

# Good? Bad? Why?



<http://uncultured.com/2007/09/20/notre-dame-and-watering-sidewalks/>

# Solution



- Sprinklers should be directed at lawn areas
  - Spraying water on pavement increases runoff
- Look for more water-efficient methods of irrigation
- Consider low-maintenance vegetation

<http://www.hightechlawn.com/lawn-care-frequently-asked-questions.html>

# Good? Bad? Why?



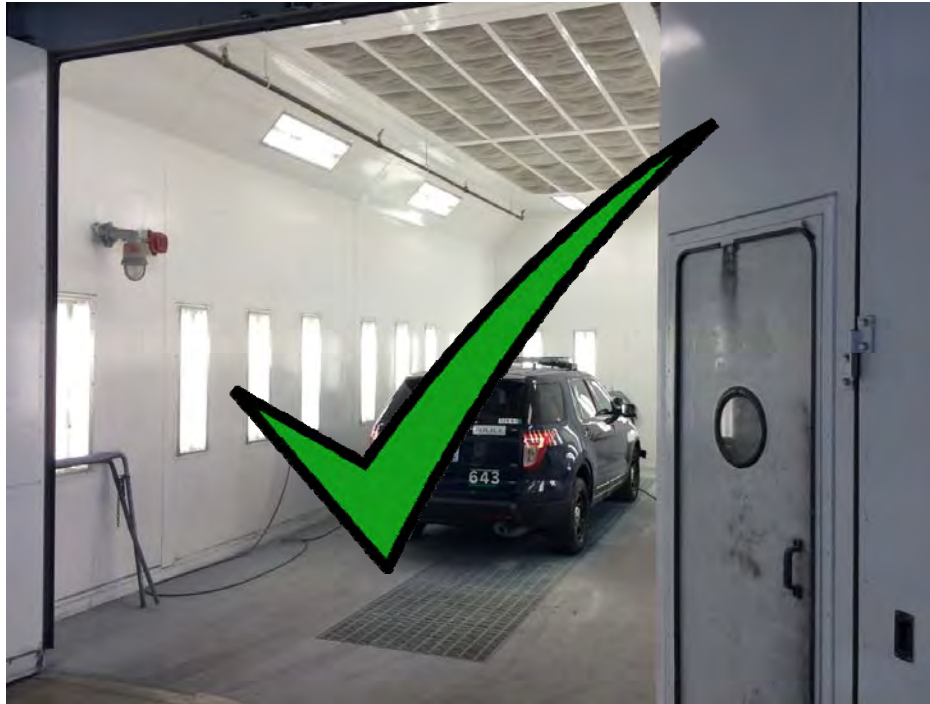
<http://www.forsythnews.com/archives/24878/>

# Good



- Spill is being contained at one centralized location
- Filter bags being used to create control perimeter around spill
- Appears that only dry methods are being used

# Good? Bad? Why?



<http://www.pangealityproductions.com/home/2015/06/city-seattle-vehicle-fleet-maintenance-facility-video-shoot-pollution-prevention-resource-center/>

# Good



- Maintenance of vehicle is being performed inside & under cover
- Proper drainage within facility
  - If a spill/leak were to occur, drains should be covered with drain mats



# Good? Bad? Why?



<http://troop910.com/how-to-wash-car-properly/>

# Solution



- Heavy use of detergent
- Contaminated runoff flowing directly into adjacent storm drain system
- Recommend using wash rack with proper containment
  - Pump and Treat
  - Sanitary Sewer disposal

<http://www.wash-racks.com/>



# Good? Bad? Why?



Source: Trans-clean Corp.

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Novotney, Michael. *Urban Restoration Manual No. 9: Municipal Pollution Prevention/Good Housekeeping Practices*. Version 1.0. Center for Watershed Protection. Copyright 2008. Dated September 2008.

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# Good



- Proper use of a wash water containment system
- Promoting filtration/infiltration by power-washing on grass surface
  - Less runoff to enter storm drain system

# Good? Bad? Why?



<http://www.elginsweeper.com/Products/AirSweepers/Whirlwind/tabid/109/Default.aspx>

# Good



- Pollutant type appears to be appropriate for street sweeping activity
- Sweeping is adjacent to construction area that has potential to generate a significant amount of pollutants (sediment, debris, trash, etc.)

# Good? Bad? Why?



Novotney, Michael. *Urban Restoration Manual No. 9: Municipal Pollution Prevention/Good Housekeeping Practices*. Version 1.0. Center for Watershed Protection.  
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# Solution



- Storage of road salt adjacent to storm drain
  - Promotes contaminated runoff into storm drain system
  - Recommend better storage units that have less potential to rust, rot, leak, crack, etc.
- Could include salt usage instructions



# Good? Bad? Why?



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Dated September 2008.

# Solution



- Material storage area is not covered
- While more costly, other benefits to providing a covered storage area:
  - Keeps dry - prevents clumping
  - Reduces loss from stormwater runoff

<http://www.fragmentsfromfloyd.com/culture/angle-of-repose/>

# Good? Bad? Why?



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Dated September 2008.

# Solution



- While road salt is being properly covered, there is significant runoff coming from the storage unit
  - Has potential to enter storm drain system & contaminate waterways
  - Add protection to downstream inlets

<http://richlandswcd.net/services/water/stormwater/epa-best-practices>

# Good? Bad? Why?



<http://taimages.railstotrails.org/7-VegetationManagement/Integrated-Roadside-Vegetation/i-cBL4dXj>

# Good



- Seed & Mulch being applied to unstabilized land adjacent to roadway
- Maintaining roadside vegetation can provide erosion control, stormwater management & help reduce runoff contamination



# Good? Bad? Why?



[http://www.mswmag.com/online\\_exclusives/2013/08/proper\\_storm\\_drain\\_and\\_catch\\_basin\\_cleaning](http://www.mswmag.com/online_exclusives/2013/08/proper_storm_drain_and_catch_basin_cleaning)

# Good



- Proper use of inlet cleaning equipment
  - Inlets shall be maintained & cleaned regularly as identified in the SWPPP

# Good? Bad? Why?



<https://normanswei.wordpress.com/tag/rcra/>

# Solution



- Some containers do not have lids
- Some of the barrels are not labeled
- All materials are sitting on the floor, should be placed on spill containment pallet
- Some materials are not properly stacked

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# Good? Bad? Why?



[http://naturalsols.co.uk/spill\\_response.html](http://naturalsols.co.uk/spill_response.html)

# Solution



- Failure to contain spill & prevent it from spreading
  - Filter bags not properly installed
  - Hazardous material has potential of entering adjacent storm drain system
- Once spill is contained, use dry cleanup methods

<http://www.caulfieldindustrial.com/3m-chemical-spill-26-litre-lab-kit/p-225212pd.html>



# Good? Bad? Why?



<http://www.ars.usda.gov/is/pr/2010/100723.htm>

# Good



- Compost Filter Socks are being used to protect inlet from sediment-laden runoff
- Appears to be super silt fence around the entire project site

# Quiz Question #1

A municipality has a tarp-covered storage unit alongside a major roadway where it stores road salt and various other materials in barrels (pesticides, fertilizers, etc.). The barrels are grouped together by type and sit on the floor in separate corners of the unit, while the road salt sits in a large pile in the middle of the unit. The whole lot where the storage unit is located slopes towards an existing inlet at the outskirts of the lot.

- What are some of your concerns with this scenario?
- What additional pollution prevention techniques could be used to promote good housekeeping?
- During a heavy snow/hail storm, the unit begins to leak from the tarp in multiple locations. Due to the heavy snow, the municipality uses the road salt to salt the adjacent roadway. Do you see any major issues with this scenario?

# Quiz Question #1: Solutions

## Concerns

- Road salt & other materials should be separately stored
  - If they must be stored in the same unit, materials should be put on pallets to prevent leaks and damage to barrels
- Ideally, the cover for the storage unit would be something more stable than a tarp

## Recommendations

- Build separate unit for other materials
- Place materials on pallets
- Replace cover (roof)
- Add additional protection to existing inlets during storm events

## Snowstorm Concerns

- Salt will be lumped together & make it difficult to apply
- Hail could damage barrels & create leaks/cracks
- Content from barrels could mix with road salt
- Contaminated Runoff created from snow melt

# Quiz Question #2

While gassing-up your Work Truck at a Municipal fueling station in Allegheny County, you notice fuel delivery drivers filling the underground tanks across the parking area. As they begin the pumping operation, you witness the hose going from the truck tanker to the underground tank spring a small leak. The workers do not seem to notice it, but you see the fuel leaking from the hose and flowing offsite towards an adjacent inlet.

- What actions should you immediately take to help remedy the situation?
- What are some pollution prevention techniques one would use to assure that the spill is contained & properly taken care of?

# Quiz Question #2: Solutions

## What To Do

- Make the workers aware of the leak
  - Stop all pumping operations until the leak is repaired or the hose is replaced
- Alert the proper members of PA DEP through the emergency response program
  - Southwest Region (412-442-4000) 24 hours service
- Monitor the leak while keeping a safe distance from potentially harmful substances
- Follow procedures laid out in the Spill Response Plan created by the county or gas station

## Pollution Prevention Techniques

- Should use dry cleanup methods
  - Sweeping to remove litter, debris, rags and absorbents for leaks & spills
  - Protect runoff into adjacent storm drains with diversion practices
- Avoid the use of water to wash these areas
  - Damp cloth on pumps & damp mop on pavement
  - Avoid using hoses to prevent runoff into storm drain systems