



Good Housekeeping Practices for DPW/Fleet Maintenance Facilities

Kevin P. Walker
C&S Engineers, Inc.

Best Management Practices

- Best Management Practices (BMPs) are measures and/or controls used to prevent or to mitigate pollution from activities that could result in the discharge of contaminants to a stormwater outfall at a facility. BMPs may include processes, procedures, schedules of activities, prohibitions on practices, and other management practices for the prevention or reduction of water pollution. In general, BMPs could be any measure or control that results in preventing toxic or hazardous substances from entering the environment.
- When selecting a specific Best Management Practice for a facility's stormwater management program, it is recommended that practices which eliminate or reduce the amount of pollutants generated at the site be given priority. This methodology is referred to as "source reduction."



Identify Pollutant Sources

- Loading and Unloading Operations
- Outdoor Material Storage Activities
- Vehicle and Equipment Maintenance
- Fueling Operations
- Vehicle Parking

Best Management Practices

- Preventive Maintenance
- Good Housekeeping
- Materials Management
- Spill Prevention and Response
- Activity Based BMPs



Preventative Maintenance

- Identification of equipment, systems, and facility areas that should be inspected
- Schedule for periodic inspections or tests of these equipment and systems
- Appropriate and timely adjustment, repair, or replacement of equipment and systems
- Maintain a minimum supply of spill response equipment



Systems and Equipment to Inspect

- Vehicles and equipment
- Areas where chemicals such as fuels and drums are transferred/unloaded
- Aboveground storage tanks and related piping, pumping, and dispensing systems
- Dumpsters, drums, used equipment, and other items stored outdoors

Operation and Maintenance

- Clean up leaks or releases immediately
- Check locks on valving of secondary containment, verify integrity of outside valves and replace defective valves promptly
- Regularly check levels within secondary containment structures.
- Regularly pick up and dispose of garbage and waste material



Good Housekeeping

- Maintaining regular sweeping and clean-up activities
- Promptly cleaning up spilled materials to prevent pollution runoff
- Identifying the locations of booms, brooms, vacuums, sorbents, foams, and other good housekeeping and spill response equipment
- Displaying signs which remind personnel of the importance of good housekeeping procedures and tips to follow for their implementation



Good Housekeeping (continued)

- Instructing personnel on securing drums and containers and to frequently check for leaks and spills
- Outlining a schedule for housekeeping activities to ensure that each item is completed.
- Discussing updated procedures and reporting on the progress of good housekeeping practices at the facility during every meeting

Good Housekeeping

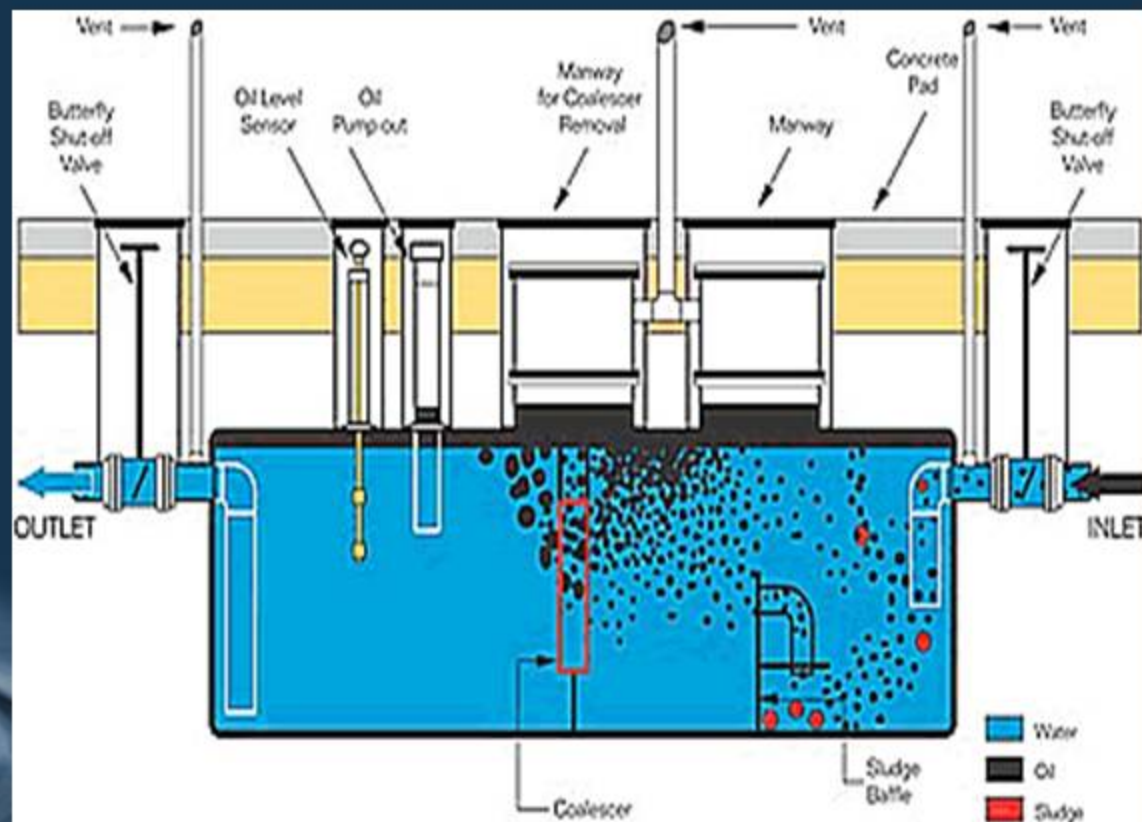
- Sorbent Materials



*Absorbent material
(Photo courtesy of DAWG, Inc.)*

Stormwater Treatment

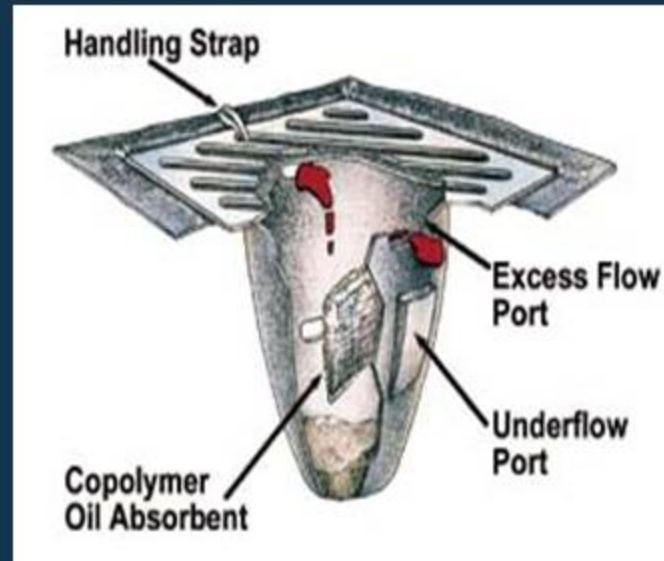
- Oil/Water Separator



(Courtesy of Interstate Products)

Stormwater Treatment

- Catch Basin Insert



Catch Basin Insert
(Courtesy of Interstate Products)

Materials Management Practices

- Neatly organizing and labeling materials in their storage areas
- Emphasize proper storage locations for items which should not be stored outside
- Identifying the significant materials stored, handled and produced at the facility which are considered to be toxic and hazardous substances
- Discussing proper handling procedures for these toxic and hazardous substances.



Material Storage Practices

- Storing containers and drums away from direct traffic routes to prevent accidental spills
- Routinely checking outdoor equipment and/or containers for leaks
- Empty drums should be stored on their sides to prevent standing water on the top or filling the inside
- Drum lids should be properly secured to prevent precipitation from entering the drum
- Storing equipment and containers, that have a potential to leak within a bermed area or inside
- Storing containers on pallets

Material Handling

- How not to do it



(Photo courtesy of C&S Engineers, Inc.)

Material Handling

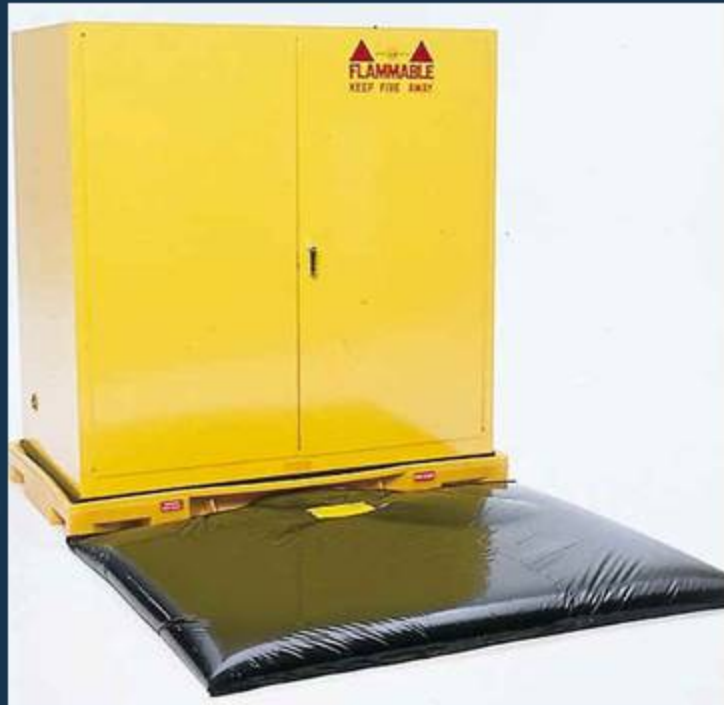
- A problem waiting to happen



(Photo courtesy of C&S Engineers, Inc.)

Material Handling

- Storage Cabinet



(Photo courtesy of Interstate Products)

Material Handling

- Spill Pallet



(Photo courtesy of Interstate Products)

Material Handling

- Outside Covered Drum Storage



(Photo courtesy of Interstate Products)

Material Handling

- The way it should be done



(Photo courtesy of C&S Engineers, Inc.)

Materials Management



*Onondaga County Dept. of Transportation
Jamesville Maintenance Facility
(Photo Courtesy of C&S Engineers, Inc.)*

Materials Management



*Onondaga County Dept. of Transportation
Jamesville Maintenance Facility
(Photo Courtesy of C&S Engineers, Inc.)*



Material Inventory Controls

- Track how materials are stored and handled at the facility
- Identify which materials and activities pose the most risk to the environment
- Properly dispose of unusable material in a timely fashion.



Spill Prevention and Response

- Potential spill areas and drainage routes, including information on past spills and the reported causes of those spills
- Specific material handling procedures and storage requirements
- Procedures and equipment for cleaning up spills
- Spill reporting and notification requirements

Spill Containment

- Spill Kit



(Photo courtesy of Interstate Products)

Spill Containment

- Drainage Inlet Covers and Plugs



*Drainage inlet cover
(Photo courtesy of New Pig Corporation)*

Spill Containment

- Inflatable Sewer Plugs



(Photo courtesy of Cherne Industries)

Fueling BMPs

- Consider installing spill and overflow protection devices on fuel tank systems
- Consider installation of structural measures to prevent spills as applicable (e.g., protective bollards around fuel dispensing stations and aboveground tanks, and secondary containment structures around aboveground tanks)
- Use dry cleanup methods for the fuel area
- Discourage topping off fuel tanks

Vehicle/Equipment Maintenance BMPs

- Check for leaking oil and fuels on all applicable equipment
- Completely drain oil from filters before disposal or recycling
- Segregate and label waste materials
- Recycle spent vehicle fluids and batteries

Vehicle/Equipment Maintenance BMPs (continued)

- Use nontoxic or low toxicity materials
- All vehicle maintenance shall be performed indoors
- Avoid hosing down the work area
- Use drip pans or containers in areas prone to leaks
- Properly transfer used/spent fluids to avoid spills
- Properly recycle or dispose used/spent fluids - never pour liquid waste down sanitary or storm drains



Thank You!

If you have questions or concerns, feel free to contact me at 315-455-2000, or email me at kwalker@cscos.com