



Stormwater Quality Control Requirements

Information for Developers, Builders and Project Proponents

Why Control Stormwater Quality?

Stormwater runoff from urbanized areas is the largest source of pollution to the nation's waters. Municipalities 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 landscaped area, Belmont

Summary of Requirements

During the development review process, municipalities 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.
- Reporting on the amount of impervious surface created/replaced.

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

- Larger projects require post-construction treatment measures.
- Projects with treatment measures require maintenance agreements.
- In most hillside locations, larger projects will require hydromodification controls.

Contact the municipality (see back of page) where your project is located for specific application requirements.

Site Design for Water Quality

Some of the ways to reduce water quality impacts through site design include:

- Reduce impervious surfaces.
- Drain rooftop downspouts to pervious areas.
- Use landscaping as a storm drainage and treatment feature.



Parking lot drains to planter strip, Millbrae

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).

STOPPP's Source Control Model List can be found at <http://www.flowstobay.org/pdfs/bmp/Municipal/Source%20Control-final.pdf>.

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.

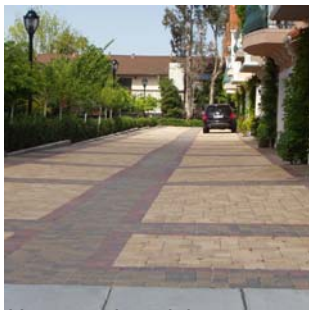
Projects disturbing one acre or more must comply with the Statewide Construction NPDES General Permit, and submit a Notice of Intent to the State Water Resources Control Board. For more information, see

<http://www.waterboards.ca.gov/stormwtr/construction.html>.

Stormwater Treatment Measures

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

- Bioretention units (also called “rain gardens”),
- Flow-through planter boxes,
- Pervious pavement with subsurface treatment,
- Vegetated swales,
- Detention basins.



UngROUTED modular pavers promote infiltration, Redwood City

Is Stormwater Treatment Required for My Project?

All projects require post-construction stormwater treatment measures to the maximum extent practicable. Treatment measures must be incorporated in projects that create and/or replace *one acre or more of impervious surface*, including the project’s roof area, streets, sidewalks, parking lots, etc. As of August 15, 2006, treatment measures

will be required for projects that create and/or replace *10,000 square feet or more of impervious surface*.

Maintaining Treatment Measures

Post-construction treatment measures need ongoing maintenance to keep working properly. During project review, applicants must prepare a maintenance plan and enter into a maintenance agreement with the applicable municipality to assure long-term maintenance of treatment measures.

What is Hydrograph Modification (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. In the past, erosion was addressed by constructing engineered channels, leading to excessive sedimentation and other problems.

Does My Project Need HM Controls?

STOPPP has prepared a Hydromodification Management Plan (HMP) identifying areas susceptible to HM, in which projects will be required to retain, detain or infiltrate runoff to match pre-project flows and durations. The HMP will be implemented after it is approved by the Water Board (likely this year).

Contacts for More Information:

- STOPPP: 650/363-4305, www.flowstobay.org

- Water Board staff: Keith Lichten, 510/622-2380
- Phone numbers for local stormwater programs are listed on the following link:

<http://www.flowstobay.org/contacts/illicitdischargecoord.html>

Resources on the Web

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

⇒ **C.3 Stormwater Handbook**, STOPPP, 2005.

Guidance on the new development provision of STOPPP’s NPDES permit. http://www.flowstobay.org/pdfs/bmp/Construction%20Series/stoppp_c3_handbook_final.pdf

⇒ **Guidebook of Post-Construction BMPs**,

STOPPP, 2005. Post-construction BMPs used in local projects.

<http://www.flowstobay.org/pdfs/bmp/Construction%20Series/SiteDesignGuidebook.pdf>

⇒ **Start at the Source**, Bay Area Stormwater Management Agencies Association (BASMAA), 1999. Overview of site design measures.

<http://www.flowstobay.org/pdfs/bmp/Construction%20Series/start%20at%20the%20source.pdf>

⇒ **List of Qualified Consultants**, BASMAA, 2005. Consultants with qualifications to design treatment measures.

<http://www.basmaa.org/resources/files/BASMAA%20Qualified%20Consultant%20List.pdf>

⇒ **Stormwater BMP Handbook – New Development**, California Stormwater Quality Association, 2003.

<http://www.cabmphandbooks.org/Development.asp>

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