



CITY OF REDWOOD CITY  
STORMWATER POLLUTION PREVENTION PROGRAM

**LOCAL SOURCE CONTROL MEASURES LIST**

Storm Drain Pollution Prevention:

In San Mateo County, water runoff from storm drains flows directly to local creeks, San Francisco Bay, and the Pacific Ocean with no treatment. This untreated water runoff is a major contributor to water pollution. Water pollution is a serious problem for wildlife dependent on our waterways and for the people who live near polluted streams or wetlands.

Some common sources of these pollutants include spilled oil, fuel and fluids from vehicles, small maintenance and heavy equipment; landscaping runoff containing pesticides or weed killers; and materials such as used motor oil, antifreeze and paint products. In some cases, these various pollutants are conveyed through stormwater runoff. In other instances, these materials are accidentally spilled or deliberately poured into streets or storm drains.

The City of Redwood City is adopting policies and an ordinance to address the problems associated with the discharge of pollutants into the storm drains. These policies and the ordinance are based on requirements originating from Federal Law (The Federal Clean Water Act) and from State Law (California Porter-Cologne Water Quality Control Act). The model list of measures included in this document provides a menu of alternatives to help businesses, property owners, builders and developers comply with City, State, and Federal Laws.

This document is considered a guidance tool only. For further information regarding the design of these controls, please refer to information and publications available from various organizations, including:

- Start at the Source and Using Site Design Techniques to Meet Development Standards for Stormwater Quality, published by BASMAA (Bay Area Stormwater Management Agencies Association, [www.basmaa.org](http://www.basmaa.org))
- Stormwater Best Management Practice Handbook published by the California Stormwater Quality Association ([www.casqa.org](http://www.casqa.org))
- Various publications by STOPPP (San Mateo Countywide Stormwater Pollution Prevention Program, [www.flowstobay.org](http://www.flowstobay.org))
- Various publications by the San Francisco Bay Regional Water Quality Control Board ([www.waterboards.ca.gov/sanfranciscobay](http://www.waterboards.ca.gov/sanfranciscobay))

Guidelines:

The following model list contains measures to control sources of stormwater pollutants associated with the post-construction phase of new development and redevelopment projects. Each identified source of pollutants may have one or more appropriate control measures.

Effective February 15, 2005; Group 1 projects:

- Commercial, industrial, or residential developments that create one acre or more of impervious surface, including roof area, streets, and sidewalks.
- Significant redevelopment or infill projects (a project on a previously developed site that results in addition or replacement of an acre or more of impervious surface).
- Streets and roads that are under the City’s jurisdiction and that create one acre or more of new impervious surface.

Effective August 16, 2006; Group 2 projects:

- Group 2 projects are in all ways the same as the Group 1 project definition above, except that the size threshold of impervious area for new and significant redevelopment or infill projects is reduced from one acre of impervious surface to 10,000 square feet of impervious surface.
- Single family homes are excluded from the Group 2 project definition, although the City encourages homeowners to minimize impervious surfaces and stormwater runoff whenever possible.

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For additional information not covered in this document, including referenced documents prepared by the City of Redwood City, please view the City of Redwood City’s website ([www.redwoodcity.org](http://www.redwoodcity.org)) or contact the Building & Inspection department at 650-780-7350.

### **A. Landscaping and Irrigation Design**

- 1) General: See Landscape Guidelines, approved by City Council, by Resolution 11308. This policy provides water conservation guidelines for design of landscaping and irrigation systems.
- 2) Existing native trees: Existing native trees, shrubs, and ground cover shall be protected, retained and incorporated into the landscape plan to the maximum extent practicable. See the Tree Preservation Ordinance, #1536 (Chapter 35 of Municipal Code).

### **B. Storm Drain Inlets and Waterways**

- 1) Systems shall be designed in accordance with the City of Redwood City Engineering Standards, Volume III, Part V: "Storm Drain Design Criteria".
- 2) On-site storm drain inlets shall be clearly marked, using stencils and material provided by Redwood City, with the words "No Dumping! Flows to Bay," or "No Dumping! Flows to Lagoon," or equivalent, using thermoplastic stenciling or other methods approved by the City of Redwood City.
- 3) Private storm drains should be cleaned annually by removing sediment, trash and debris from catch basins and inlets, for disposal offsite.

### **C. Parking Facilities**

- 1) Interior facilities: All parking structures shall be provided with floor drains connected to a sand and grease interceptor prior to discharging to the appropriate storm drain systems. The applicant shall contact the City of Redwood City for specific connection and discharge requirements.
- 2) Exterior facilities: Exterior parking lots shall be drained to an approved filtration device. Refer to Article 30 of the City of Redwood City Zoning Ordinance.

### **D. Pool, Spa, and Fountain Discharges**

- 1) Swimming pool, hot tub, spa fountain and landscape feature water may be allowed to indirectly discharge to the storm drains if the water has been dechlorinated, the water is within ambient temperature, and no copper-based algae control has been added to the water. The owner must demonstrate that the water has been dechlorinated and that no copper-based algaecide is present.
- 2) Water with high chlorine content or copper-based algae remover will require a special sewer discharge permit to discharge to an approved facility.

### **E. Food Service Facilities**

- 1) Food service facilities (including restaurants, catering services, and grocery stores) shall have a floor sink or other floor mat, container, and equipment cleaning area, which is connected to an approved grease interceptor prior to discharge into the sanitary sewer system. The restaurant operator shall comply with regulations as

set forth by the San Mateo County Environmental Health Department. Regular maintenance and cleaning of the grease interceptor is required, and maintenance records may be requested for periodic review.

- 2) The restaurant operator must properly contain and then dispose of fats, oils, and grease in approved tallow bins. Licensed grease haulers shall be used to dispose of grease products in a legal disposal facility. Records of disposal must be maintained, for later verification as needed.
- 3) The cleaning area shall be indoors or in a roofed area outdoors; both areas must be connected to the sanitary sewer.
- 4) Outdoor cleaning areas shall be designed to prevent stormwater run-on from entering the sanitary sewer and to prevent stormwater run-off from carrying pollutants to the storm drain.
- 5) Signs shall be posted indicating that all food service equipment washing activities shall be conducted in the cleaning area.
- 6) Sidewalk Cleaning: Cleaning the sidewalk within a restaurant/café area is required. The area shall be dry swept daily and pressure washed quarterly or more frequently as needed. The restaurant operator shall comply with all State and local regulations related to water disposal including the National Pollutant Discharge Elimination System (NPDES) and the California Stormwater Quality Association (CASQA) as follows:

*Pollution Prevention*

- Use dry cleaning methods whenever practical for surface cleaning activities.
- Use the least toxic materials available (e.g. water-based paints, gels or sprays for graffiti removal).

*Surface Cleaning*

- First, sweep (dry clean) sidewalk and parking areas to minimize cleaning with water. Sweep, collect, and dispose of debris and trash before washing with water.
- Before wet cleaning (or pressure washing), block the storm drain (or inlets) with wattle (netted hay rolls).
- Create a dam to collect debris and allow only water into inlet.

**F. Refuse Areas**

- 1) Trash enclosure areas shall be designed to avoid run-on to the trash enclosure area. No drains shall be installed in or beneath dumpsters, compactors, or tallow bin areas serving food service facilities, unless they are connected to an approved sanitary sewer.

- 2) Use turf, turf with cement strips, turfcrete, pervious pavement, or other approved pervious material to build up the area around the trash enclosures, recycling areas, and/or food compactor enclosures.

#### **G. Outdoor Process Activities<sup>1</sup>**

- 1) The applicant shall contact the City of Redwood City for specific connection and discharge requirements.
- 2) Outdoor process activities shall be performed in roofed areas designed to prevent run-on to and runoff from the area with process activities. Examples of appropriate design to prevent run-on and runoff include using a berm or grade break. Oils and chemicals in a process equipment area shall be collected and disposed of properly.
- 3) Per the Operations and Maintenance (O & M) agreement, all paved areas should be checked by the business operator periodically, for cracks and fractures. Any cracks or fractures should be repaired and sealed, to prevent leakage.
- 4) Tanks, containers, or sinks used for parts cleaning or rinsing shall not be connected to the storm drain system. Tanks, containers, or sinks used for such purposes may only be connected to the sanitary sewer system if allowed by a sewer discharge permit.

#### **H. Outdoor Storage Facilities**

- 1) All outdoor equipment and materials storage areas, including storage areas containing non-hazardous liquids, shall have an approved cover or roof. Either the storage site shall be designed to limit the possibility of runoff coming in contact with pollutants, or storm drain inlet valves shall be provided on exterior drains in the area to prevent contaminated water from entering the storm drain. Storage or maintenance/repair activities shall occur only on paved and contained areas.
- 2) All on-site hazardous materials and wastes, as defined or regulated by the California Public Health Code and the Certified Unified Program Agency (CUPA) must be used and managed in compliance with the applicable CUPA program regulations and the facility hazardous materials management plan approved by the CUPA authority. Contact the San Mateo County Environmental Health Department for further information on hazardous materials.
- 3) Per the Operations and Maintenance (O & M) agreement, all paved areas should be checked by the business operator periodically, for cracks and fractures. Any cracks or fractures should be repaired and sealed, to prevent leakage.

#### **I. Outdoor Vehicle Cleaning Facilities**

- 1) Wastewater from commercial vehicle and equipment washing operations, including automobile dealerships, shall not be discharged to the storm drain system.

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<sup>1</sup> Examples of businesses that may have outdoor process activities and equipment include machine shops and auto repair shops, and industries that have pretreatment facilities.

- 2) Commercial/industrial facilities having vehicle/equipment cleaning needs, and new residential complexes with on-site vehicle cleaning areas shall either provide a roofed, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs (faucets) and installing signs prohibiting such uses. Vehicle/equipment washing areas shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. A sign shall be posted indicating the location and allowed uses in the designated wash area. The applicant shall contact the local permitting authority and/or sanitary district with jurisdiction for specific connection and discharge requirements.
- 3) Commercial car wash facilities shall be designed and operated such that no runoff from the facility is discharged to the storm drain system. Either wastewater from the facility shall be discharged to the sanitary sewer, or a wastewater reclamation system shall be installed and the wastewater reused.

#### **J. Vehicle/Equipment Repair and Maintenance**

- 1) Vehicle/equipment repair and maintenance shall be performed in a designated area indoors, or if such services must be performed outdoors, in an area designed to prevent the run-on and runoff of stormwater.
- 2) Secondary containment shall be provided for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within these secondary containment areas.
- 3) Floor drains in vehicle service facilities shall drain to an approved combination sand and oil interceptor discharging to the sanitary sewer, in accordance with the Plumbing Code. An industrial waste discharge permit is required.
- 4) Tanks, containers, or sinks used for parts cleaning or rinsing shall be connected to the sanitary sewer system, not the storm drain system. An industrial waste discharge permit is required.

#### **K. Fuel Dispensing Areas**

- 1) Fueling areas<sup>2</sup> shall have impermeable surfaces (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding, and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable.
- 2) Fueling areas shall be covered by a canopy or roof that extends a minimum of ten feet in each direction from each pump. The canopy or roof shall drain into an approved storm drain system.

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<sup>2</sup> The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

- 3) On-site drainage shall be directed to an oil-sand filter or other hydrodynamic device, before entering the storm drain system.

#### **L. Loading Docks**

- 1) Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area.
- 2) Door skirts between the trailers and the building shall be installed to prevent exposure of loading activities to rain, unless one of the following conditions applies: the loading dock is covered, or the applicant demonstrates that rainfall will not result in an untreated discharge to the storm drain system.

#### **M. Miscellaneous Drain or Wash Water**

- 1) Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system.
- 2) For small air conditioning units, air conditioning condensate should be directed to landscaped areas as a minimum Best Management Practice (BMP). For large air conditioning units, in new developments or significant redevelopments, condensate lines shall be directed to the sanitary sewer system. Any air conditioning condensate that is discharged to land without flowing to a storm drain may be subject to the requirements of the State Water Resources Control Board's (SWRCB) Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality.
- 3) Roof drains shall discharge and drain away from the building foundation to an unpaved area wherever practicable.
- 4) Rooftop equipment including that producing air conditioning condensate shall drain to the sanitary sewer.
- 5) An appropriately equipped facility that drains to the sanitary sewer must be provided for washing and/or steam cleaning activities. Sanitary connections are subject to the review, approval and conditions of the City of Redwood City. These conditions shall be required for automotive-related businesses.
- 6) Fire sprinkler test/flushing water shall be discharged to the landscaping.

#### **N. Marinas and Boating Facilities**

- 1) Waste water from pressure washing shall be collected in holding tanks which allow settling of large particles. Waste water must then be cleaned by a combination of filtration or chemical treatment. Methods must be approved by the City of Redwood City in advance of construction.
- 2) Boat cleaning, maintenance, and repair should take place in covered or roofed facilities, following the same requirements as "Vehicle/Equipment Repair and Maintenance".

- 3) Generally follow the Best Management Practices (BMPs) and guidance from the California Coastal Commission in their document The California Clean Marina Toolkit: A Resource for Environmentally Sound Marina Management and Operation.