IC18. VEHICLE AND EQUIPMENT FUELING

BEST MANAGEMENT PRACTICES (BMP)

A BMP is a technique, measure, or structural control that is used for a given set of conditions to improve the quality of the stormwater runoff in a cost-effective manner.[1] The minimum required BMPs for this activity are outlined in the box to the right. Implementation of pollution prevention/good housekeeping measures may reduce or eliminate the need to implement other more costly or complicated procedures. Proper employee training is key to the success of BMP implementation.

MINIMUM BEST MANAGEMENT PRACTICES

Pollution Prevention/Good Housekeeping

- Maintain clean fuel-dispensing areas.
- Utilize fueling safeguards.
- Conduct regular inspections of fueling equipment.
- Stencil storm drains.

Training

- Train employees on these BMPs, stormwater discharge prohibitions, and wastewater discharge requirements.
- Provide ongoing employee training in pollution prevention.

The BMPs outlined in this fact sheet target the following pollutants:

TARGETED CONSTITUENTS	
	Sediment
	Nutrients
☑	Floatable Materials
☑	Metals
	Bacteria
☑	Oil and Grease
☑	Organics and Toxicants
	Pesticides
	Oxygen Demanding

Provided below are specific procedures associated with each of the minimum BMPs along with procedures for additional BMPs that should be considered if this activity takes place at a facility located near a sensitive waterbody. In order to meet the requirements for medium- and high-priority facilities, the owners/operators must select, install, and maintain appropriate BMPs on site. Since the selection of the appropriate BMPs is a site-specific process, the types and numbers of additional BMPs will vary for each facility.

1. **Use properly maintained off-site fueling stations whenever possible.**
   These businesses are better equipped to handle fueling and spills.
2. **Maintain clean fuel-dispensing areas.**
   - Use dry cleanup methods such as sweeping for removal of litter and debris, or use rags and absorbents for leaks and spills.
   - If cleaning by washing, place a temporary plug in the downstream storm drain and pump out the accumulated water. Properly dispose of the water. **DO NOT** discharge wash water to sanitary sewer until contacting the local sewer authority to find out if pretreatment is required.

[1] EPA *Preliminary Data Summary of Urban Stormwater Best Management Practices*

3. **Design fueling areas to minimize stormwater exposure.**
   - Cover the fuel dispensing area such that the cover's minimum dimensions are equal to or greater than the area within the grade break or fuel dispensing area. Position roof downspouts to direct water away from fueling areas.
   - Pave fuel area with Portland cement concrete or equivalent smooth, impervious surface. Grade with a 2 to 4 percent slope to prevent ponding.
   - Use secondary containment. Construct a berm around the perimeter of the material storage area to prevent the run-on of uncontaminated stormwater from adjacent areas as well as stormwater runoff.
4. **Minimize pooling of water.**
   - Use a perimeter drain or slope pavement inward with drainage to sump. A minimum slope of 1.5 percent is recommended.
   - Install inlet catch basin equipped with a small sedimentation basin or grit chamber to remove large particles from stormwater in impervious areas.
   - During the wet season, release accumulated stormwater frequently.
5. **If conducting mobile fueling, designate mobile fueling areas and bring equipment to these areas.**
   - Use secondary containment when conducting mobile fueling.
   - Cover storm drains in the vicinity during transfer.
6. **Utilize fueling safeguards.**
   - Use overflow protection devices on tank systems to warn the operator to automatically shut down transfer pumps when the tank reaches full capacity.
   - Install protective guards around tanks and piping to prevent vehicle or forklift damage.
   - Clearly tag or label all valves to reduce human error.
   - Place spill kits at fueling areas and/or on vehicles.
   - Install vapor recovery nozzles to help control drips as well as air pollution.
   - Eliminate or post hose bibs.
   - Fit fuel dispensing nozzles with "hold-open latches" (automatic shutoffs) except where prohibited by local fire departments.
7. **Conduct regular inspections of fueling equipment.**
   - Check fueling equipment for external corrosion and structural failure.
   - Check for spills and overfills due to operator error.
   - Check for failure of piping system.
   - Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.
   - Visually inspect new tank or container installation for loose fittings, poor welding, and/or improper or poorly fitting gaskets.
   - Inspect tank foundations, connections, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
   - Report leaking vehicles to fleet maintenance.
   - Periodically, have a qualified professional conduct integrity testing.
8. **Use secondary containment when transferring fuel from the tank truck to the fuel tank and cover storm drains in the vicinity during transfer.**
9. **Fit underground storage tanks (USTs) with spill containment and overfill prevention systems meeting the requirements of Section 2635(b) of Title 23 of the California Code of Regulations.**
10. **Equip USTs with spill and overfill protection.**
11. **Install required AQMD equipment and post a notice.**
12. **Post signs to remind employees and customers not to top off the fuel tank when filling and signs that ban customers and employees from changing engine oil or other fluids at that location.**

TRAINING

1. **Train employees on these BMPs, stormwater discharge prohibitions, and wastewater discharge requirements.**
2. **Train employees on proper fueling and cleanup procedures.**
3. **Train employees on proper spill containment and clean-up.**
   - Establish training that provides employees with the proper tools and knowledge to immediately begin cleaning up a spill.
   - Ensure that employees are familiar with the site's spill control plan and/or proper spill clean-up procedures.
   - BMP IC17 discusses Spill Prevention and Control in detail.
4. **Establish a regular training schedule, train all new employees, and conduct annual refresher training.**
5. **Use a training log or similar method to document training.**

STENCIL STORM DRAINS

Storm drain system signs act as highly visible source controls that are typically stenciled directly adjacent to storm drain inlets. Stencils should read *NO DUMPING DRAINS TO OCEAN*.

REFERENCES

California Storm Water Best Management Practice Handbook. Industrial and Commercial. 2003. www.cabmphandbooks.com

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King County Stormwater Pollution Control Manual. Best Management Practices for Businesses. King County Surface Water Management. July 1995. http://dnr.metrokc.gov/wlr/dss/spcm.htm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, and Central Coast Regional Water Quality Control Board. July 1998 (Revised February 2002 by the California Coastal Commission).

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