the amount of pollutants that are reaching our nations waters. Part of this ongoing effort includes employee awareness training. Keep our environment clean!

Questions?

**PURDUE UNIVERSITY®**  
**FORT WAYNE**

**Environmental Health  
and Safety**

Contact Environmental Health & Safety (EHS)

Stephanie Phillips

x14193

[steels@pfw.edu](mailto:steels@pfw.edu)

Erin Turner

x14197

[mckieno1@pfw.edu](mailto:mckieno1@pfw.edu)