



Stormwater Quality Control Requirements

Information for Developers, Builders and Project Applicants

Alameda Countywide Clean Water Program

Updated September 2007

Why Control Stormwater Quality?

Stormwater runoff from urbanized areas is the largest source of pollution to the nation's waters. Local agencies in urbanized portions of the San Francisco Bay Area are responsible for controlling stormwater pollution by complying with municipal stormwater National Pollutant Discharge Elimination System (NPDES) permits, issued by the Regional Water Quality Control Board (Water Board).

Importance of Development Projects

The development or redevelopment of property represents an opportunity to incorporate controls that can reduce water quality impacts, not only during construction, but also over the life of the project. The countywide NPDES permit includes substantial requirements for new development and redevelopment projects, similar to other Bay Area municipal stormwater NPDES permits.



Rooftop runoff drains to bubbler in landscaped area, Fremont

Summary of Requirements

During the development review process, local agencies apply stormwater requirements to projects, as described below:

⇒ **Apply to all projects, as appropriate:**

- Site design measures to maximize pervious areas.
- Source control measures to help keep pollutants out of stormwater.
- Construction best management practices (BMPs).
- Post-construction treatment measures, to the maximum extent practicable.

⇒ **Applicable based on project size/location:**

- Projects that create and/or replace 10,000 sq. ft. or more of impervious surface require post-construction treatment measures.
- Projects with treatment measures require maintenance agreements.
- Starting June 12, 2007, hydromodification management is required in many areas for projects that create and/or replace 1 acre or more of impervious area (more info on back of page).

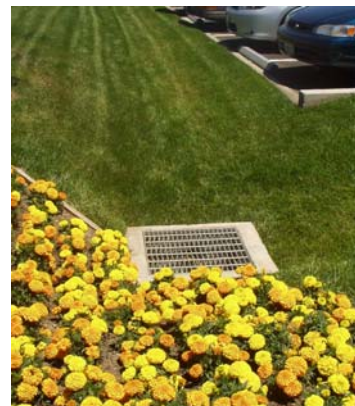


For specific application requirements, contact the city (see back of page) where your project is located.

Site Design for Water Quality

Site design measures to reduce water quality impacts include

- Reduce impervious surfaces.
- Drain rooftop downspouts to splash blocks or "bubblers."
- Use landscaping for storm drainage and treatment.



Parking lot drains to vegetated swale, Union City

Source Controls

Source controls are practices that 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).

ACCWP's Source Control Model List can be found at www.cleanwaterprogram.org/businesses_developers.htm (scroll to Source Controls).

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.
- Maintain filter materials at storm drain inlets.

Projects disturbing one acre or more must comply with the Statewide Construction NPDES General Permit, and submit a Notice of Intent to the State Water Resources Control Board.

Stormwater Treatment Measures

Stormwater treatment measures are engineered systems that remove pollutants before stormwater reaches the storm drain system, and ultimately San Francisco Bay. The county-wide NPDES permit specifies hydraulic sizing criteria for treatment measures. Examples of treatment measures include:

- Bioretention areas,
- Flow-through planters,
- Vegetated swales,
- Detention basins.



UngROUTED modular pavers promote infiltration, Berkeley

Is Stormwater Treatment Required for My Project?

All projects require post-construction stormwater treatment measures to the maximum extent practicable. Treatment measures must be included in projects that create and/or replace **10,000 square feet or more of impervious surface**, including roof area, streets, sidewalks, parking lots, etc. Note: single-family homes that are not part of a larger development plan may use landscaping to treat stormwater runoff.

Hydromodification Management (HM)

When open land is covered with buildings and pavement, runoff flows into creeks at higher rates and volumes,

resulting in creek channel erosion, flooding and habitat loss. Past engineering approaches to controlling channels have been found to be ineffective or destructive to creek ecosystems. Many projects now require hydromodification management (HM) measures – detention and/or infiltration combined with special discharge structures – to match pre-project runoff patterns from the site.

Does My Project Need HM Measures?

If your project's permit application is deemed complete on or after June 12, 2007, it may require HM measures. HM requirements apply if the project creates and/or replaces 1 acre or more of impervious surface, AND it is located in a susceptible area. See http://cleanwaterprogram.org/busineses_developers.htm for a map of susceptible areas and a flyer on HM requirements.



Maintaining Treatment and HM Measures

Post-construction treatment measures and HM measures need ongoing maintenance to keep working properly. Applicants must prepare a maintenance plan and sign a maintenance agreement with the applicable local agency.

Contact Information:

- ACCWP: 510/670-5543, www.cleanwaterprogram.com
- Water Board staff : 510.622.2300 (request Alameda County stormwater program manager)
- Contact info for local stormwater programs: www.cleanwaterprogram.org/businesses_developers.htm



Runoff is treated in detention basin, Pleasanton.

Resources on the Web

The following resources provide useful information for incorporating stormwater controls in projects.

⇒ **C.3 Stormwater Technical Guidance**, ACCWP, 2006. Guidance for implementing the stormwater controls described above. www.cleanwaterprogram.org/businesses_developers.htm

⇒ **Guidebook of Post-Construction BMPs**, ACCWP, 2005. Post-construction BMPs used in local projects. www.cleanwaterprogram.org/businesses_developers.htm (Scroll to Site Design Measures.)

⇒ **Start at the Source**, Bay Area Stormwater Management Agencies Association (BASMAA), 1999. Overview of site design measures. http://cleanwaterprogram.org/publications_libraryResources.htm (Scroll to Development & Redevelopment.)

⇒ **List of Qualified Consultants**, BASMAA, 2005. Consultants qualified to design treatment measures. www.basmaa.org/documents (Click on technical reports/data/documents)

⇒ **Stormwater BMP Handbook – New Development**, California Stormwater Quality Association, 2003. www.cabmphandbooks.org/Development.asp