

Best Management Practice Guide

Retail Gasoline Outlets

California

Stormwater Quality Task Force

Prepared by

Retail Gasoline Outlet Work Group

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Introduction

This guide represents the work of the California Stormwater Quality Task Force's (SWQTF) Retail Gasoline Outlet Work Group. The Work Group formed in May 1996 and met on a regular basis to review and discuss appropriate best management practices for fueling and other closely related activities likely to be found at retail fueling operations. Representatives from industry, municipalities, and regulatory agencies participated. Best management practices (BMPs) from throughout California, and elsewhere, were reviewed and considered for inclusion in this guide. The Work Group worked in the tradition of the SWQTF by raising and discussing issues in an open forum, and working to reach consensus on each issue. The Work Group worked in parallel and communicated with State and Regional Board staff responsible for storm water permit compliance.

These best management practices were developed with retail gasoline outlets primarily in mind, and may or may not have applicability to other facility types (e.g., cardlocks, bulk plants, fleet operations). The need for and application of these BMPs to other facility-types should be carefully reviewed on a case-by-case basis. During the development of this guide, storm water and wastewater issues were addressed together to avoid cross-media transfers of waste. In addition, the potential of these BMPs to affect other environmental media/regulations (e.g., hazardous waste) was considered before their inclusion in this guide.

Regulatory Context

The Federal Clean Water Act, as amended in 1987, and the State Porter-Cologne Act are the principle regulations for control of storm water pollutants. There are, however, other regulations that deal with the control of storm water pollutants. Examples include the Federal Coastal Zone Act Reauthorization Amendments of 1990, and the State Hazardous Waste Source Reduction and Management Review Act. The 1987 amendments to the Federal Clean Water Act added section 402(p) which establishes a framework for regulating municipal, industrial, and construction storm water discharges under the National Pollutant Discharge Elimination System (NPDES) program. On November 16, 1990, the USEPA published final regulations that establish application requirements for storm water permits from five classes of discharges (Phase 1) including storm water associated with industrial activity (industrial storm water) that discharges either directly to surface waters or indirectly through municipal separate storm drain systems. Municipalities with a population over 100,000 or those that have been determined to be a significant contributor of pollutants are also required to obtain a NPDES storm water permit.

As part of its storm water management program, a municipality is required to develop a program to monitor and control pollutants in storm water discharges from its municipal system. These programs must include structural and source control measures to reduce pollutants from runoff from commercial and industrial areas. Thus it is important for commercial and industrial facilities located within municipalities to realize that there may be municipal requirements on storm water discharges from their facilities.

In addition to the storm water requirements, both the Federal Clean Water Act and the State Porter-Cologne Act require the control of pollutants in wastewater discharges. The Porter-Cologne Act requires the development of Basin Plans for drainage basins in California. These basin plans are used in turn to identify more specific controls for discharges (e.g., wastewater treatment plant effluent). The basin plans are implemented through the NPDES program. Many municipalities, being subject to both storm water and wastewater regulations, will develop water quality protection programs that deal with both types of discharges in a coordinated and integrated way.

Purpose and Intent

The purpose of this guide is two-fold. First, to be a compilation of peer-reviewed best management practices for fueling and other closely related activities found at retail fueling operations. Second, to be a reference for municipalities, regulators, and facility owners and operators.

The intent of the SWQTF is that these best management practices serve as a “default” set of BMPs for use throughout California. Municipalities and retail gasoline outlets that have not yet adopted best management practices for these activities should give these practices strong consideration. Municipalities and retail gasoline outlets that do have and use BMPs should compare their current practices with those presented here. Substantive differences should be identified and re-evaluated. Successful implementation of these BMPs depends on a partnership between municipalities, regulators, and facility owners and operators. Each has a role to play:

- Municipalities should become familiar with these BMPs and incorporate them into their water quality protection programs, as appropriate.
- Regulators and inspectors should use these or similar BMPs to measure the pollution prevention efforts of facilities.

- Facility owners and operators should become familiar with these BMPs, teach their employees about them, and ensure that they are used on-site.

How to Use the Best Management Practices

Coverage - These best management practices cover three activities or areas:

- Fuel dispensing
- Air/water supply
- Outdoor waste receptacles

Retail gasoline outlets will have every combination of these activities/areas on-site, including other activities not covered by this guide. For example, a facility may have a fuel dispensing area, air/water supply area, indoor service bay, but no outdoor waste receptacles. These BMPs cover the first two areas but not the indoor service bay. Best management practices for the indoor service bay may be found elsewhere. The inclusion of best management practices for air/water supply areas is not intended to suggest that air and/or water must be supplied by retail gasoline outlets in geographic areas not otherwise required to do so.

Design - The design of this guide is purposely different from many BMP lists that are designed as a menu of BMPs from which the facility owner/operator, and the inspector, may choose some but not necessarily all BMPs. These BMP lists are designed so that if the activity/area is on-site, each numbered BMP listed below the activity should be implemented. For some BMPs, as described below, several implementation options are provided. The best management practices are meant to be implemented, monitored, and maintained on a year round basis. The guide also makes an important distinction between existing facilities and new or substantially remodeled facilities. A definition of new or substantially remodeled is also provided. The Work Group used these design elements to help clarify and unify expectations.

Options - Several of the best management practices provide facility owners and operators options for compliance. For example, one best management practice is:

- Minimize the possibility of storm water pollution from outside waste receptacles by doing at least one of the following:
 - a) use only watertight waste receptacle(s) and keep the lid(s) closed, or
 - b) grade and pave the waste receptacle area to prevent run-on of storm water, or
 - c) install a roof over the waste receptacle area, or
 - d) install a low containment berm around the waste receptacle area, or
 - e) use and maintain drip pans under waste receptacles.

It is the intent of these BMPs that a) through e) are options. Effective implementation of at least one of these options, chosen by the facility owner/operator, should be deemed implementation of this best management practice.

Other BMPs - The Work Group considered other BMPs not listed here including:

- Oil/water separators
- Catch basin inserts

The evidence reviewed by the Work Group indicated that the effectiveness and efficiency of these and other BMPs not listed was insufficient for them to pass peer review and therefore these BMPs can not be generally recommended for use statewide. There may be situations in which these BMPs would be effective and efficient (as evidenced by research), and therefore appropriate, but these situations should be the exception, not the rule. Members of the SWQTF are conducting studies on these and other BMPs. If that research shows that a particular BMP is effective and efficient, the SWQTF will consider adding it to this guide.

Best Management Practices

Existing Facilities

Fuel Dispensing Areas

1. Maintain fuel dispensing areas using dry cleanup methods such as sweeping for removal of litter and debris, or use of rags and absorbents for leaks and spills. Fueling areas should never be washed down unless the wash water is collected and disposed of properly.
2. Fit underground storage tanks with spill containment and overfill prevention systems meeting the requirements of Section 2635(b) of Title 23 of the California Code of Regulations.
3. Fit fuel dispensing nozzles with “hold-open latches” (automatic shutoffs) except where prohibited by local fire departments.
4. Post signs at the fuel dispenser or fuel island warning vehicle owners/operators against “topping off” of vehicle fuel tanks.

Facility - General

1. “Spot clean” leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.

2. Maintain and keep current, as required by other regulations, a spill response plan and ensure that employees are trained on the elements of the plan.
3. Manage materials and waste to reduce adverse impacts on storm water quality.
4. Train all employees upon hiring and annually thereafter on proper methods for handling and disposing of waste. Make sure that all employees understand storm water discharge prohibitions, wastewater discharge requirements, and these best management practices. Use a training log or similar method to document training.
5. Label drains 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.
6. Inspect and clean if necessary, storm drain inlets and catch basins within the facility boundary before October 1 each year.

Outdoor Waste Receptacle Area

1. Spot clean leaks and drips routinely to prevent runoff of spillage.
2. Minimize the possibility of storm water pollution from outside waste receptacles by doing at least one of the following:
 - a) use only watertight waste receptacle(s) and keep the lid(s) closed, or
 - b) grade and pave the waste receptacle area to prevent run-on of storm water, or
 - c) install a roof over the waste receptacle area, or
 - d) install a low containment berm around the waste receptacle area, or
 - e) use and maintain drip pans under waste receptacles.

Air/Water Supply Area

1. Minimize the possibility of storm water pollution from air/water supply areas by doing at least one of the following:
 - a) spot clean leaks and drips routinely to prevent runoff of spillage, or
 - b) grade and pave the air/water supply area to prevent run-on of storm water, or
 - c) install a roof over the air/water supply area, or
 - d) install a low containment berm around the air/water supply area.

New or Substantially Remodeled Facilities

The elements listed below should be included in the design and construction of new or substantially remodeled facilities.

Fuel Dispensing Areas

1. Fuel dispensing areas must be paved with portland cement concrete (or, equivalent smooth impervious surface), with a 2% to 4% slope to prevent ponding, and must be separated 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 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.
2. The fuel dispensing area must be covered, and the cover’s minimum dimensions must be equal to or greater than the area within the grade break or the fuel dispensing area, as defined above. The cover must not drain onto the fuel dispensing area.

Outdoor Waste Receptacle Area

1. Grade and pave the outdoor waste receptacle area to prevent run-on of storm water to the extent practicable.

Air/Water Supply Area

1. Grade and pave the air/water supply area to prevent run-on of storm water to the extent practicable.

Substantially Remodeled Facilities

One of the following criteria must be met before a facility is deemed to be substantially remodeled and the design elements described above are required to be included in the new design and construction:

- the canopy cover over the fuel dispensing area is new or is being substantially replaced (not including cosmetic/facial appearance changes only) and the footing is structurally sufficient to support a cover of the minimum dimensions described above, or
- one or more fuel dispensers are relocated or added in such a way that the portland cement concrete (or, equivalent) paving and grade break or the canopy cover over the fuel

dispensing area do not meet the minimum dimensions as defined above. Replacement of existing dispensers or underground storage tanks do not, by themselves, constitute a substantial remodel.

Special note on the paving BMP (#1 only) addressing Fuel Dispensing Areas under New or Substantially Remodeled Facilities

This best management practice is not specifically intended to apply to facilities that install a new canopy where no canopy existed.

Special note on the canopy BMP (#2 only) addressing Fuel Dispensing Areas under New or Substantially Remodeled Facilities

This best management practice is not specifically intended to apply to facilities that:

- are located in geographic areas not subject to federal or state storm water regulations
- do not discharge storm water either directly to surface waters or indirectly, through municipal separate storm drain systems
- do not add fuel dispensers
- replace, relocate, or add fuel dispensers within the parameters described in the BMP
- increase their throughput of fuel dispensed without modifying their equipment
- make only cosmetic or facial appearance changes to their existing canopy

For the purposes of the waste receptacle area and air/water supply area BMPs only, the facility is considered substantially remodeled if the area around the waste receptacle area or air/water supply area is being regraded or repaved.

Help

For assistance with implementation of these best management practices, municipal staff or facility owners and operators should contact their local storm water program representative, Regional Board or State Board storm water contact, or the Stormwater Quality Task Force.