

Municipal Services Agency
Cheryl Creson, Administrator



County Executive
Terry Schutten

County of Sacramento

Date: May 18, 2006

TO: Keith DeVore
FROM: Cheryl Creson
COPY: Herb Niederberger
Craig Crouch
Kerry Schmitz

SUBJECT: Stormwater Quality Design Standards

As required in Sacramento County Code Title 15 Chapter 15.12 (Stormwater Management and Discharge Control – the “Stormwater Ordinance”) regulations must be approved by the Agency Administrator. I hereby approve the Post-Construction Control Measures Regulation and direct that its provisions be implemented as defined in the above-referenced Stormwater Ordinance.

Cheryl Creson
Municipal Services Agency Administrator

Post Construction Control Measures Regulation

Section 1. Title. This regulation shall be known and may be cited as the Post Construction Control Measures Regulation.

Section 2. Definitions.

1. "Administrator" means the Administrator of the County of Sacramento's Municipal Services Agency and his or her designees.
2. "Certificate of Control Measure Compliance" is a statement, stamped by a Professional Engineer licensed by the State of California, that the Control Measures installed at a specified Project meet the requirements of this regulation.
3. "Design Standards" means specifications established by the County for the physical attributes of Post Construction Control Measures.
4. "Director" means the Director of the County of Sacramento's Department of Water Resources and his or her designees.
5. "Development Standards Provisions" means Provisions 19 and 22 of the Municipal Stormwater Permit.
6. "Exhibit A" is a table incorporated as part of this regulation that lists the Project Categories, and shows the Post Construction Control Measures and Project Category Thresholds that apply to each.
7. "Municipal Stormwater Permit" means NPDES Permit #CAS082597, including any amendments thereto or successor permit, issued by the Regional Board to the County and the cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, and Sacramento.
8. "New Development" means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivisions.
9. "Person" means any natural person as well as any corporation, partnership, public agency, trust, estate, cooperative association, joint venture, business entity or other similar entity, or the agent, employee or representative of any of the above.
10. "Post Construction Control Measures" are features required by the County at new development and significant redevelopment projects that are designed to reduce or eliminate the volume of runoff or the discharge of pollutants in runoff to the County Stormdrain System or to Natural Waters.
11. "Post Construction Stormwater Quality Plan" or "PCSQP" is a plan submitted by a Project Proponent as a separate sheet of the improvement plans for the Project

that shows the Post Construction Control Measures to be installed in satisfaction of this regulation.

12. "Project" means a new development or significant redevelopment that is subject to the requirements of the Municipal Stormwater Permit.
13. "Project Category" means a type of project, distinguished by land use and size, which in the Municipal Stormwater Permit is called a Priority Development Project Category and is defined in Provision 19; and in this regulation is listed in Exhibit A.
14. "Project Category Threshold" means the size range for which a specific Project is subject to the requirements established in Exhibit A for the Project Category
15. "Project Proponent" means a person who submits an application for approval of improvement plans for a new development or significant redevelopment, and who is responsible for implementation of those improvement plans.
16. "Runoff Reduction Measures" are Post Construction Control Measures that reduce runoff volumes from a developed parcel.
17. "Significant redevelopment" includes, but is not limited to, expansion of a building footprint; replacement of a structure; replacement of impervious surface that is not part of a routine maintenance activity; and land-disturbing activities related to structural or impervious surfaces.
18. "Source Control Measures" means Post Construction Control Measures that prevent and/or reduce the contact and subsequent mobilization of pollutants with runoff.
19. "Stormwater Ordinance" means Title 15 Chapter 15.12 of Sacramento County Code.
20. "Treatment Control Measures" means Post Construction Control Measures that remove pollutants that have been mobilized by and/or are contained in runoff.

Section 3. Purpose and intent. The purpose of this regulation is to establish requirements, standards, procedures, and other mechanisms necessary for administration of Post Construction Control Measures. It is intended to minimize the short and long-term impacts on receiving water quality from new development and significant redevelopment, and to promote compliance by the County with the Development Standards Provisions of the Municipal Stormwater Permit.

Section 4. Approval and Interpretation by Administrator. The Administrator is authorized to interpret the provisions of this regulation. All plans, control measures, submittals, calculations, and other requirements established under this regulation are subject to evaluation and approval by the Administrator.

Section 5. Post Construction Control Measures. New development and significant redevelopment projects shall implement design standards as shown applicable for a project category in Exhibit A. For Significant redevelopment, the Design Standards apply only to the redeveloped area, and not to the entire development, except in cases where drainage from the existing developed portion is allowed to enter/flow through the redeveloped portion. In such cases, the treatment control measure must be designed for the entire contributing shed

Section 6. Source Control Measures. Source Control Measures shown as applicable for a given category in Exhibit A are required for all Projects within that Project Category.

Section 7. Treatment Control Measures. All runoff from the Project must be treated by a combination of Treatment Control Measures that meet the Design Standards and are shown in Exhibit A as acceptable for the Project Category.

Section 8. Runoff Reduction Control Measures. Runoff Reduction Control Measures shall be selected according to Exhibit A. The expected runoff reduction for any Runoff Reduction Control Method required by Exhibit A, or used for the design of a required Treatment Control Measure, shall be calculated according to methods established in the applicable Design Standard. If a Design Standard has not been adopted for a particular type of Runoff Reduction Control Measure, and the magnitude of the expected runoff reduction is necessary for the design of a required Treatment Control Measure, then the expected runoff reduction shall be calculated, and the calculation shall be stamped by a Professional Engineer licensed by the State of California.

Section 9. Post-Construction Stormwater Quality Plan. For each Project, the Project Proponent shall submit a Post-Construction Stormwater Quality Plan or PCSQP. The PCSQP must show Post Construction Control Measures that meet the requirements of Exhibit A. The PCSQP shall include sufficient design detail and calculations to demonstrate the adequacy of any control measure intended to meet the requirements of this regulation, and at a minimum shall include the following items:

- Grades
- Existing & proposed buildings and other structures
- Pavement
- Landscaping
- Drainage systems, including pipe materials, sizes, slopes and invert elevations
- Contributing shed delineation
- Post Construction Control Measures, including the following information where applicable:
 - Dimensions and setbacks from property lines and structures
 - Profile view, including typical cross-sections with dimensions
 - Water surface elevations/freeboard
 - Inlets, outlet structures, and release points
 - Vegetation & growing medium specifications
 - Filter fabric specifications
 - Infiltration material specifications
 - Installation requirements

- Table of Post Construction Control Measures. This table shall list all Post Construction Control Measures, and for each show the type of control measure, impervious and pervious area of contributing sheds, and calculated flow (Stormwater quality, Nolte & 100 year flows if applicable).

Section 10. Alternative Post Construction Control Measures. Project Proponents may install alternative Post Construction Control Measures in lieu of Post Construction Control Measures that are specified on the approved PCSQP. However, Project Proponent shall submit a plan revision for approval prior to installation of alternative post construction control measures. Post Construction Control Measures shall be certified by a Professional Engineer as provided in Section 11 of this regulation, and are subject to approval by the Administrator.

Section 11. Certificate of Control Measure Compliance. Before the Administrator shall deem any Project to be complete, the Project Proponent shall submit to the Administrator a Certificate of Control Measure Compliance. No occupancy permit shall be issued for any building that is part of the Project until the Administrator deems the Project to be complete.

The Certificate of Control Measure Compliance shall include the following statement: "The requirements of the County Post Construction Control Measures Regulation were met by the method checked below:

_____ All Post Construction Control Measures have been installed as indicated on the approved plans; or

_____ Post Construction Control Measures have either been installed as indicated on the approved plans, or alternative Post Construction Control Measures have been installed in lieu of some or all of those indicated on the approved plans, and the alternatives are designed and installed in a manner that will achieve equivalent levels of source control, runoff reduction and treatment, as shown by the calculations submitted herewith."

Calculations in support of alternative Post Construction Control Methods shall be submitted as part of the Certificate of Compliance.

A Certificate of Control Measure Compliance is subject to the approval of the Administrator who at his or her discretion may conduct an evaluation of the installed Post Construction Control Measures.

Section 12. Correction and Mitigation of Deficient Control Measures. If a Certificate of Control Measure Compliance is not submitted, or if upon evaluation the Administrator finds that the design and installation of Post Construct Control Measures do not meet the design specifications of the approved plans, or that installed alternative Post Construct Control Measures cannot achieve equivalent levels of source control, runoff reduction or treatment, the Project Proponent shall correct or mitigate the deficiencies at his or her own expense. When such deficiencies are discovered by the Administrator, no project shall be found by the Administrator to be complete. No

occupancy permit shall be issued for any building that is part of the Project until the deficiencies are corrected.

In cases where correction of the deficiencies of Post Construction Control Measures is impractical, as determined by the Administrator, the Project Proponent shall mitigate the deficiencies by providing equivalent or better pollutant removal and runoff reduction at another site within the same watershed, provided that the mitigation measures are over and above the normal requirements for the site. Failure to correct or mitigate deficiencies within a reasonable time period specified by the Administrator shall be subject to enforcement under the Stormwater Ordinance (Chapter 15.12 Article 5).

Section 13. Design Standards. The Design Standards are adopted as part of this regulations. The Design Standards may be revised from time to time by the Administrator. They shall be effective when promulgated. Such revisions may be made when necessary to incorporate new information, including but not limited to data on the effectiveness of the design, and to otherwise comply with the goals and requirements of the County's Municipal Stormwater Permit, and shall be accomplished according to generally accepted engineering practices and principles. All revisions made to the Design Standards shall be subject to the Technical Revision standards of the Public Input Plan adopted by the Sacramento County Board of Supervisors which specify levels of public review for the different types of revisions.

Section 14. Maintenance Covenant. For each Project that is subject to these regulations, the Project Proponent shall be required to execute a maintenance covenant prior to approval of improvement plans by the Director. The maintenance covenant must be in recordable form, include a legal description of the project site, a plat map and specific maintenance procedures for the control measure proposed by the applicant. Upon approval by the Director, the maintenance covenant shall be recorded at the expense of the Project Proponent, and shall become an ongoing requirement for the property running with the land, regardless of ownership. Failure to implement the provisions of the maintenance covenant shall be a violation of the Stormwater Ordinance and the property owner and other responsible parties shall be subject to enforcement under the Stormwater Ordinance (Chapter 15.12 Article 5).

Section 15. Effective Date. This regulation is effective beginning May 18, 2006. Any pending applications which were not conditioned for stormwater control measures under previous standards prior to this date shall be subject to this regulation, and all applications submitted to the Administrator after this date are subject to this regulation.

Approved for Implementation By:

Cheryl Creson
Cheryl Creson, Administrator
County of Sacramento
Municipal Services Agency

Date: 5/18/06

Exhibit "A"
Stormwater Quality Standards for Development Projects
Selection Matrix for Priority Project Categories

For Agencies in Sacramento County: Effective May 18, 2006

Priority Project Category	Residential			Commercial/Industrial						Hillside Developments ≥ 25% slope	Parking lots (c) ≥ 5,000 sf or 25 spaces	Streets/Roads (d) impervious area ≥ 5 acre
	Single Family Residential (a) ≥ 10 lots, < 20 acres	> 20 acres	Multi-family Residential ≥ 1 acre	Commercial Developments impervious area ≥ 1 acre	Auto Repair Shops impervious area ≥ 1 acre	Retail Gasoline Outlets impervious area ≥ 1 acre	Restaurants impervious area ≥ 1 acre	Industrial Development (b) impervious area ≥ 1 acre				
Source Controls	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Storm Drain Message and Signage	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fueling Areas	NA		NA	✓	✓	✓	✓	✓	(e)	NA	NA	NA
Loading/Unloading Areas	NA		NA	✓	✓	✓	✓	✓	(e)	NA	NA	NA
Outdoor Storage Areas	NA		NA	✓	✓	✓	✓	✓	(e)	NA	NA	NA
Outdoor Work Areas	NA		NA	✓	✓	✓	✓	✓	(e)	NA	NA	NA
Vehicle/Equipment Wash Areas	NA		✓	✓	✓	✓	✓	✓	(e)	NA	NA	NA
Waste Management Areas	NA		✓	✓	✓	✓	✓	✓	(e)	✓	NA	NA
Runoff Reduction Measures		(f)	•	•	•	•	•	•	•	•	•	•
Alternative Driveway Design		•	•	•	NA	NA	NA	NA	•	•	NA	NA
Disconnected Roof Drains		•	•	•	•	•	•	•	•	•	NA	NA
Divided Sidewalks		•	•	•	•	•	•	•	•	•	•	•
Ecoroof		NA	NA	•	•	•	•	•	•	•	NA	NA
Interceptor Trees		•	•	•	•	•	•	•	•	•	•	•
Porous Pavement		NA	NA	•	•	NA	NA	•	•	•	•	NA
Treatment Controls (g) (h)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Porous Pavement Detention			NA	•	•	NA	NA	•	•	•	•	NA
Stormwater Planter (Flow-through)			•	•	•	•	•	•	•	•	•	•
Stormwater Planter (Infiltration)			•	•	•	NA	NA	•	•	•	•	•
Constructed Wetland Basin			•	•	•	NA	NA	•	•	•	•	•
Detention Basin, Combination			•	•	•	•	•	•	•	•	•	•
Detention Basin, Dry			•	•	•	•	•	•	•	•	•	•
Detention Basin, Wet			•	•	•	•	•	•	•	•	•	•
Infiltration Basin			•	•	•	NA	NA	•	•	•	•	•
Infiltration Trench			•	•	•	NA	NA	•	•	•	•	•
Media Filter (Austin Sand Filter)			•	•	•	•	•	•	•	•	•	•
Multi-functional Drainage Corridor			•	•	•	NA	NA	•	•	•	•	•
Vegetated Filter Strip			•	•	•	NA	NA	•	•	•	•	•
Vegetated Swale			•	•	•	•	•	•	•	•	•	•
Proprietary Devices (i)			(h)	•	•	•	•	•	•	•	•	•

✓ Required if applicable to project

• Acceptable

NA Not applicable or allowed

(a) Single family residential development of one acre or more with a density of 15 du/net acre may be required to incorporate treatment controls starting in Fall 2006.

(b) May require coverage under State's NPDES General Permit for Stormwater Discharges Associated with Industrial Activity.

(c) Only applies to stand-alone parking lots exposed to rainfall. Parking lots associated with buildings/facilities need to meet requirements of associated land use (commercial, industrial, etc.)

(d) Public road capital projects and expansions that are not a part of new residential, commercial and industrial developments.

(e) Depends on type of land use (commercial, residential, etc.)

(f) Runoff reduction measures will be required starting in Fall 2006.

(g) If the project drains to a regional treatment facility (e.g., detention basin), additional treatment controls may not be required. Contact permitting agency for verification.

(h) Some treatment devices may not be allowed in the public right-of-way or in areas where the local agency would be required to conduct maintenance. Contact the local permitting agency for requirements and restrictions.

(i) Contact the local permitting agency for a list of accepted devices.