



FUELING

Spills and leaks that may occur during equipment and vehicle fueling can contribute hydrocarbons, oils and greases, and heavy metals to stormwater runoff. Implementation of the following procedures can help prevent fuel spills and leaks and thereby reduce their impacts to stormwater.

POLLUTION PREVENTION:

Pollution prevention measures have been considered and incorporated in the model procedures. Implementation of these measures may be more effective and reduce or eliminate the need to implement other more complicated or costly procedures. Possible pollution prevention measures for fueling include:

- Fuel vehicles and equipment at off-site commercial fueling stations when feasible.
- Once per year, educate municipal staff on pollution prevention measures.

MODEL PROCEDURES:

General Guidelines

- ✓ If refueling must be done on site, use a location away from storm drains and creeks.
- ✓ If re-developing the fueling area, design the area to prevent the run-on of stormwater and the runoff of spills:
 - Pave fueling area with Portland cement concrete (or equivalent smooth impervious surface), with a 2% to 4% slope to prevent ponding.
 - Separate the dispensing area from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable. The fuel dispensing area is defined as extending 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly area may be operated plus 1 foot, whichever is less. The paving around the fuel dispensing area may exceed the minimum dimensions of the "fuel dispensing area" stated above.
 - Cover the fuel dispensing area. The cover's minimum dimensions

must be equal to or greater than the area within the grade break or the fuel dispensing area.

→ *Note: Permission must be obtained for any discharge of wash water to the sanitary sewer from the local sewerage agency.*

- Design the cover so that it does not drain onto the fuel dispensing area.
- ✓ Install vapor recovery nozzles to help control drips as well as air pollution.
- ✓ Discourage "topping off" of fuel tanks.
- ✓ Use secondary containment such as curbs, berms, etc. when transferring fuel from the tank truck to the fuel tank.
- ✓ If the facility has large numbers of mobile equipment working throughout the site and they are fueled with a mobile fuel truck, establish a designated area for fueling. With the exception of racked equipment such as bulldozers and perhaps small forklifts, most vehicles should be able to travel to a designated area with little lost time. Place temporary "caps" over nearby storm drain inlets so that if a spill occurs it is prevented from entering the storm drain.
- ✓ Ensure compliance with all Federal and State requirements regarding underground storage tanks, or install above ground tanks.
- ✓ Use dry methods to clean the fueling area whenever possible. If you periodically clean by pressure washing, place a temporary plug in the downstream drain and pump out the accumulated water. Properly dispose of the water.
- ✓ Train employees on proper fueling and cleanup procedures
- ✓ Ensure the following safeguards are in place:
 - Overflow protection devices on tank systems to warn the operator to automatically shutdown transfer pumps when the tank reaches full capacity
 - Protective guards around tanks and piping to prevent vehicle or forklift damage
 - Clearly tagging or labeling all valves to reduce human error
 - Placement of spill kits at fueling areas and/or on vehicles.
- ✓ Stencil storm drain inlets within the facility boundary, by paint/stencil (or equivalent), to indicate whether they flow to an oil/water separator, directly to the sewer, or to a storm drain. Labels are not necessary for plumbing fixtures directly connected to the sanitary sewer.
- ✓ Use absorbent materials on small spills and general cleaning rather than hosing down the area. Remove the absorbent materials promptly.
- ✓ Place a stockpile of spill cleanup materials where it will be readily

Spill Response

See Spill Prevention and Control procedures sheet

accessible.

- ✓ Aboveground tank leak and spill control (not applicable to propane):
 - Check 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 improper or poorly fitted gaskets
 - Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.

LIMITATIONS:

REFERENCES:

California Storm Water Best Management Practice Handbooks. Municipal Best Management Practice Handbook. Prepared by Camp Dresser & McKee, Larry Walker Associates, Uribe and Associates, Resources Planning Associates for Stormwater Quality Task Force. March 1993.

King County Stormwater Pollution Control Manual. Best Management Practices for Businesses. 1995. King County Surface Water Management. July. On-line: <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, Central Coast Regional Water Quality Control Board. July. 1998.