



Alameda Countywide
Clean Water Program
A Consortium of Local Agencies

Source Control Measures Guidance and Model List

The Alameda Countywide Clean Water Program (ACCWP) has developed a model list of source control measures to assist its member agencies in developing and implementing their individual work plans in accordance with Provision C.3.k of ACCWP's National Pollutant Discharge Elimination System (NPDES) permit, reissued on February 19, 2003. Provision C.3.k states, in part:

"The Permittees shall, as part of their continuous improvement process, submit enhanced new development and significant redevelopment Performance Standards that summarize source control requirements for such projects to limit pollutant generation, discharge, and runoff, to the maximum extent practicable... A model enhanced new development and significant redevelopment source control Performance Standard and proposed workplan for its implementation shall be submitted by August 15, 2004. Implementation shall begin no later than February 15, 2005, and the status shall thereafter be reported in the Permittees' Annual Reports beginning with the Annual Report due September 15, 2005 ..."

Provision C.3.k. also provides examples of source control measures to be addressed. Provision C.3's Table 2, "Implementation Schedule", requires submittal of "draft conditions of approval for source control measures" by August 15, 2004.

DEVELOPMENT OF THE MODEL LIST

Agencies typically use a number of different methods to impose requirements on development projects, including source control requirements. These methods may vary from one agency to another, but generally include the following:

- Codes and ordinances
- Application review checklists
- Application review results letters
- Plan check comments
- Conditions of approval in project approval documents
- Mitigation measures in EIRs
- Conditions on plan sheets that are part of construction drawings
- Standard specifications for agencies' capital improvement projects

Due to the variety of local practices, ACCWP has developed a model list of source control measures that the agencies may impose as submittal requirements or

checklists, conditions of approval, or plan check comments, etc., depending on the particular planning process used by each agency. These measures need to be expressed as requirements, to meet the intent of Provision C.3.k.

The preparation of the Model List included a review of the New Development Subcommittee's Conditions of Approval (COAs). The COAs include many source control measures, which are now either included in the Model List, or a very similar measure is included in the Model List. In general, where there are differences between one of the Subcommittee's conditions and a measure on the Model List, the measure on the Model List is more protective of water quality. An asterisk is used to indicate which source control measures on the Model List are also included in, or similar to conditions included in, the New Development Subcommittee's COAs. The Model List was reviewed by ACCWP's New Development Subcommittee and Industrial and Illicit Discharge Subcommittee. Comments from members of these subcommittees were incorporated into the Model List consistent with ACCWP's NPDES permit.

The Model List includes measures to control sources of 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. The source control measures in the model list are intended to be applied to projects as appropriate to the project type (e.g., measures controlling "pool, spa and fountain discharges" would only apply to projects that include a pool, spa and/or fountain). Many of the control measures have optional wording, which is shown in brackets. Each agency can choose, as appropriate, whether to make optional wording the standard in its jurisdiction, or not.

The Model List will be submitted to the Regional Board staff for review and approval to meet the August 15, 2004, deadline described above. The Model List will be implemented as part of an enhanced Performance Standard for new Development and Construction Controls, pursuant to Provision C.3.k. The Model List does not include construction BMPs, site design measures, or stormwater treatment measures. These are or will be covered under other performance standards or other guidance for implementation of Provision C.3.

C.3.k WORK PLANS

ACCWP's permit requires that the Regional Board receive by August 15, 2004, a proposed work plan for the implementation of the enhanced new development and significant redevelopment source control performance standard. The Program's Provision C.3 Work Plan indicates that each agency will develop its own work plan for implementing the enhanced performance standard, which is inconsistent with the New Development Subcommittee members' current preference that the Program develop one workplan that the member agencies could either implement or adapt to suit local needs. Any local adaptation of a Program-wide work plan would need to be submitted to the Regional Board with the Program-wide work plan by August 15, 2004.

REFERENCES

The Model List was developed using the following information sources:

- ACCWP. Model Conditions of Approval. April 1999.
- Bay Area Stormwater Management Agencies Association (BASMAA). Start at the Source Tools Handbook. June 2000.
- California Stormwater Quality Association (CASQA). Stormwater Best Management Practices Handbook: New Development and Redevelopment. January 2003.
- California Stormwater Quality Task Force. The Best Management Practice Guide – Retail Gasoline Outlets. March 1997.
- EOA, Inc. memorandum to ACCWP's I&IDC Subcommittee. Conditionally Exempt Discharges: Planned and unplanned discharges from potable water sources; water line and hydrant flushing; fire sprinkler testing water; and swimming pool water. March 9, 2001.
- EOA, Inc. memorandum to ACCWP's I&IDC Subcommittee. Conditionally Exempt Discharges: uncontaminated pumped groundwater, foundation drains, water from crawl space pumps, and footing drains. March 9, 2001.
- Regional Water Quality Control Board. Example source control measures provided in Provision C.3.k. of the STOPPP NPDES Permit. February 2003
- Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). Draft Model List of Source Control Measures. September 2002
- SCVURPPP. Model Conditions of Approval for Pesticide Reduction in Landscaping Plans. December 2002
- State Water Resources Control Board (SWRCB). Statewide General Waste Discharge Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality. April 2003
- San Mateo Countywide Stormwater Pollution Prevention Program (STOPPP). Draft BMPs and Implementation Procedures for Conditionally Exempted Discharges. January 20, 2004.

MODEL LIST OF SOURCE CONTROL MEASURES

The following 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. The model list is intended to be a menu from which agencies may select appropriate measures to apply to specific projects. Agency discretion is reserved to consider constraints such as municipal sewer system capacity and allocation restrictions and storm drain system infrastructure and design features/limitations. Phrases in brackets represent alternative or optional wording. An asterisk is used to indicate which source control measures on the Model List are also included in, or similar to conditions included in, the New Development Subcommittee's COAs, dated April 1999.

I. STRUCTURAL CONTROL MEASURES

I.A. Illegal Dumping to Storm Drain Inlets and Waterways

* On-site storm drain inlets shall be clearly marked with the words "No Dumping! Flows to Bay," or equivalent, using methods approved by the [Agency].

I.B. Interior Floor Drains

Interior floor drains shall be plumbed to the sanitary sewer system and shall not be connected to storm drains [or interior floor drains are prohibited]. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements. [In the event that the sanitary district does not approve the connection, the applicant may propose an alternative method of plumbing interior floor drains, subject to approval by RWQCB staff.]

I.C. Parking Garages

Interior level parking garage floor drains [receiving non-stormwater discharges] shall be connected to [a water treatment device approved by the (Agency) prior to discharging to] the sanitary sewer system. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements. [Or – If a municipality determines that connecting to a sanitary sewer system is not practicable, the applicant may propose an alternative method of plumbing interior parking garage floor drains or addressing runoff subject to approval by RWQCB staff].

I.D. Pesticide/Fertilizer Application

- 1) * Landscaping shall be designed to minimize irrigation and runoff, promote surface infiltration where appropriate, and minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.
- 2) Structures shall be designed to discourage the occurrence and entry of pests into buildings, thus minimizing the need for pesticides. For example, dumpster areas should be located away from occupied buildings, and building foundation vents shall be covered with screens.
- 3) If a landscaping plan is required as part of a development project application, the plan shall meet the following conditions related to reduction of pesticide use on the project site:
 - a. * Where feasible, landscaping shall be designed and operated to treat stormwater runoff by incorporating elements that collect, detain, and infiltrate runoff. In areas that provide detention of water, plants that are tolerant of saturated soil conditions and prolonged exposure to water shall be specified.
 - b. Plant materials selected shall be appropriate to site specific characteristics such as soil type, topography, climate, amount and timing of sunlight, prevailing winds, rainfall, air movement, patterns of land use, ecological consistency and plant interactions to ensure successful establishment.
 - c. Existing native trees, shrubs, and ground cover shall be retained and incorporated into the landscape plan to the maximum extent practicable.
 - d. Proper maintenance of landscaping, with minimal pesticide use, shall be the responsibility of the property owner.
 - e. Integrated pest management (IPM) principles and techniques shall be encouraged as part of the landscaping design. Examples of IPM principles and techniques include:
 1. Select plants that are well adapted to soil conditions at the site.
 2. Select plants that are well adapted to sun and shade conditions at the site. Consider future conditions when plants reach maturity. Consider seasonal changes and time of day.
 3. Provide irrigation appropriate to the water requirements of the selected plants.
 4. Select pest- and disease-resistant plants.
 5. Plant a diversity of species to prevent a potential pest infestation from affecting the entire landscaping plan.
 6. Use "insectary" plants in the landscaping to attract and keep beneficial insects.

- 4) * Landscaping shall also comply with [Agency's] "water efficient landscape ordinance" or equivalent.

I.E. Pool, Spa, and Fountain Discharges

- 1) Pool (including swimming pools, hot tubs, spas and fountains) discharge drains shall not be connected directly to the storm drain or sanitary sewer system, unless the connection is specifically approved by the local permitting authority [and/or sanitary district with jurisdiction, as applicable]. [Exception: Public pool discharge drains may be connected to the sanitary sewer system, in accordance with applicable local requirements.]
- 2) Subject to local requirements, when draining is necessary, a hose or other temporary system shall be directed into a sanitary sewer clean out. The clean out shall be installed in a readily accessible area [example: within 10 feet of the pool]. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements.
- 3) [Subject to local requirements, swimming pool, spa and fountain water may be allowed to discharge to the storm drains if the water has been dechlorinated, the water is within ambient temperature, and no copper-based algae control projects have been added to the water.]
- 4) If commercial and public swimming pool discharges are discharged to land where the water would not flow to a storm drain or to a surface water, the discharge may be subject to the requirements of the State Water Resources Control Board's (SWRCB) Statewide General Waste Discharge Requirements (WDRs) for Discharges to Land with a Low Threat to Water Quality.

I.F. Food Service Equipment Cleaning

* Food service facilities (including restaurants and grocery stores) shall have a sink or other floor mat, container, and equipment cleaning area, which is connected to [a grease interceptor prior to discharging to] the sanitary sewer system. The cleaning area shall be large enough to clean the largest mat or piece of equipment to be cleaned. The cleaning area shall be indoors or in a roofed area outdoors; both areas must be plumbed to the sanitary sewer. 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. Signs shall be posted indicating that all food service equipment washing activities shall be conducted in this area. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements. [In the event that the sanitary district does not approve the connection, the applicant may propose an alternative method of plumbing interior or roofed floor drains, subject to approval by RWQCB staff.]

I.G. Refuse Areas

- 1) * New or redevelopment projects [such as food service facilities, recycling facilities and/or multi-family residential complexes or subdivisions or similar facilities] [or - such as food service facilities, recycling facilities or similar facilities] shall provide a roofed and enclosed area [or enclosed area] for dumpsters and recycling containers. The area shall be designed to prevent water run-on to the area and runoff from the area and to contain litter and trash, so that it is not dispersed by the wind or runoff during waste removal.
- 2) * Runoff from food service areas, trash enclosures, recycling areas, and/or food compactor enclosures or similar facilities shall not discharge to the storm drain system. Trash enclosure areas shall be designed to avoid run-on to the trash enclosure area. Any drains installed in or beneath dumpsters, compactors, and tallow bin areas serving food service facilities shall be connected [to a grease removal device and/or treatment devices prior to discharging] to the sanitary sewer. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements. [In the event that the sanitary district does not approve the connection, the applicant may propose an alternative method of providing for drainage from the trash enclosure area, subject to approval by RWQCB staff.]

I.H. Outdoor Process Activities/Equipment¹

- 1) Process activities shall be performed either indoors or in roofed outdoor areas. If performed outdoors, the area shall be designed to prevent run-on to and runoff from the area with process activities.
- 2) * Process equipment areas shall drain to the sanitary sewer system. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements. [In the event that the sanitary district does not approve the connection, the applicant may propose an alternative method of providing for drainage of process equipment areas, subject to approval by RWQCB staff.]

I.I. Outdoor Equipment/Materials Storage

- 1) * All outdoor equipment and materials storage areas shall be covered [and bermed], or shall be designed with BMPs to limit the potential for runoff to contact pollutants
- 2) Storage areas containing non-hazardous liquids shall be covered by a roof and drain to the sanitary sewer system, and be contained by berms, dikes, liners, vaults or similar spill containment devices. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements. [Or – Storage areas

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

containing non-hazardous liquids shall be covered by a roof and contained by berms, dikes, liners, vaults or similar spill containment devices.]

- 3) All on-site hazardous materials and wastes, as defined and/or regulated by the California Public Health Code and the local Certified Unified Program Agency (CUPA) [, i.e., Alameda County Environmental Health Department], 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.

I.J. Vehicle/Equipment and Commercial/Industrial Cleaning

- 1) Wastewater from vehicle and equipment washing operations shall not be discharged to the storm drain system. [However, for car dealerships, if water only (without soap or other cleaning agent) is used for a minimal amount of rinsing of vehicle exterior surfaces for appearances purposes, the runoff may be discharged to the storm drain system.]
- 2) * Commercial/industrial facilities having vehicle/equipment cleaning needs [and new residential complexes of 25 units or greater] 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. [In the event that the sanitary district does not approve the connection, the applicant may propose an alternative method of providing for drainage of the vehicle/equipment washing area, subject to approval by RWQCB staff.]
- 3) * Commercial car wash facilities shall be designed and operated such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer [or a wastewater reclamation system shall be installed and the wastewater reused with no discharges to the storm drain]. The applicant shall contact the local permitting authority [or sanitary district with jurisdiction] for specific connection and discharge requirements.

I.K. 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 the secondary containment areas.

- 3) Vehicle service facilities shall not contain floor drains [unless the floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer, for which an industrial waste discharge permit has been obtained. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements.]
- 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 an industrial waste discharge permit. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements. [In the event that the sanitary district does not approve the connection, the applicant may propose an alternative method of providing for drainage of tanks, containers or sinks used for parts cleaning or rinsing, subject to approval by RWQCB staff.]

I.L. Fuel Dispensing Areas

- 1) * Fueling areas² 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 that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be roofed and the roof's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area, as defined below.⁴] The canopy [or roof] shall not drain onto the fueling area.

I.M. Loading Docks

- 1) * Loading docks shall be graded to minimize run-on to and runoff from the loading area [and/or be covered]. Roof downspouts shall be positioned to direct stormwater away from the loading area. Stormwater runoff from loading dock areas shall be drained to the sanitary sewer, or diverted and collected for ultimate discharge to the sanitary sewer. [Or – Stormwater runoff from loading dock areas shall be connected to a post-construction stormwater treatment measure(s) prior to discharge to the storm drain system]. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements.
- 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

² 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.

apply:: the loading dock is covered, or the applicant demonstrates that rainfall will not result in an untreated discharge to the storm drain system.

I.N. Fire Sprinkler Test Water

Fire sprinkler test water shall be drained to the sanitary sewer system (with approval from the local permitting authority [and/or sanitary district with jurisdiction]) or drain to landscaped areas where feasible. [In the event that the sanitary district does not approve the connection and drainage to landscaped areas is infeasible, the applicant may propose an alternative method of providing for drainage of fire sprinkler test water, such as by filtering and dechlorinating the water prior to discharge to a storm drain, subject to approval by RWQCB staff.]

I.O. 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. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements. [In the event that the sanitary district does not approve the connection, the applicant may propose an alternative method of providing for boiler drain lines, subject to approval by RWQCB staff.]
- 2) For small air conditioning units, air conditioning condensate should be directed to landscaped areas as a minimum BMP. For large air conditioning units, in new developments or significant redevelopments, the preferred alternatives are for condensate lines to be directed to landscaped areas, or alternatively connected to the sanitary sewer system after obtaining permission from the sanitary sewer's owner. As with smaller units, any anti-algal or descaling agents must be properly disposed of. Any air conditioning condensate that discharges 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 (WDRs) for Discharges to Land with a Low Threat to Water Quality. [Or – Air conditioning condensate lines may discharge to the storm drain system provided they are not a source of pollutants].
- 3) Roof drains shall discharge and drain away from the building foundation to an unpaved area wherever practicable.
- 4) Roof top equipment [other than that producing air conditioning condensate] [or including that producing air conditioning condensate] shall drain to the sanitary sewer [or be covered and have no discharge to the storm drain]. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements.
- 5) * Most washing and/or steam cleaning must be done at an appropriately equipped facility that drains to the sanitary sewer. Any outdoor washing or pressure washing must be managed in such a way that there is no discharge of soaps or other pollutants to the storm drain. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for

specific connection and discharge requirements. [These conditions shall be required for automotive related businesses]. [In the event that the sanitary district does not approve the connection, the applicant may propose an alternative method of providing for drainage of the washing or steam cleaning facility, subject to approval by RWQCB staff.]

II. OPERATIONAL BMPS

This section describes Operational best management practices (BMPs) that rely on private property owners to implement following construction of projects. Responsibility for implementation of these BMPs clearly rests with the property owners. Because some of these Operational BMPs may be difficult to implement, the municipalities may consider some of these Operational BMPs as reasonable goals to achieve. The municipalities have certain limited responsibilities for verification of property owner implementation. [The municipality will check on a property owner/operator's implementation of required Operational BMPs only during industrial and commercial business inspections, if any, and/or any inspections to verify the operation and maintenance of stormwater treatment measures, and/or may require the property owners to submit technical reports to verify the effective implementation of the Operational BMPs.]

II.A. Paved Sidewalks and Parking Lots

* Sidewalks and parking lots shall be swept regularly to minimize the accumulation of litter and debris. Debris resulting from pressure washing shall be trapped and collected to prevent entry into the storm drain system. Washwater containing any soap, cleaning agent or degreaser shall not be discharged to the storm drain [and shall be collected and discharged to the sanitary sewer] [or collected and treated prior to being lawfully disposed]. The applicant shall contact the local permitting authority [and/or sanitary district with jurisdiction] for specific connection and discharge requirements.

II.B. Private Streets, Utilities and Common Areas

- 1) The owner of private streets and storm drains shall prepare and implement a plan for street sweeping of paved private roads and cleaning of all storm drain inlets.
- 2) * For residential developments, where other maintenance mechanisms are not applicable or otherwise in place a property owners association, architectural committee, or similar organization [or a maintenance assessment district, special assessment district, or similar arrangement] shall be created and shall be responsible for maintaining all private streets and private utilities and other privately owned common areas and facilities on the site including landscaping. These maintenance responsibilities shall include implementing and maintaining stormwater BMPs associated with improvements and landscaping [and will include the maintenance responsibilities described in the maintenance plan, which is included as an attachment to the stormwater treatment measure O&M agreement for the subject property]. [CC&R's creating the association shall be reviewed and

approved by the City or County Attorney prior to the recordation of the Final Map and recorded prior to the sale of the first residential unit.] The CC&R's [or special assessment district] shall describe how the stormwater BMPs associated with privately owned improvements and landscaping shall be maintained by the association [or the special assessment district].

II.C. Vehicle/Equipment Repair and Maintenance

- 1) No person shall dispose of, nor permit the disposal, directly or indirectly, of vehicle fluids, hazardous materials, or rinsewater from parts cleaning operations into storm drains.
- 2) No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately.
- 3) No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area that cannot discharge to the storm drain, such as an area with secondary containment.

II.D. Fueling Areas

The property owner shall dry sweep the fueling area and spot clean leaks and drips routinely. Fueling areas shall not be washed down with water unless the wash water is collected and disposed of properly (i.e., not in the storm drain).

II.E. Loading Docks

* The property owner shall ensure that BMPs are implemented to prevent potential stormwater pollution. These BMPs shall include, but are not limited to, a regular program of sweeping, litter control and spill clean-up.

II.F. On-site Storm Drains

* All on-site storm drains must be cleaned [or inspected and, if necessary, cleaned] at least once a year immediately prior to the rainy season. Additional cleaning may be required by the [Agency].