

# Stormwater C.3 Update

## Guidebook 6th Edition Now in Effect

### New in the 6th Edition

- Applications for development approvals must include an evaluation of the feasibility of stormwater infiltration, evapotranspiration, and harvesting/reuse (pages 40-42).
- In-vault filters or tree-well-type high-rate biofilters may be used *only* on qualifying "Special Projects." Additional reporting requirements apply (pages 58-60).
- The required soil mix for bioretention facilities now includes a specified gradation for the compost fraction as well as for the soil fraction (Appendix B).

The Contra Costa Clean Water Program (CCCWP) published the 6th Edition of the *Stormwater C.3 Guidebook* on February 15, 2012. The *Guidebook* is available online on the CCCWP's website.

The 6th Edition incorporates all changes to C.3 requirements mandated by the San Francisco Bay Regional Water Quality Control Board's (RWQCB's) Municipal Regional Permit (MRP) adopted in October 2009. After receiving a number of required reports, the RWQCB amended the MRP on November 28, 2011.

The MRP mandates Low Impact Development (LID) on nearly all development projects.

As of December 1, 2011, applicants proposing Regulated Projects must analyze the feasibility of infiltrating, evapotranspiring, or



At El Cerrito's refurbished Recycling Center, a new cistern collects runoff to be used for irrigation and toilet flushing. In the foreground, a bioretention facility is being constructed for compliance with Provision C.3 in the Municipal Regional Permit.

harvesting/reusing runoff. Where none of these are feasible, runoff from impervious areas may be routed to bioretention facilities.

In-vault filters or tree-well-type biofilters may be used only in specific, narrowly defined categories of "smart growth" projects. Applicants proposing these systems

must document the feasibility/infeasibility of the other, preferred, runoff reduction and treatment methods.

Soil mix specifications for bioretention facilities have also been updated. Gradation requirements apply to the compost fraction, as well as the sand fraction, of the specified mix.

## Template for Stormwater Control Plans

Contra Costa municipalities have adopted ordinances requiring applications for development approvals to be accompanied by a Stormwater Control Plan that meets the criteria in the most recent edition of the *Stormwater C.3 Guidebook*.

Chapter 3 of the *Guidebook* includes step-by-step instructions and a checklist for preparing a Stormwater Control Plan.

A Stormwater Control Plan template, available on the CCCWP website in MS

Word, includes headings, table formats, and prompts for filling in the information required in a Stormwater Control Plan. The template, now updated for the 6th Edition, should be used in concert with the *Guidebook* instructions.



# Integrated Design for Stormwater Quality

Contra Costa municipalities operate their storm drainage systems in compliance with National Pollutant Discharge Elimination System (NPDES) permits issued by the San Francisco Bay RWQCB and Central Valley RWQCB. Provision C.3 was added to the permits in 2003. Municipalities must require new developments to incorporate permanent pollution-prevention measures.

The goal of Low Impact Development (LID) is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. The NPDES permits now mandate the use of LID for projects regulated under Provision C.3.

The LID Design Guide—Chapter 4 in CCCWP's *Stormwater C.3 Guidebook*—provides step-by-step instructions for designing development and redevelopment projects that comply with the requirements.

Conceptual LID design involves application of five techniques:

1. Optimize the site layout by preserving natural drainage features and minimizing roofs and paving.
2. Use pervious surfaces and green roofs.
3. Disperse runoff from impervious surfaces onto adjacent landscaping.
4. Store runoff and use it later for toilet flushing, irrigation or other uses.
5. Use bioretention to infiltrate and evapotranspire a portion of runoff and to treat the remainder.

A map showing drainage management areas and LID facilities must be included in the Stormwater Control Plan for the project. An Integrated Management Practice Sizing Calculator, available at [www.cccleanwater.org](http://www.cccleanwater.org), also facilitates calculations.



This bioretention facility provides stormwater treatment and flow duration control for a big-box retail store in Antioch.

## Provision C.3 Thresholds and Requirements

Impervious Area Threshold	Effective Date	Requirement
All projects requiring municipal approvals or permits (includes single-family residences)	May 1, 2010	As encouraged or directed by local staff, preserve or restore open space, riparian areas, and wetlands as project amenities, minimize land disturbance and impervious surfaces (especially parking lots) cluster structures and pavements, include micro-detention in landscaped and other areas, and direct runoff to vegetated areas. Use Bay-friendly landscaping features and techniques. Include Source Controls specified in Appendix D.
Projects between 2,500 and 10,000 square feet requiring approvals or permits (includes single-family residences)	December 1, 2012	Install one or more of the following: Direct roof runoff into cisterns or rain barrels for reuse; direct roof runoff onto vegetated areas; direct runoff from sidewalks, walkways, and/or patios on to vegetated areas; direct runoff from driveways and/or uncovered parking lots on to vegetated areas; construct sidewalks, walkways, and/or patios with permeable surfaces; construct bike lanes, driveways, and uncovered parking lots with permeable surfaces.
Auto service facilities, gas stations, restaurants, and uncovered parking lots over 5,000 square feet	December 1, 2011	Prepare and submit a Stormwater Control Plan as described in Chapter 3, including features and facilities to ensure runoff is treated before leaving the site. Evaluate feasibility of storage for later use. Use the LID Design Guide in Chapter 4, including sizing factors and criteria for "treatment only."
All projects between 10,000 square feet and one acre	August 15, 2006	
Projects an acre and larger	October 14, 2006	Select one of four flow-control compliance options in Appendix C. Where required, design project features and facilities for hydrograph modification management (flow-control) as well as stormwater treatment. Evaluate feasibility of storage for later use. Prepare and submit a Stormwater Control Plan as described in Chapter 3 and use the LID Design Guide in Chapter 4, including the sizing factors and criteria for "treatment and flow control."

This fact sheet is a summary only. See the Regional Water Board Orders and the Contra Costa Clean Water Program's *Stormwater C.3 Guidebook* for actual requirements.

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