



City of La Mesa
Department of Public Works
Engineering Division

Existing Development Storm Water Best Management Practices Manual

2007 Update

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1.0 INTRODUCTION

The City of La Mesa has established best management practice (BMP) requirements for different Jurisdictional Urban Runoff Management Program (JURMP) components. BMPs are practices, activities, or structures designed to prevent or reduce the discharge of pollutants in to the City's storm water conveyance system. The City's storm water conveyance system consists of public and private drainage facilities designed to collect and convey water from storm events. This includes, but is not limited to, roads, streets, storm drains, gutters, inlets, catch basins, pipes, and natural waterways.

Included in this Storm Water BMP Manual Part I (Manual) are BMPs related to industrial and commercial facilities, municipal facilities, and residents. BMPs related to construction activities and permanent BMPs for new development and redevelopment can be found in the Storm Water BMP Manual Part II document. For each of the aforementioned components, there is a discussion of BMP requirements applicable to all dischargers and BMPs for specific activities associated with the corresponding component. Dischargers, as discussed throughout this Manual, refers to any person or entity engaged in activities or operations or owning facilities, which will or may result in pollutants entering storm water, the storm water conveyance system, or receiving waters; and the owners of property on which such activities, operations or facilities are located, which includes, but is not limited to, construction site project proponents and owners, industrial and commercial owners and operators, municipal facility operators, and landlords, property management agencies, and residents residing within the City.

Note that the discussion of BMP requirements applicable to all dischargers is discussed at the beginning of each section, and is largely the same for each section. Though this may seem redundant, the Manual is structured in this way so that each section contains complete BMP requirements when separated from other sections of the Manual. This facilitates using sections of this Manual as educational outreach material.

2.0 MUNICIPAL

2.1 BMP REQUIREMENTS FOR ALL DISCHARGERS

2.1.1 NON-STORM WATER DISCHARGES

Non-storm water discharges refer to water flows that are not associated with storm events (i.e. the product of precipitation). The following categories of non-storm water discharges are exempt from discharge prohibitions established by the City's ordinance, but BMPs must be maintained to keep prevent these discharges from being a source of or transporting pollutants to the City's storm water conveyance system. Such discharges are listed below:

- Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
- Diverted stream flows (provided required permits are obtained);
- Flows from riparian habitats and wetlands;
- Foundation drains (not including active groundwater dewatering systems);
- Rising groundwater;
- Uncontaminated groundwater infiltration to MS4s [as defined at 40 CFR 35.2005(20)];
- Uncontaminated pumped groundwater;
- Water from crawl space pumps;
- Water from footing drains (not including active groundwater dewatering systems).
- Air conditioning condensate
- Flows from emergency fire fighting activities
- Springs
- Water line flushing

2.1.2 BMP REQUIREMENTS APPLICABLE TO ALL DISCHARGERS

Good Housekeeping BMPs

Good housekeeping consists of practices implemented to prevent pollutants from being carried in either non-storm water dischargers or with storm water during a storm event and include the practices below. These practices should be implemented by all dischargers, when applicable:

- Report prohibited non-storm water discharges to the City's storm water hotline (619) 667-1134
 - Prohibited non-storm water discharges include industrial and commercial businesses hosing down their sites or washing vehicles or equipment where water reaches the City's storm water conveyance

system, or anyone dumping solid or liquid waste directly into or where it may reach the City's storm water conveyance system.

- Regularly clean and maintain outdoor areas
 - Eliminate the accumulation of pollutants (dirt, surplus materials, spilled or dropped substances, litter, and debris) that collect in areas that can be carried in runoff to the storm water conveyance system.
 - Keep dumpster, trashcan, and recycling bin lids closed to prevent the wind from carrying trash out of the receptacles and to prevent wind, rain, and scavengers from transporting pollutants to the storm water conveyance system.
- Choose dry cleaning methods
 - Eliminate hosing down the site unless all wash water is contained and disposed of to a pervious area, like a lawn, or the sanitary sewer system. Note that some kinds of wash water (i.e. containing significant amounts of pollutants) may not be allowed to be disposed of to a pervious area. Additionally, sewer permits may be necessary for disposing of significant amounts of wash water to the sewer system.
 - Sweeping of paved areas is a dry cleaning method that helps prevent trash, debris, and particulate matter such as dirt from accumulating on paved surfaces and being carried to the storm water conveyance system during a rain event.
- Reduce the use of toxic materials
 - Substitute non-toxic or less-toxic cleaning materials and solvents, use non-caustic and phosphate-free detergents, water-based degreasers, non-chlorinated solvents, when possible.
- Store materials in a manner where they do not contact storm water
 - Move into a building or provide a cover, berm, or similar structure to prevent storm water from contacting materials stored outdoors.

Erosion Control

- Remove or secure any significant accumulations of eroded soils from slopes, or other exposed areas. Such areas may be secured through the use of vegetation, geotextiles, erosion control blankets, etc.

Illegal Connections and Discharges

- Illegal connections to the storm water conveyance system, including, but not limited to sinks and toilets plumbed to the storm water conveyance system, and other systems that convey prohibited discharges to the storm water conveyance system must be eliminated (even if the connection was established pursuant to a valid permit and was legal at the time it was constructed).
- Illegal discharge practices must be eliminated. If a discharge is not include on the list of allowed discharges discussed in section 2.1.1, and is not water resulting from a storm event, it is most likely an illegal discharge.

2.2 BMP REQUIREMENTS FOR MUNICIPAL FACILITIES

Key BMPs generally applicable to municipal facilities and activities include the following:

- Reducing the exposure of pollutants to storm water and non-storm water discharges. This is often done through
 - Covering the pollutants and/or
 - Keeping pollutants away from typical flow paths of water
- Good housekeeping: generally keeping work and storage areas clean and well organized
- Prompt, proper cleanup of spills
- Preventing illegal discharges, such as vehicle wash water

The City utilizes the California Storm Water Quality Association (CASQA) Municipal Handbook to guide its implementation of applicable BMPs for specific municipal areas and activities. Table 3-1 at the end of this section provides a checklist that includes which fact sheets in the CASQA Municipal Handbook are used as a source of BMPs based on municipal area and/or activity. The CASQA fact sheets can be accessed at www.cabmphandbooks.com. If it is not feasible to implement the required BMPs at specific sites and/or during specific activities, the City implements other equivalent BMPs as necessary to comply with the Municipal Permit. More stringent BMP requirements may need to be applied where necessary to reduce discharges of pollutants to sensitive water bodies and/or comply with total maximum daily load (TMDL) regulations.

The City implements more specific BMPs for landscaping activities, activities related to fire fighting, and special events. Those BMPs are described in the following subsections. This handbook does not directly discuss the City's methods of BMPs for street sweeping, sanitary sewer maintenance, and MS4 maintenance, which are routine maintenance operations with established protocols.

2.2.1 LANDSCAPING ACTIVITIES

The following BMPs should be implemented during pesticide, herbicide, and fertilizer handling and use:

- City personnel who participate in the application of pesticides should be trained and/or licensed (Qualified Applicator License) and follow guidelines set by the California Department of Pesticide Regulations and the County Agricultural Commission.
- Every two years, Qualified Applicator Certificate holders must show proof that they have secured a minimum of 20 hours of continuing education.
- Record the applications of all chemical agents by noting the locations, types, and quantities of chemicals used. Report chemical use monthly to the Department of Agriculture.

- The Qualified Applicator Certificate holder should conduct monthly inspections to monitor storage, handling, and disposal of the pesticides.
- Follow written recommendations prepared by a State Pesticide Advisor during pesticide application.
- Personnel who participate in the application of herbicides for the City should be trained and follow guidelines set by the County Agricultural Commission.
- Only pesticides that are quickly absorbed onto the soil or plants should be used. Low pressure and low volume should be used during applications.
- Pesticides should not be sprayed when there is a high possibility of the spray drifting into non-target areas or onto non-target vegetation, insects, or animals.
- Maintain compliance with county and state reporting requirements for pesticide use.
- Pesticides, herbicides, and fertilizers should be applied during the growing seasons: spring summer, and fall.
- Pesticides, herbicides, and fertilizers should not be applied directly prior to or during a storm event.
- All federal, state, and local regulations should be followed in the use of pesticides, herbicides, and fertilizers.
- Trained City personnel should perform irrigation of landscaped areas.
- Drip irrigation and overhead irrigation methods using timers should be implemented, where appropriate, to avoid runoff from over-irrigation.
- Upgrade the irrigation system as technology improves.
- Identifies locations where over-spraying occurs and rearrange the sprinklers to minimize the runoff as needed.
- Employees should be trained to follow pesticide, herbicide and fertilizer labels, and the material safety data sheet(s) (MSDS).
- Use native vegetation and mulching where possible to reduce the need for pesticides, herbicides, fertilizer, and irrigation.
- Diseased plants should be removed and infected parts of plants are removed to minimize the need for pesticide and herbicide use, where applicable.
- Properly labeled, unused portions of fertilizers should be stored in locked buildings.
- Whenever practicable, integrated pest management techniques that rely on non-chemical solutions should be implemented.

In addition to the BMPs listed for pesticide, herbicide, and fertilizer management, all waste, including landscaping waste, must be disposed of properly.

2.2.2 FIRE STATIONS

The following pollution prevention measures and BMPs should be implemented to reduce or eliminate the amount of pollutants generated by the by fire fighting activities both at fire stations in the City and locations throughout the City.

- Use minimal amounts of biodegradable soap for washing activities.

- Conduct truck maintenance, including fluid changes, at an offsite location

BMPs are implemented when conducting the following activities:

Regular Maintenance of Fire and Emergency Vehicles and Equipment

- Vehicles and equipment should be cleaned where runoff is directed to the sanitary sewer system (via a drain equipped with a clarifier), to a pervious infiltration area, or otherwise collected and disposed of properly.
- Significant maintenance is conducted off site and used-oil, hydraulic fluids, and antifreeze should be stored in containers for recycling or are disposed as hazardous waste.
- Spill kits should be available to promptly cleanup and contain leaking or spilled vehicle fluids.
- Use biodegradable soaps, cleaners, and detergents, when available.
- Minimize use of soaps, cleaners, and detergents and dispose of general cleaning solutions to the sanitary sewer system.
- Caustics, flammables, and solvents should be contained and disposed of properly as hazardous waste

Training Exercises

- Water flows should be directed to a connection to the sanitary sewer system
- Water used in training exercises should be directed to landscaped areas whenever possible, and runoff from the training exercises should not be allowed to discharge to the MS4.
- Live fire training activities should be pre-planned to allow integration of barriers to off-site runoff that could contribute to non-storm water discharges

Facilities Maintenance

- Impervious areas such as apparatus floors, maintenance bays, driveways, patios, and walkways should be swept to remove debris. Debris should be placed in the trash. Interior floors should be mopped as necessary, and the wastewater discharged into the sanitary sewer system or onto landscaped areas
- Landscaped areas should be maintained as required to reduce introduction of leaves and other landscape waste into the MS4
- Irrigation systems should be monitored and maintained as required to reduce irrigation water from going off-site
- Spills should be cleaned up using spill kits provided at the work site, and disposal of spilled material is in accordance with applicable regulations
- Spills that require a cleanup beyond the ability of the on-site employees should be reported to the City Public Works Department or the County Hazmat Team for assistance with appropriate resources
- Maintenance and repair of structures should be conducted using methods that do not contribute pollutants to the MS4
- General non-hazardous cleaning solutions should be disposed of in a utility sink that drains into the sanitary sewer system

Post-Emergency Rehabilitation of Response Equipment

Tools, fire hoses, ladders, and other equipment utilized at the scene of an emergency should be restored to a response-ready state in a manner that does not delay the ability of the apparatus to be available for another emergency response. The use of water that could contribute to storm water discharges may be used unless another practical and immediately available method is identified.

2.2.3 SPECIAL EVENTS

The following BMPs are required to be implemented during and/or after special events:

- Proper management of trash and litter
- Inspect catch basins, and clean out if necessary, after larger events such as Oktoberfest
- Street sweeping following the special event, where applicable

Additional BMPs may be implemented depending on the site and/or site conditions, however.

TABLE 3-1

MINIMUM BMP SELECTION CHECKLIST FOR MUNICIPAL AREAS/ACTIVITIES

Required Minimum BMPs as discussed in the CASQA Municipal BMP Handbook

Facility Type	SC-10 Non-Stormwater Discharges	SC-11 Spill Prevention, Control & Cleanup	SC-20 Vehicle and Equipment Fueling	SC-21 Vehicle and Equipment Cleaning	SC-22 Vehicle and Equipment Repair	SC-30 Outdoor Loading/Unloading	SC-31 Outdoor Container Storage	SC-32 Outdoor Equipment Maintenance	SC-33 Outdoor Storage of Raw Materials	SC-34 Waste Handling & Disposal	SC-41 Building & Grounds Maintenance	SC-43 Parking/Storage Area Maintenance	SC-50 Over Water Activities	SC-60 Housekeeping Practices	SC-61 Safer Alternative Products	SC-70 Road and Street Maintenance	SC-71 Plaza and Sidewalk Cleaning	SC-72 Fountain & Pool Maintenance	SC-73 Landscape Maintenance	SC-74 Drainage System Maintenance	SC-75 Waste Handling and Disposal	SC-76 Water & Sewer Utility Maintenance	
Fire Stations	X	X		X						X	X	X		X	X								
Mobile Municipal Activities, Including Power Washing																	X	X	X				
MS4																				X			
Other Fixed Facilities	X	X								X	X	X		X					X				
Parks, Recreational Facilities, and Other Landscaped Areas	X	X					X		X	X	X	X		X	X								
Public Works Facilities	X	X	X	X	X	X	X	X	X	X	X	X		X	X								
Roads, Streets, Highways, and Parking Facilities		X										X				X							
Sanitary Sewer System																						X	
Special Events	X	X								X				X									

Please note that this checklist is designed to select minimum BMPs for particular facility and/or activity categories. If a municipal facility is conducting activities associated with a number of different categories, the City requires minimum BMPs for each category to be implemented. The City may also require the implementation of additional BMPs not included on CASQA municipal fact sheets depending on compliance history, site conditions, or other applicable factors.

3.0 INDUSTRIAL AND COMMERCIAL

3.1 BMP REQUIREMENTS FOR ALL DISCHARGERS

3.1.1 NON-STORM WATER DISCHARGES

Non-storm water discharges refer to water flows that are not associated with storm events (i.e. the product of precipitation). The following categories of non-storm water discharges are exempt from discharge prohibitions established by the City's ordinance, but BMPs must be maintained to keep prevent these discharges from being a source of or transporting pollutants to the City's storm water conveyance system. Such discharges are listed below:

- Discharges from potable water sources not subject to NPDES Permit No. CAG679001, other than water main breaks;
- Diverted stream flows (provided required permits are obtained);
- Flows from riparian habitats and wetlands;
- Foundation drains (not including active groundwater dewatering systems);
- Rising groundwater;
- Uncontaminated groundwater infiltration to MS4s [as defined at 40 CFR 35.2005(20)];
- Uncontaminated pumped groundwater;
- Water from crawl space pumps;
- Water from footing drains (not including active groundwater dewatering systems).
- Air conditioning condensate
- Flows from emergency fire fighting activities
- Springs
- Water line flushing

3.1.2 BMP REQUIREMENTS APPLICABLE TO ALL DISCHARGERS

Good Housekeeping BMPs

Good housekeeping consists of practices implemented to prevent pollutants from being carried in either non-storm water dischargers or with storm water during a storm event and include the practices below. These practices should be implemented by all dischargers, when applicable:

- Report prohibited non-storm water discharges to the City's storm water hotline (619) 667-1134
 - Prohibited non-storm water discharges include industrial and commercial businesses hosing down their sites or washing vehicles or equipment where water reaches the City's storm water conveyance

system, or anyone dumping solid or liquid waste directly into or where it may reach the City's storm water conveyance system.

- Regularly clean and maintain outdoor areas
 - Eliminate the accumulation of pollutants (dirt, surplus materials, spilled or dropped substances, litter, and debris) that collect in areas that can be carried in runoff to the storm water conveyance system.
 - Keep dumpster, trashcan, and recycling bin lids closed to prevent the wind from carrying trash out of the receptacles and to prevent wind, rain, and scavengers from transporting pollutants to the storm water conveyance system.
- Choose dry cleaning methods
 - Eliminate hosing down the site unless all wash water is contained and disposed of to a pervious area, like a lawn, or the sanitary sewer system. Note that some kinds of wash water (i.e. containing significant amounts of pollutants) may not be allowed to be disposed of to a pervious area. Additionally, sewer permits may be necessary for disposing of significant amounts of wash water to the sewer system.
 - Sweeping of paved areas is a dry cleaning method that helps prevent trash, debris, and particulate matter such as dirt from accumulating on paved surfaces and being carried to the storm water conveyance system during a rain event.
- Reduce the use of toxic materials
 - Substitute non-toxic or less-toxic cleaning materials and solvents, use non-caustic and phosphate-free detergents, water-based degreasers, non-chlorinated solvents, when possible.
- Store materials in a manner where they do not contact storm water
 - Move into a building or provide a cover, berm, or similar structure to prevent storm water from contacting materials stored outdoors.

Erosion Control

- Remove or secure any significant accumulations of eroded soils from slopes, or other exposed areas. Such areas may be secured through the use of vegetation, geotextiles, erosion control blankets, etc.

Illegal Connections and Discharges

- Illegal connections to the storm water conveyance system, including, but not limited to sinks and toilets plumbed to the storm water conveyance system, and other systems that convey prohibited discharges to the storm water conveyance system must be eliminated (even if the connection was established pursuant to a valid permit and was legal at the time it was constructed).
- Illegal discharge practices must be eliminated. If a discharge is not include on the list of allowed discharges discussed in section 2.1.1, and is not water resulting from a storm event, it is most likely an illegal discharge.

3.2 BMP REQUIREMENTS FOR INDUSTRIAL AND COMMERCIAL SITES

Key BMPs generally applicable to industrial and commercial facilities and activities include the following:

- Reducing the exposure of pollutants to storm water and non-storm water discharges. This is often done through
 - Covering the pollutants and/or
 - Keeping pollutants away from typical flow paths of water
- Good housekeeping: generally keeping work and storage areas clean and well organized
- Prompt, proper cleanup of spills
- Preventing illegal discharges, such as vehicle wash water

3.2.1 POLLUTION PREVENTION

The City will require incorporation of such strategies into the standard operating procedures of all industrial and commercial facilities, whether a large or small industrial facility, a corporate chain store, a franchise, or an independent or family-run shop. The following pollution prevention methods shall be considered and implemented to the MEP, where applicable:

- Reduce quantity of toxic materials used or substitute less-toxic materials
- Use minimal cleaning water to decrease wastewater generation
- Display pollution prevention methods prominently to remind or instruct employees and customers
- Implement a spill response plan
- Segregate and recycle wastes
- Provide a schedule of preventive maintenance procedures
- Reduce waste through more efficient production processes
- Recycle wastes as part of the production process (most preferred), off site or on site (least preferred)
- Treat wastes on site to decrease volume and/or toxicity
- Dispose of wastes properly
- Continually train employees as needed

3.2.2 GENERAL AND ACTIVITY SPECIFIC BMPs

In addition to the pollution prevention BMPs described above, the City has also established a set of minimum BMPs based on the CASQ California Stormwater BMP Handbook – Industrial & Commercial (CASQA, 2003) for all industrial and commercial sites. Businesses are required to use an effective combination of general BMPs and activity-specific BMPs. General BMPs and activity-specific BMPs are required where applicable and are briefly listed below. The relevant CASQA BMP fact sheet reference is

given in parentheses after each listing; the BMP fact sheets are available online at www.cabmphandbooks.com. In some cases the City does not agree with some of the specific recommended BMP options listed in the CASQA fact sheets. Those exceptions are listed later in this section.

Note that more stringent BMP requirements may need to be applied where necessary to reduce discharges of pollutants to sensitive water bodies and/or comply with total maximum daily load (TMDL) regulations. The City also reserves the right to require the development of Storm Water Pollution Prevention Plans (SWPPP) and/or storm water monitoring if deemed necessary by City inspectors.

- **General BMPs**

- Non-Storm Water Discharge Control (SC-10)
- Spill Prevention, Control/Cleanup (SC-11)
- Waste Handling and Disposal (SC-34)
- Sediment/Erosion Control (SC-40)
- Building/Grounds Maintenance (SC-41)
- Parking Area Maintenance (SC-43)
- Drainage System Maintenance (SC-44)
- Employee Training
 - As appropriate to their positions, staff must be trained to avoid prohibited discharges.
 - Staff must be trained in proper implementation of the BMPs applicable to the activities they regularly conduct.

- **Activity-Specific BMPs**

Appropriate BMPs depend on the type of activities, pollutants and potential source of pollutants. BMPs requirements for the following activities and areas, which are relatively common at industrial and commercial sites, follow the CASQA BMP noted in parentheses after each activity.

- Vehicle/Equipment Fueling (SC-20)
- Vehicle/Equipment Cleaning (SC-21)
- Vehicle/Equipment Repair (SC-22)
- Outdoor Loading/Unloading (SC-30)
- Outdoor Liquid Container Storage (SC-31)
- Outdoor Equipment Operations (SC-32)
- Outdoor Storage of Raw Materials (SC-33)

In addition to the minimum BMPs listed above, the City may require additional BMPs based on specific site conditions observed during an inspection. The City also may require the implementation of treatment control BMPs, including but not limited to the following:

- Infiltration Trench (TC-10)
- Infiltration Basin (TC-11)
- Retention/Irrigation (TC-12)

- Wet Pond (TC-20)
- Constructed Wetland (TC-21)
- Extended Detention Basin (TC-22)
- Vegetated Swale (TC-30)
- Vegetated Buffer Strip (TC-31)
- Bioretention (TC-32)
- Media Filter (TC-40)
- Water Quality Inlet (TC-50)
- Multiple Systems (TC-60)
- Wetland (MP-20)
- Media Filter (MP-40)
- Wet Vault (MP-50)
- Vortex Separator (MP-51)
- Drain Inlet (MP-52)

3.2.3 CITY EXCEPTIONS TO CASQA FACT SHEETS

The City has noted some exceptions to some BMPs listed on some of the aforementioned CASQA Industrial and Commercial Fact Sheets, which are discussed below.

Please note that although CASQA fact sheets state that listed BMPs are “suggested protocols,” the City requires the implementation of such protocols as minimum BMPs, when applicable to the business.

There are no fact sheets specific to disposal of hazardous waste included in the CASQA Industrial and Commercial Handbook. Industrial and commercial businesses must follow appropriate waste disposal BMPs (SC-34) and applicable laws and regulations when disposing of hazardous waste.

CASQA fact sheet SC-11 states that industrial and commercial businesses should develop and regularly update a spill prevention control and countermeasure (SPCC) Plan. A formal SPCC document is not required, but is encouraged. However, other BMPs listed on SC-11 must be implemented when preventing and responding to spills.

SC-22, Vehicle and Equipment and Repair, states, “Incoming vehicles [should be] checked for leaking oil and fluids. Do not allow leaking vehicles or equipment on site.” Due to the nature of vehicle equipment and repair facilities, leaking vehicles or equipment may be allowed on site. BMPs must be implemented to prevent vehicle and equipment fluids from contacting, or potentially contacting, storm water.

SC-43, Parking/Storage Area Maintenance, states, “Follow the procedures below when cleaning oily deposits: use a screen or filter fabric over inlet, then wash surfaces.” Non-storm water discharges of this nature, even if filtered, are not allowed to enter the storm water conveyance system. Water must be contained, collected, and disposed of properly.

SC-41 - Building and Grounds Maintenance, states (in regards to pressure washing), "If soaps or detergents are not used, and the surrounding area is paved, waste runoff does not have to be collected but must be screened. Pressure washers must use filter fabrics or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff." As previously mentioned, non-storm water discharges of this nature, even if filtered, are not allowed to enter the storm water conveyance system. Water must be contained, collected, and disposed of properly.

Note that the City does not require the use of treatment control BMPs as minimum BMPs for existing industrial and commercial facilities. Treatment control BMPs may be necessary at industrial and commercial facilities to reduce pollutants to the MEP. Treatment control BMPs are required for all high priority development projects as required by the Municipal Permit and the City's SUSMP ordinance. Any business implementing treatment control BMPs should be aware of regulations that regulate the removal of silt, sediment, and/or vegetation from naturally lined ponds and detention basins.

4.0 RESIDENTIAL

4.1 BMP REQUIREMENTS FOR ALL DISCHARGERS

4.1.1 NON-STORM WATER DISCHARGES

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4.1.2 BMP REQUIREMENTS APPLICABLE TO ALL DISCHARGERS

Good Housekeeping BMPs

Good housekeeping consists of practices implemented to prevent pollutants from being carried in either non-storm water dischargers or with storm water during a storm event and include the practices below. These practices should be implemented by all dischargers, when applicable:

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 - Prohibited non-storm water discharges include industrial and commercial businesses hosing down their sites or washing vehicles or equipment where water reaches the City's storm water conveyance

system, or anyone dumping solid or liquid waste directly into or where it may reach the City's storm water conveyance system.

- Regularly clean and maintain outdoor areas
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 - Keep dumpster, trashcan, and recycling bin lids closed to prevent the wind from carrying trash out of the receptacles and to prevent wind, rain, and scavengers from transporting pollutants to the storm water conveyance system.
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 - Sweeping of paved areas is a dry cleaning method that helps prevent trash, debris, and particulate matter such as dirt from accumulating on paved surfaces and being carried to the storm water conveyance system during a rain event.
- Reduce the use of toxic materials
 - Substitute non-toxic or less-toxic cleaning materials and solvents, use non-caustic and phosphate-free detergents, water-based degreasers, non-chlorinated solvents, when possible.
- Store materials in a manner where they do not contact storm water
 - Move into a building or provide a cover, berm, or similar structure to prevent storm water from contacting materials stored outdoors.

Erosion Control

- Remove or secure any significant accumulations of eroded soils from slopes, or other exposed areas. Such areas may be secured through the use of vegetation, geotextiles, erosion control blankets, etc.

Illegal Connections and Discharges

- Illegal connections to the storm water conveyance system, including, but not limited to sinks and toilets plumbed to the storm water conveyance system, and other systems that convey prohibited discharges to the storm water conveyance system must be eliminated (even if the connection was established pursuant to a valid permit and was legal at the time it was constructed).
- Illegal discharge practices must be eliminated. If a discharge is not include on the list of allowed discharges discussed in section 2.1.1, and is not water resulting from a storm event, it is most likely an illegal discharge.

4.2 BMP REQUIREMENTS FOR ALL RESIDENTIAL SITES

Residents are responsible for complying with general BMP requirements to which all parties in the City are subject, including illegal discharge prohibitions. Specific BMPs applicable to activities of City residents are listed below.

- **Automobile Repair and Maintenance**

Residents are encouraged to

- Use routine preventive maintenance practices to prevent vehicle leaks and spills from entering urban runoff
- Reduce vehicle use by:
 - Changing driving habits
 - Carpooling
 - Increasing use of public transportation
 - Biking or walking for short trips
- Make timely vehicle inspections and repairs
- Leaks and Spills

Residents are required to prevent leaks and spills from contacting urban runoff by using the following BMPs or their equivalent:

- Use drip pans, plastic sheeting, or other materials to contain spills
- Work indoors or under shelter
- If working outdoors, do not conduct maintenance during rain events
- Clean up leaks and spills when they occur
- Clean tools and parts only in contained areas
- Materials and Waste Management
Residents are required to properly manage and dispose of automotive wastes and materials by using the following BMPs or their equivalent:
 - Properly and lawfully dispose of all wastes
 - Recycle or properly dispose of oil and antifreeze
 - Store materials and wastes indoors or under cover
 - Use secure and watertight containers when storing materials and wastes outside
- Restrictions on Activity: residents are prohibited from repairing vehicles on City streets.

- **Automobile Washing**

Residents are encouraged to do all of the following activities, except where it is stated to be “required”:

- Reduction of Wash Water
 - Use preventive practices to keep vehicles clean (park in garage, under cover, etc.)
 - Dry cleaning methods to avoid the generation of wash and rinse water

- Turn off the water when not in use or to use a controllable spray nozzle
 - Required to contain, capture, or divert wash water from the conveyance system
 - Wash vehicles over pervious surfaces such as lawns or gravel areas
 - Establish neighborhood wash areas where wash water and contaminants can be properly managed
 - Materials and Waste Management
 - Use minimal amounts of soap, detergents, and other cleaners when washing vehicles
 - Residents are required to properly dispose of soapy water or bucket rinse water into the sanitary sewer or soak into the lawn
 - Launder rags and towels or dispose of them in the trash
 - Use dry methods to degrease or clean especially dirty parts prior to wet washing and rinsing. For example, grease or brake dust can be removed using towels.
 - Restrictions on Activity
 - Washing cars on City streets without BMPs is not allowed.
- **Automobile Parking**

The following BMPs are encouraged:

 - Minimize leaks and spills in driveways and parking areas by repairing oil, water, and fuel leaks in vehicles
 - Use routine preventative maintenance practices and to make timely vehicle repairs
 - Proper design and construction of parking areas in residences during major redevelopment is required. Further details are given in the Development Planning Component (Section 4 of this document).
 - Clean parking areas using dry methods, particularly where sediments and/or debris has accumulated
- **Garden Care Activities and Product Use**

Residents are encouraged to do all of the following activities, except where it is stated to be “required”:

 - Leaks and Spills
 - Clean up spills of gardening chemicals, fertilizers, and soils immediately
 - Return spilled materials to the container for future use or to properly dispose if them
 - Materials and Waste Management
 - Use safe substitutes and alternative methods for garden use including
 - IPM techniques

- Use of native plants and drought-tolerant species to reduce water use and the amount of green waste produced
 - Planting techniques to attract beneficial insects
 - Use of biological controls
 - Composting, vermiculture, and yard waste recycling
 - Employ practical purchasing for pesticides and fertilizers:
 - Use minimal amounts of pesticides and fertilizers, to help prevent unnecessary pollutant runoff to the MS4
 - Always read label instructions and follow the instructions for garden care products
 - Conserve water through the use of xeriscape gardening, drip irrigation, soaker hoses, and micro-spray systems
 - Required to repair or adjust irrigation systems that allow excessive runoff
 - Prevent erosion by planting and mulching hillsides and slopes
 - Store lawn care products in closed, labeled containers and in covered areas
 - Residents are discouraged from using materials during windy or rainy days
 - Effectively cover stockpiles of soil, compost or fertilizers with plastic tarps or equivalent methods to prevent dispersal by wind or rain
 - Use dry sweeping techniques for clean up
 - Recycle lawn clippings and greenery waste through local programs
 - Residents are required to properly dispose of HHW. The City maintains a HHW disposal facility, which is described later in this section.
 - Required to not hose off paved surfaces to the street or gutter
 - Restrictions on Activities
 - Residents are prohibited from disposing of hazardous waste into the trash, landfill, or storm drain
- **Home Care and Maintenance**
 - Leaks and Spills

Residents are required to

 - Clean up hazardous materials spills immediately
 - Use proper techniques for spill cleanup and waste disposal
 - Materials and Waste Management

Residents are encouraged to do all of the following activities, except where it is stated to be “required”:

 - Use practical purchasing for home cleaning and maintenance products to reduce waste. For example, purchase only what is needed for specific projects.

- Use safe substitutes for home cleaning and maintenance
 - Read and abide by product label instructions
 - Use water based paints
 - Store HHW in closed labeled containers in a covered area
 - Recycle latex paint through community programs
 - Residents are required to properly dispose of unwanted HHW
 - Recycle unused, unwanted products
 - Recycle unwanted appliances and household equipment
 - Restrictions
 - Residents are prohibited from disposing wash waters (carpet cleaning, mop water, paint wash-up, etc.) to the street, gutter, or storm drain
 - Residents are required to ensure swimming pool water is clear, de-chlorinated, and free of chemicals, sediments, or other pollutants before discharging. Pool water must be discharged through the sanitary sewer system or other appropriate means. Discharge of pool water to the City's MS4 is prohibited.
 - Residents are prohibited from washing pool filter where discharges may enter storm drainage systems
- **Disposal of Pet Waste**
 - Waste Management/ Disposal
 - Pet owners are required to clean up after their pets in the public right of way and on private property not belonging to them. Pet waste bags are supplied at various parks in the City to facilitate this activity, and many Home Owners Associations (HOA) provide pet waste bags and have posted signs to encourage proper waste disposal.
 - Residents are required to dispose of pet waste to the toilet trash, or other acceptable means
 - Residents are encouraged to clean up pet waste on their private property if pets are allowed to defecate outside
 - Pet Management
 - Residents are prohibited from allowing their pets to run free in residential neighborhoods
- **Disposal of Trash**
 - Residents are prohibited from littering
 - Residents are prohibited from dumping trash, including large appliances, furniture, hazardous waste, and other unwanted items, into the MS4
 - Residents are encouraged to
 - Dispose of trash in provided trash cans or shared dumpsters and to ensure trash bags are not leaking prior to disposal
 - Recycle waste products where possible
 - Compost food scraps and green waste where possible

- Pick up, sweep up, and mop up trash and spills surrounding the trash can/dumpster, using minimal water and cleaning products, if necessary. No discharge to the MS4 is allowable during this process.
- Keep trash can and/or dumpster lids closed