

B2. Fueling Operations



Goal: Prevent or reduce the risk of discharge of pollutants to stormwater from vehicle and equipment fueling activities

APPLICABLE OPERATIONS AND ACTIVITIES

Any permanent or mobile site, facility or operation at which the fueling of vehicles and equipment is taking place, including:

- Gas Stations
- Truck Stops and Terminals
- Fleet Maintenance Yards
- Airports
- Mobile Fueling Operations
- Construction Sites
- Any Other Site Fueling Vehicles or Equipment

POLLUTION CONTROL APPROACH

Maximize the prevention of leaks and spills, and ensure that any leaked or spilled fuel is properly cleaned up

KEY POLLUTION PREVENTION AND CONTROL MEASURES

- Never leave fueling operations unattended
- Cover fueling areas and prevent contact with stormwater runoff
- Do not “top off”
- Use overflow protection devices
- Consider using off-site fueling stations or a designated fueling area for mobile operations.
- Immediately identify, clean up and properly dispose of any leaks or spills

TARGETED POLLUTANTS

- Sediment
- Nutrients
- Bacteria
- Organic Matter
- Oil & Grease
- Heavy Metals
- Toxic Chemicals
- Abnormal pH
- Trash & Debris
- Other: Gasoline and Other Fuels

Overview

Fueling operations include any facility or site that refuels vehicles, equipment or small containers with gasoline, diesel fuel, kerosene, jet fuel or other petroleum products. Spills and leaks that occur during fueling can contaminate stormwater runoff, surface water and groundwater with toxic hydrocarbons, oil and grease, and heavy metals.

Pollution Prevention and Control Measures

For all fueling operations:

- ▶ Never leave fueling of vehicles and equipment unattended.
- ▶ Post signs at the fuel dispenser or fuel island reminding users not to top off fuel tanks when filling, which can increase the risk of spilling fuel onto the ground.
- ▶ Ensure the following safeguards are in place:
 - Fuel dispensing equipment and pumps are equipped with automatic shutoffs and overflow protection to prevent spills and leaks.
 - Protective guards around pumps, tanks and piping to prevent damage from vehicles.
 - Clear tagging or labeling of all equipment, pumps and valves.
- ▶ Install vapor recovery nozzles and systems to help control drips and protect air quality.
- ▶ Maintain clean fuel dispensing areas using dry cleanup methods such as sweeping for removal of litter and debris, and the use of rags and absorbents for leaks and spills. Absorbents should be removed promptly and disposed as hazardous waste. See Section B4 (Hazardous Materials/Waste Management) for more information.

For stationary (permanent) fueling operations:

- ▶ Cover the fueling area with an overhanging roof structure or canopy so that rain cannot come in contact with the fueling area.
- ▶ Label drains within the facility by paint/stencil, sign, or marker to indicate whether they flow to an oil/water separator, sanitary sewer, or stormwater drain.
- ▶ If an existing fueling pad drains to storm or sanitary sewer, consider installing a valve which can be closed to prevent discharge in the event of a fuel spill (as shown in Figure B2-1). If the fueling pad drainage connects to sanitary sewer, a pretreatment permit may be required.
- ▶ Use secondary containment when transferring fuel from a tanker truck to onsite fuel tanks. Cover storm drains in the vicinity during transfer.

For mobile fueling operations:

- ▶ Use off-site stationary fueling stations as much as possible. These businesses are better equipped to handle fuel and spills properly.
- ▶ All fueling operations should be located to ensure that spills or leaks will not discharge, flow or be washed to the stormwater drainage system, surface waters or groundwater.
- ▶ If the facility or site has a large number of vehicles and equipment, consider establishing a designated fueling area rather than using a mobile fueling truck. The fueling area should be a level-grade area and located a minimum of 50 feet away from concentrated flows of stormwater, stormwater drains, drainage ditches, and surface waters.

- ▶ Place temporary caps over nearby catch basins and manhole covers so that if a spill occurs it is prevented from entering the stormwater drainage system.
- ▶ Use drip pans or absorbent pads to capture drips and spills during fueling. Absorbents must be removed promptly and disposed as hazardous waste.
- ▶ If fueling is done during evening/night hours, lighting should be provided.
- ▶ Spill and clean up materials should be located in the mobile fueling vehicles.

Fueling Area Design Features

- ▶ Design fueling areas to prevent contact with rain and stormwater runoff:
 - Cover the entire fueling area with a roof or canopy structure.
 - Use berms or curbs to prevent stormwater runoff from flowing onto the fueling area.
 - Position roof downspouts away from fueling area.
- ▶ Fueling areas should be paved with Portland cement concrete, free of cracks and gaps, and impervious in order to contain leaks and spills. Apply a suitable sealant that protects any asphalt in areas surrounding the fueling area.
- ▶ Use a trench or perimeter drain around the fueling area or slope the pavement to a drain connected to a dead-end sump, an underground storage container which does not discharge to the stormwater drainage system. The sump captures and holds spilled fuel from the pad to be pumped out later.
- ▶ Install spill control devices (such as an oil/water separator) in catch basins that collect stormwater runoff from the fueling area.
- ▶ Ensure that all stormwater from the site is treated by an appropriate structural or non-structural stormwater control. Stormwater controls that provide water quality treatment for the contaminant(s) in question may be found in *Volume 2, Technical Handbook*.

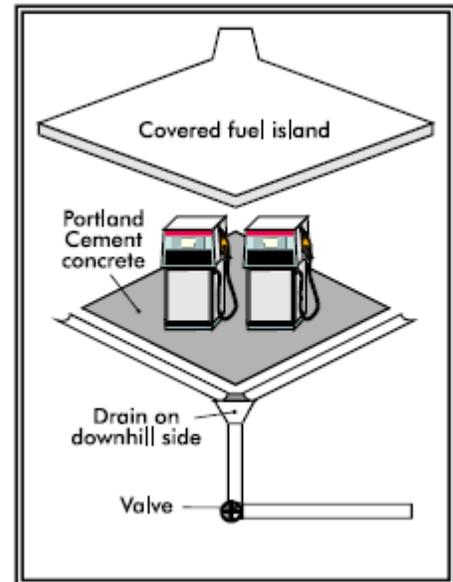


Figure B2-1 Fueling Area Design Features

Additional Considerations

- ▶ All specific standards set by Federal and Georgia laws concerning the storage of oil and hazardous materials must be met, including:
 - Spill Prevention Control and Countermeasure (SPCC) Plan
 - Secondary containment
 - Integrity and leak detection monitoring
 - Emergency preparedness plans
- ▶ Storage of all fuels should comply with the Uniform Fire Code and the National Electric Code, and any other applicable code, including local fire regulations on the clearance of roof covers over flammable materials.
- ▶ Follow appropriate practices and protocols for the loading, filling and/or unloading of liquid materials. See Section B1 (Loading/Unloading Operations) for more details.

Inspection and Preventive Maintenance Requirements

Table B2-1 Typical Inspection and Preventive Maintenance Activities for Fueling Operations

Activity	Schedule
<ul style="list-style-type: none"> Inspect the fueling area to check for any material leaks or spills. Promptly clean using dry methods such as rags and absorbents. Properly dispose of cleanup materials and any contaminated soil. 	Ongoing
<ul style="list-style-type: none"> Inspect vehicles and equipment each day of use for leaks, loose fittings and improper or poor fitting gaskets. Leaks should be repaired immediately or equipment removed from service. 	Daily
<ul style="list-style-type: none"> Fueling areas should be swept and cleaned when needed. Trash and debris should be collected and disposed of properly. Do not hose down paved areas. 	As needed (frequently/seasonally)
<ul style="list-style-type: none"> Inspect spill control devices to remove separated floatable liquids. Properly dispose of captured fuel and other contaminants. 	After storm events, or as required by manufacturer guidelines or a maintenance agreement

Spill Prevention and Response

- ▶ For applicable facilities storing liquid petroleum and related materials, a Spill Prevention Control and Countermeasure (SPCC) Plan must be developed and kept up-to-date. Regulatory requirements and sample SPCC Plans can be found at www.epa.gov/oilspill
- ▶ Develop Standard Operating Procedures (SOPs) for spill prevention and clean up (see Section 2.1.5).
- ▶ Have an emergency plan, equipment and trained personnel ready at all times to deal immediately with major spills
- ▶ Store and maintain appropriate spill cleanup materials on site in a location near the fueling area(s)

Considerations for Local Government-Owned or Operated Facilities and Operations

- ▶ The following local government functions and departments are often involved with fueling operations:
 - Local fleet management
 - Public works
 - Transportation (streets & highways)
 - Parks / recreation

Local government entities that undertake stationary and/or mobile fueling activities should adopt these pollution prevention and control measures, and develop appropriate Standard Operating Procedures (SOPs) for implementing them.

Considerations for Industrial NPDES (Georgia IGP) Stormwater Pollution Prevention Plans (SWPPPs)

- ▶ Applicable industrial activity sectors with coverage under the Georgia IGP that often undertake fueling operations include, but are not limited to:

Sector G: Transportation Equipment, Industrial or Commercial Machinery

Sector J: Mining and Dressing

Sector K: Landfills, Land Application Sites, and Open Dumps

Sector P: Land Transportation and Warehousing

Sector Q: Water Transportation Maintenance/Cleaning

Sector S: Air Transportation Facilities

Please see Appendix B for the SIC codes that correspond to each industrial activity sector

- ▶ The SWPPP must include a list of significant spills and leaks of toxic or hazardous pollutants that occurred in areas that are exposed to precipitation, or that otherwise drain to a stormwater conveyance at the facility, after the date of three years prior to the effective date of the permit. This list is required to be updated as appropriate during the term of the permit.

Specific State Regulations and Requirements

- ▶ Georgia Oil or Hazardous Materials Spills or Releases Act (O.C.G.A. 12-14-1)
- ▶ Georgia Hazardous Waste Management Act (O.C.G.A. 12-8-60)