

Municipal Storm Water Permit Revisions

Impacts to Cities and New Development Projects

The Municipal Storm Water NPDES Permit Program

Congress created the National Pollutant Discharge Elimination System (NPDES) Program in 1970 as part of the federal Clean Water Act, to help meet the Act's goal of making the nation's waters fishable, swimmable, and drinkable. In the 1970s, NPDES did substantially reduce pollution from "big pipe" dischargers, such as waste water treatment plants, refineries, and large manufacturing plants.

However, the nation's waters remained significantly impaired by non-point source pollutants, including urban storm water runoff, one of the most significant remaining single sources of pollutant loading to waters. As a result, in 1987, Congress expanded the NPDES permit program to include urban storm water runoff. In the Bay Area, each large municipality is covered by a municipal NPDES storm water permit that requires the municipality to act to reduce pollutants to the maximum extent practicable.

Examples of actions include stenciling storm drain inlets with "No Dumping – Drains to Bay" messages, street sweeping, and inspections of industrial facilities. Federal law also recognizes that new development and significant re-development projects are significant sources of pollutants. Existing municipal NPDES storm water permit performance standards for new and re-development projects are now being significantly revised.

Municipal Storm Water Program Components

The following comprise the components of the municipal storm water program.

- Public Information and Participation
- Industrial and Commercial Inspection.
- Illicit Discharge Inspection.
- Municipal Maintenance.
- Monitoring
- **New Development**

What is a BMP?

Unlike traditional NPDES permits, which have numeric limits on the amounts of pollutants that can be discharged (e.g., 5 parts per billion of lead), municipal NPDES storm water permits require the implementation of more qualitative Best Management Practices, or BMPs. New and re-development BMPs include source controls, design measures, and treatment controls to minimize the discharge of pollutants to storm drain systems and creeks, wetlands, and the Bay.

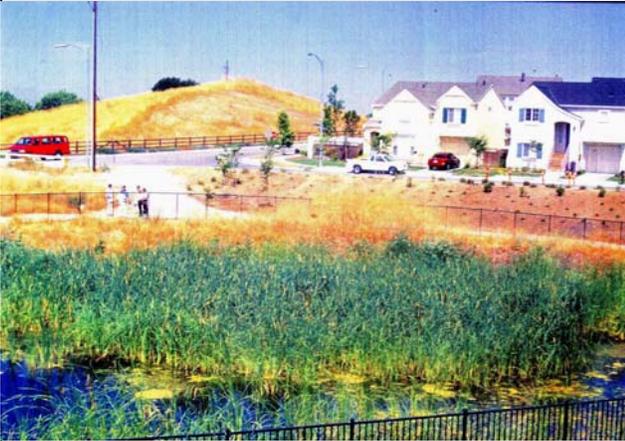


Treatment Control BMP: A vegetated swale treats runoff from a Palo Alto parking lot.



Design Measure BMP: A university parking lot in Chicago is paved with pervious pavement—to reduce runoff and filter pollutants.

What is a BMP? (continued)



Treatment Control BMP: A detention pond treats storm water at a San Jose subdivision.

The legal standard for BMP implementation is maximum extent practicable, or MEP. MEP is the successful implementation of technically and economically feasible BMPs to reduce pollutants to the maximum extent practicable. It is a standard that evolves as more information and experience are gained.

New and Redevelopment Permit Performance Standards

New and redevelopment performance standards require implementation of best management practices (BMPs)—including incorporation of treatment measures—in new and redevelopment projects during and after construction to minimize pollutant discharges for the life of the project. These standards are being significantly revised, with the result that municipalities and municipal staff must:

- Become more knowledgeable about the requirements;
- Revise local approval processes to incorporate controls into required projects;
- Track and regularly inspect projects that have incorporated controls, to ensure controls are maintained; and,
- Incorporate revised requirements into City General Plans, CEQA review, and development project approval processes.

Proposed permit revisions are summarized in subsequent sections. Potential effects on municipalities include:

- Potential additional up-front costs to developers and Cities to incorporate controls

into projects and later to ensure that treatment controls are maintained.

- Increases in staff time to review plans and inspect built treatment controls;
- Changes in street, site design, and drainage standards and guidance to reduce runoff impacts;
- Increases in stream restoration projects; and,
- Staff time to incorporate permit requirements into a City's General Plan, CEQA review process, and development project approval process.

Which Projects are Subject to the Revised Standards?

New development and significant redevelopment projects that create 1 acre or more of impervious surface are initially covered by the revised standards. After 3 years, this threshold falls to 5,000 square feet of impervious surface.

The permit also allows Cities to propose their own "small project" definition that could replace the 5,000 square foot standard, as long as the proposal is comparably effective to the 5,000 square foot standard with respect to development area and/or pollutant loading.

Covered new development projects include both private development projects and public projects such as streets, roads, and parking lots. Covered significant redevelopment projects include major reworking of existing sites, and can include downtown redevelopment projects, but do not include regular maintenance (e.g., roof replacement, routine repaving, etc.) and interior remodels.

What is Required of these Projects?

Projects must incorporate source controls, design measures, and treatment controls to minimize storm water pollutant discharges. Treatment controls must be sized to treat a specified amount—about 85%—of average annual runoff. In the Bay Area, this is typically less than the 1-inch storm.

Are there Exceptions?

Where incorporating controls into a project is clearly impracticable—for example, at highly

Exceptions, cont.

constrained downtown redevelopment sites—sites are allowed to satisfy their obligation elsewhere by implementing measures to provide an 'equivalent water quality benefit.' The permit allows Cities to develop their own program to do this, subject to approval of the Regional Board.

Alternately, projects may participate in regional solutions—such as storm water wetlands that treat runoff from a broad area—rather than providing on-site treatment controls.

Source Controls are Required

The revised permit requires source controls to prevent the discharge of pollutants from new projects. Source controls have already been widely implemented across the Bay Area. Examples include:

- Indoor mat/equipment wash racks;
- Sanitary sewer drains for swimming pool drains and covered areas of parking structures; and,
- Covered trash enclosures, fueling bays, and loading docks.

Site Design Measures are Required

Under the permit, Cities review and, as appropriate, revise local design standards to reduce potential impacts. This could include revising standards to reduce impervious surfaces, allow for certain types of treatment controls that may be presently prohibited, and reduce impacts to streams and wetlands. Examples of site design measures include:

- Roof downspouts leading to splash blocks or 'bubble-ups.'
- Minimum-impact street design standards; and,
- Minimum-impact parking lot standards, including use of landscaping as a storm water drainage feature.

Operation and Maintenance

Treatment controls often do not work unless periodically inspected and maintained. An O&M verification program is required by the permit, and includes:

- Listing properties with treatment controls;
- Developing agreements with private entities to maintain controls (e.g., incorporation into CC&Rs or another legally enforceable mechanism); and,
- Periodic inspection of a subset of treatment measures, with appropriate follow-up.

Creek Erosion

Urbanization creates impervious surfaces that reduce the landscape's natural ability to function as a sponge. Instead of soaking in, storm water runs off. These impervious surfaces increase peak flows and runoff volumes in creeks, and can cause creek erosion, threatening structures, increasing flooding and desilting costs for flood control, and impacting wildlife habitat. The permit requires that Cities, through their Stormwater Programs, develop a plan to minimize these impacts, for example by:

- Designing projects to minimize changes to runoff peak flows and volumes;
- Doing downstream creek restoration in advance of construction of impacting projects, so that creeks can accommodate increased flows; and/or,
- Detaining flows on-site.

General Plans and CEQA

General Plans must be updated as a part of their regularly scheduled review and update process to appropriately incorporate water quality and watershed protection principles, and to require implementation of measures in the storm water permit. Similarly, Cities' CEQA and other environmental review processes must be appropriately updated to address impacts as identified in the Permit.

Reporting

As is presently the case, Cities must annually report their compliance with performance standards in the Permit to the Regional Board.

For More Information

Contact your local Stormwater Program, or San Francisco Bay Regional Water Quality Control Board staff at (510) 622-2300. This document was prepared by S.F. Bay RWQCB staff.