



Changes to Stormwater Quality Control Requirements

Information for Developers, Builders and Project Applicants

Alameda Countywide Clean Water Program

February 2010

Why Are New Requirements Needed?

Stormwater runoff from urbanized areas remains the largest source of pollution to San Francisco Bay. Local agencies in urbanized portions of the Bay Area are responsible for controlling stormwater pollution by complying with the new Municipal Regional Stormwater Permit, issued by the State Regional Water Quality Control Board (Water Board) in October 2009.



Rainwater is captured and used to flush toilets in Oakland.

Overview of Stormwater Requirements

During development review, local agencies require projects to include stormwater controls, including site design measures, source controls, treatment measures, low impact development, hydro-modification management, and construction BMPs, as described below. Many of these requirements have existed for years and are unchanged. New requirements are described in the sidebar at right.

Site Design for Water Quality

Site design measures to reduce water quality impacts include:

- Reduce impervious surfaces.
- Direct runoff from impervious surfaces to vegetated areas.

Source Controls

Source controls prevent potential pollutant sources from contacting rainfall and stormwater. Examples include:

- Roofed trash enclosures.
- Pest-resistant landscaping.
- Sanitary sewer drains for vehicle wash areas (with sewer district approval).

Contact the city where your project is located for its Local Source Control Measures list (see Contact Info on page 2).

Stormwater Treatment

Stormwater treatment measures are engineered systems that remove pollutants before stormwater reaches the storm drain system, and ultimately San Francisco Bay. Examples of treatment measures include:

- Bioretention areas / rain gardens,
- Flow-through planters,
- Vegetated swales.

Since 2006, projects that create and/or replace 10,000 square feet or more of impervious surface have required hydraulically-sized, post-construction, stormwater treatment measures. Starting December 1, 2011, new stormwater treatment requirements, described in the sidebar, will go into effect.

Summary of New Requirements

The following requirements begin December 1, 2011:

- Stormwater treatment requirements will have to be met using evapotranspiration, infiltration, and/or rainwater harvesting and reuse. Where this is infeasible, landscape-based treatment measures with underdrains may be used. (More information under "Low Impact Development," below.)
- The threshold for requiring stormwater treatment will drop from 10,000 to 5,000 square feet, or more, of impervious surface for the following project categories: uncovered parking areas (stand-alone or part of another use), restaurants, auto service facilities¹, and retail gasoline outlets.

Low Impact Development

The goal of low impact development (LID) is to reduce stormwater runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring (evaporating stormwater into the air directly or through plant transpiration), and/or biotreating stormwater runoff close to its source, or onsite.

LID reduces water quality impacts by preserving and re-creating natural landscape features, minimizing imperviousness, and using stormwater as a resource, rather than a waste product.

This may be accomplished by installing rain barrels or cisterns, green roofs, permeable pavement, or stormwater treatment measures designed to infiltrate or detain stormwater runoff, so that 100 percent of the amount of rainwater runoff specified in Provision C.3.d of the Municipal Regional Stormwater Permit soaks into the ground, is stored for reuse, evaporates, or is taken up by plants. If this is infeasible, landscape-based treatment (“biotreatment,” such as bioretention areas, vegetated swales, and planter boxes with underdrain systems that flow to the storm drain system) is allowed.

Criteria and procedures to determine feasibility are scheduled to be available in May 2011. The use of vault-based systems will be restricted, and regional criteria will be developed that may allow vault-based systems in limited types of projects.



A bioretention area in Fremont detains and infiltrates stormwater runoff.

Hydromodification Management (HM)

When land is covered with buildings and pavement, runoff enters creeks at higher rates and volumes, resulting in channel erosion, flooding and habitat loss. These changes to waterways are known as hydromodification. Hydromodification management (HM) measures are detention and/or infiltration facilities that are constructed with special discharge structures to match pre-project runoff patterns. HM requirements are different from flood control requirements.

If a project creates and/or replaces one acre or more of impervious surface, AND is located in a susceptible area, HM requirements apply. You can view a map of susceptible areas and flyer on HM requirements in the HM section of ACCWP’s New Development webpage (see Contact Information).

Maintaining Treatment and HM Measures

Stormwater treatment measures and HM measures need ongoing maintenance to keep working properly. Applicants must prepare a maintenance plan and sign, with the applicable local agency, a maintenance agreement that runs with the land.

Construction Site Controls

Project sites are required to use construction BMPs, such as:

- Prepare and use sediment and erosion control plans.
- Minimize exposed soil by stabilizing slopes.

Projects disturbing one acre or more must comply with the

Statewide Construction NPDES General Permit. For more information, visit www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml.

What is Required for My Project?

Check with the city where your project is located for specific application requirements, including whether the new requirements will apply.¹



Flow-through planters collect and filter roof runoff in Emeryville.

Contact Information

- ACCWP: 510/670-5543, www.cleanwaterprogram.com (for New Development webpage, click on “For Businesses,” then “New Development and Redevelopment projects.”)
- Water Board staff: 510/622-2300 (request Alameda County stormwater program manager)
- For contact info for new development representatives at local agencies, go to ACCWP’s New Development webpage (see link above).

¹ See the flyer, “Additional Low Impact Development Requirements Phasing In,” for more information on the new requirements (including Standard Industrial Classification Codes for auto service facilities) at ACCWP’s New Development webpage (see Contact Information).