



Post Construction Stormwater Runoff Management



City of San Jose

Department of Planning, Building, and Code Enforcement

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Example of a pervious surface

The City of San Jose is responsible for ensuring compliance with Federal and State laws that regulate how stormwater runoff is managed prior to its entry to the storm drain system, streams, rivers or the San Francisco Bay. Two City Council Policies reflect these laws:

City Council Policy 6-29, Post Construction Urban Runoff Management.

Policy 6-29 requires all projects to include Best Management Practices that prevent rainwater pollution, treat polluted runoff and eliminate or control runoff from the project site.

If a project is identified as a Land Use of Concern or if a project creates, replaces, or modifies 10,000 square feet (or more) of impervious surface, then Source Control Measures and hydraulically sized Treatment Control Measures that meet the standards listed in Policy 6-29 are required.

City Council Policy 8-14, Post Construction Hydromodification Management Policy and Map.

Policy 8-14 encourages all projects to be designed to include treatment control measures that hold and slow down the volume of runoff coming from a site.

The policy includes a Hydromodification Management Plan map that shows areas in the City of San Jose where an increase in the amount of stormwater runoff coming from a site might negatively impact streams, rivers and the San Francisco Bay. If the project is located in one of these specified areas and is one acre (or more) in size, and will create, replace, or modify one acre (or more) of impervious surface, then it must include design measures to store or slow down the flow rates of runoff coming from the site to pre-project conditions. Both Policies are available online at: <http://www.sanjoseca.gov/planning/stormwater/>.

What do I have to do?

All projects must be designed to include Post Construction Best Management Practices to clean stormwater runoff. Projects that meet the thresholds described in Policy 6-29 and Policy 8-14 must submit a Stormwater Control Plan at the time an application is submitted.

What is a Stormwater Control Plan?

A Stormwater Control Plan demonstrates how the project will comply with Policy 6-29 and Policy 8-14 by showing what permanent Source Control Measures and Treatment Control Measures will be used to treat runoff before it enters the stormdrain.

How do I prepare a Stormwater Control Plan?

A project's civil engineer typically designs the Stormwater Control Plan. However, development of the Stormwater Control Plan should be closely coordinated with the site design (architect), grading and drainage plan (civil engineer) and landscape plan (landscape architect). A list of qualified consultants who can prepare a Stormwater Control Plan is available online at: <http://www.sanjoseca.gov/planning/stormwater/>.



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What is Stormwater Runoff?

Stormwater runoff is rainwater that flows across surfaces without being absorbed into soil. As this water flows over hardscape areas, such as rooftops, parking lots and streets, it becomes polluted. Stormwater pollution includes both visible (cigarette butts, litter, plastic bags and bottles) and invisible (pesticides, arsenic, lead, mercury and disinfectants) contaminants.



Additionally, hardscape (impervious) areas prevent water from being absorbed into the ground and causes stormwater to flow more quickly and in larger quantities into the stormdrain system. As stormwater combines with runoff already in the system and it gathers additional volume, speed and force. As a result, when the runoff is eventually released into a creek, river or bay it causes erosion, flooding and damage to wildlife habitat.

What are Post Construction Best Management Practices, Source Control Measures and Treatment Control Measures?

Best Management Practices are methods, activities or structures used to reduce the pollutant content of stormwater runoff. These are permanent control measures that remain in place after construction. Source Control Measures and Treatment Control Measures are types of Best Management Practices.

Source Control Measures are actions, structures or habits that *prevent* stormwater from becoming polluted. Examples include regular sweeping of parking lots, proper disposal of hazardous materials, diverting roof downspouts to drain to landscaped areas, and enclosing trash & recycling areas.

Treatment Control Measures are systems and/or structures used to *remove* pollutants from stormwater. Examples include vegetated swales and media filtration systems.

What Treatment Control Measures should I use?

The selection of Treatment Control Measures should be based on the site's soil type, depth to groundwater, site constraints, on-site activities, potential pollutants and the cost, size, operation and maintenance requirements of the measure.

Treatment control measures that include landscape based infiltration features are preferred. Examples of landscape based treatment control measures include bioretention cells, bioswales and flow-through planter boxes.

Treatment control measures that include infiltration capabilities should not be used if groundwater exists within ten feet of the surface of the soil unless measures are taken to prevent runoff from getting in contact with groundwater. If groundwater cannot be protected, a mechanical treatment device should be installed. Media Filtration Systems are preferred. Media Filtration Systems are mechanical devices that separate trash from runoff and clean runoff before it enters the stormdrain system. These systems can be more expensive to install and to maintain than landscape based treatment and are generally used when it's not feasible to install landscape based measures.

Design solutions for landscape based Treatment Control Measures are available online at: www.cabmphandbooks.com and at: www.eoainc.com/c3_handbook_final_may2004/.

Where can I get more information about swales, bioretention cells and other Treatment Control Measures?

These examples of landscape based treatment control measures can be viewed online at: www.cabmphandbooks.com.

What is a Land Use of Concern?

Land Uses of Concern are projects that can generate heavy pollutants. Examples include gas stations, vehicle and equipment repair shops, auto wrecking yards, loading docks, and industrial operations.



What is impervious surface?



Impervious surfaces are areas that prevent or severely restrict the infiltration of water into soil. Examples include streets, sidewalks, roofs and compacted soil.



What are pervious surfaces?

Pervious surfaces allow water to pass through or permeate its surface. Examples include landscape areas, pervious paving materials (such as porous concrete or asphalt and interlocking pavers).

What does hydraulically sized mean?

Hydraulically sized means the Treatment Control Measures have been designed to hold and/or treat a specific amount of water based on a set of volume of water or the flow capacity of the treatment measure.

What does numeric criteria mean?

Numeric criteria are calculations that determine the Treatment Control Measures have been designed in accordance with annual rainfall data to hold a specific volume of water and/or that demonstrate the Treatment Control Measure will treat specific flow rates of runoff. Refer to City Council Policy 6-29 for the numeric sizing criteria.

Where can I get assistance?

A list of Qualified Consultants who can assist you in preparing a Stormwater Control Plan is available online at: www.sanjoseca.gov/planning/stormwater/. Design solutions for landscape-based stormwater Treatment Control Measures are also available online at: www.cabmphandbooks.com.

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