

**CITY OF MOUNTAIN VIEW
STORMWATER QUALITY GUIDELINES FOR
DEVELOPMENT PROJECTS**

I. Introduction

Beginning December 1, 2011, Mountain View and 14 other public agencies in Santa Clara County are required by the State of California's San Francisco Regional Water Quality Control Board (Regional Board) to place additional conditions of approval related to stormwater quality control on certain development projects. Affected projects include:

1. All projects that create and/or replace **10,000 square feet** or more of impervious surface, including roof areas and pavement.
2. All restaurants, auto service facilities, retail gas outlets and uncovered parking lot projects (stand-alone or part of another development project, including the top uncovered portion of parking structures) that create and/or replace **5,000 square feet** or more of impervious surface.

The stormwater treatment requirements are established by Regional Board Order R2 2009-0074, NPDES Permit No. CAS612008, adopted October 14, 2009.

The purpose of this document is to assist development applicants in complying with these stormwater quality requirements. These guidelines include information on:

- A. Which projects need a Stormwater Management Plan;
- B. Design and selection of Best Management Practices (BMP);
- C. Stormwater Management Plan requirements;
- D. BMP operation and maintenance responsibilities; and
- E. BMP inspection and reporting.

A list of definitions is provided at the end of this document.

II. Projects Requiring Stormwater Pollution Prevention Measures

- A. New commercial, industrial or residential development projects creating **10,000 square feet or more** of impervious surface, including roof area,

driveways, parking lots, streets and sidewalks, shall include permanent BMPs sufficient to reduce the water quality impacts of stormwater runoff from the entire project site for the life of the project unless exempt according to Section IV of these Guidelines.

- B. A development project on a previously developed site resulting in the addition of or the replacement of or the combined total of addition and replacement of **10,000 square feet or more** of impervious surfaces, including roof area and pavement, is classified as a Significant Redevelopment Project and shall include permanent BMPs sufficient to reduce water quality impacts of stormwater runoff from the project site unless exempt according to Section IV of these Guidelines. To determine what portions of the site are subject to BMPs, consider the following:
1. If the new or replaced or the combined total of new and replaced impervious surface is **less than or equal to** 50 percent of the existing impervious surfaces, the project shall include permanent BMPs sufficient to reduce water quality impacts of stormwater runoff from only the new and replaced impervious surfaces for the life of the project.
 2. If the new or replaced or the combined total of new and replaced impervious surface is **greater than** 50 percent of the existing impervious surfaces, and the existing development was not subject to stormwater treatment measures, then the project shall include permanent BMPs sufficient to reduce water quality impacts of stormwater runoff from the entire project site for the life of the project. If the existing development was subject to stormwater treatment measures, then the project shall include permanent BMPs sufficient to reduce water quality impacts of stormwater runoff for only the combined total of new and replaced impervious surface for the life of the project.
- C. New restaurants, auto service facilities, retail gas outlets and uncovered parking lot projects (stand-alone or part of another development project, including the top uncovered portion of parking structures) that create and/or replace 5,000 square feet or more of impervious surface, including roof area, driveways, parking lots, streets and sidewalks, shall include permanent BMPs sufficient to reduce the water quality impacts of stormwater runoff from the entire project site for the life of the project unless exempt according to Section IV of these Guidelines.
- D. Restaurants, auto service facilities, retail gas outlets and uncovered parking lot projects (stand-alone or part of another development project, including the top uncovered portion of parking structures) on a previously developed site resulting in the addition of or the replacement of or the combined total of

addition and replacement of 5,000 square feet or more of impervious surfaces, including roof area and pavement, is classified as a Significant Redevelopment Project and shall include permanent BMPs sufficient to reduce water quality impacts of stormwater runoff from the project site unless exempt according to Section IV of these Guidelines. To determine what portions of the site are subject to BMPs, consider the following:

1. If the new or replaced or the combined total of new and replaced impervious surface is less than or equal to 50 percent of the existing impervious surfaces, the project shall include permanent BMPs sufficient to reduce water quality impacts of stormwater runoff from only the new and replaced impervious surfaces for the life of the project.
 2. If the new or replaced or the combined total of new and replaced impervious surface is greater than 50 percent of the existing impervious surfaces, and the existing development was not subject to stormwater treatment measures, then the project shall include permanent BMPs sufficient to reduce water quality impacts of stormwater runoff from the entire project site for the life of the project. If the existing development was subject to stormwater treatment measures, then the project shall include permanent BMPs sufficient to reduce water quality impacts of stormwater runoff for only the combined total of new and replaced impervious surface for the life of the project.
- E. If a development or redevelopment project is exempt according to Section IV of these Guidelines at a minimum, the project shall include standard source control BMPs.
- F. Stormwater Management Plans submitted to the City must include a stamped and signed certification by a qualified engineer, stating that the Stormwater Management Plan complies with the City's guidelines and the NPDES permit issued by the Regional Water Quality Control Board. Stormwater Management Plans with a stamped and signed certification by a qualified civil engineer will be accepted as complete and in full compliance with these requirements.

III. Design and Selection of Best Management Practices

- A. Stormwater quality Best Management Practices shall be selected and designed to the satisfaction of the Fire Chief in accordance with the requirements contained in the most recent versions of the following documents:
1. Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP)—C.3 Handbook;
 2. NPDES Municipal Stormwater Discharge Permit issued to the City of Mountain View by the California Regional Water Quality Control Board, San Francisco Bay Region;
 3. California BMP Handbooks;
 4. "Start at the Source" Design Guidance Manual; and
 5. Bay Area Stormwater Management Agencies Association "Using Site Design Standards to Meet Development Standards for Stormwater Quality—A Companion Document to Start at the Source."
- B. Regulated projects are required to treat 100 percent of the amount of runoff from the regulated project's drainage using Low-Impact Development (LID) treatment measures, which include rainwater harvesting/reuse, infiltration or biotreatment.
1. A properly engineered and maintained biotreatment system may be considered only if it is infeasible to implement harvesting/reuse and infiltration at the site. Feasibility worksheets shall be submitted to show if infiltration and harvesting/reuse systems are appropriate for the site (see Section V of these Guidelines).
 2. LID treatment reduction credits may be applicable to "special projects" that qualify due to smart growth and transit-oriented development (TOD) characteristics. Qualifying special projects would be allowed to treat a portion of the site using non-LID treatment controls. The percentage of treatment reduction credit is dependent upon various criteria. A special projects worksheet shall be submitted to show qualifications for the LID treatment reduction credits and to determine the allowable credit that will apply to the project.

- C. Numeric sizing criteria used to design stormwater pollutant removal treatment systems shall be in accordance with the City's current Municipal Regional Stormwater NPDES Permit.
1. Treatment systems depending on volume capacity shall be designed to treat stormwater runoff equal to:
 - a. The maximized stormwater quality capture volume for the area, based on historical rainfall records, determined using the formula and volume capture coefficients set forth in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998), Pages 175-178 (e.g., approximately the 85th percentile 24-hour storm runoff event); or
 - b. The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology set forth in Appendix D of the California Stormwater Best Management Practices Handbook for New Development and Redevelopment (2003), using local rainfall data.
 2. Treatment BMPs whose primary mode of action depends on flow capacity shall be sized to treat:
 - a. 10 percent of the 50-year peak flow rate; or
 - b. The flow of runoff produced by rain equal to at least two times the 85th percentile hourly rainfall intensity for the applicable area, based on historical records of hourly rainfall; or
 - c. The flow of runoff resulting from rain equal to at least 0.2" per hour intensity.
 3. Treatment BMPs that use a combination of flow and volume capacity shall be sized to track at least 80 percent of the total runoff over the life of the project, using local rainfall data.

IV. Stormwater Management Plan Required

- A. Development Permit Application Requirements
1. All projects defined in Section II.
 2. Land development activities that are smaller than the minimum applicability criteria set forth in Items 1 and 2 above, if such activities are

part of a larger common plan of development, even though multiple, separate and distinct land development activities may take place at different times on different schedules.

B. Building Permit Requirements

No building, grading or erosion and sediment control permits shall be issued until the Stormwater Management Plan has been reviewed and approved by the Fire Chief.

C. Exemptions from Permanent Treatment BMP Requirements

The following are exempt from the City of Mountain View Stormwater Management Plan requirements. Exempt projects must incorporate applicable source control requirements:

1. New single-family or duplex homes not part of a PUD or other multi-dwelling unit project and which creates or replaces less than 10,000 square feet of impervious surface.
2. Projects creating or replacing less than 10,000 square feet of impervious surface.
3. Restaurants, auto service facilities, retail gas outlets and uncovered parking lot projects (stand-alone or part of another development project, including the top uncovered portion of parking structures) that create and/or replace less than 5,000 square feet or more of impervious surface.
4. Interior remodels.
5. Routine maintenance or repair, including roof or exterior surface replacement, pavement resurfacing, repaving and road pavement structural section rehabilitation within the existing footprint, and any other reconstruction work within a public street or road right-of-way where both sides of the right-of-way are developed.

D. Stormwater Management Plan Submittal

Three stamped and signed copies of the project's Stormwater Management Plan shall be submitted to the City. A qualified engineer's certification stating that the Stormwater Management Plan complies with the City's guidelines and the NPDES permit issued by the Regional Water Quality Control Board must be included in the Stormwater Management Plan.

V. Stormwater Management Plan Contents

The development permit applicant is responsible for submitting a Stormwater Management Plan that meets the design requirements of the City of Mountain View Stormwater Quality Control Guidance Manual. The plan shall include sufficient information to evaluate the environmental characteristics of affected areas, the potential impacts of the proposed development on water resources and the effectiveness and acceptability of measures proposed for managing stormwater runoff. The minimum information submitted for support of a Stormwater Management Plan shall be as follows:

1. Common address, parcel number and legal description of the site.
2. Contact information for all persons having a legal interest in the property.
3. Vicinity map.
4. A brief narrative description of the project.
5. A completed "C.3 Data Form" that provides total site area, disturbed area, as well as preproject and postproject impervious surface data.
6. A completed "Infiltration/Harvesting and Use Feasibility Screening Worksheet," as needed. If results from the screening worksheet determine that additional information is needed, submit completed "Infiltration Feasibility Worksheet" and/or "Stormwater Harvesting and Use Feasibility Worksheet."
7. For Smart Growth and/or TOD projects that will apply for LID treatment reduction credits, submit a completed Special Projects Worksheet.
8. Geotechnical investigations, including soil maps, saturated hydraulic conductivity (Ksat), borings, site-specific recommendations and any additional information necessary for the proposed stormwater management design.
9. Topographic survey information showing existing and proposed contours, including all areas necessary for the postdevelopment hydraulic analyses of proposed stormwater management facilities.
10. A list of all stormwater management facilities and practices to be employed at the site. Include a map showing the site divided into discrete drainage management areas (DMAs), and showing the stormwater management facilities/treatment controls for each DMA.

11. Numeric BMP sizing criteria computations according to the SCVURPPP "C.3 Stormwater Handbook—Guidance for Implementing Stormwater Regulations for New and Redevelopment Projects."
12. Structural and construction details for all components of the proposed drainage system or systems and stormwater management facilities, including facility dimensions, and inlet and outlet structures.
13. Landscaping plan showing disposition of existing vegetation and any vegetative site stabilization and/or landscape-based stormwater management measures and also showing building locations, parking areas and other general site plan elements.
14. A list of any regular on-site cleaning activities to be used as stormwater pollutant source controls (e.g., pavement sweeping) and the schedules for these cleaning activities.
15. Cost estimates for all proposed on-site stormwater treatment facilities.
16. BMP operation and maintenance procedures, including maintenance tasks, inspection and maintenance schedule, the parties responsible for BMP operation and maintenance, funding mechanisms for ongoing operation, and maintenance and access and safety issues.
17. Certification by the owner/developer that all stormwater management construction will be done according to this Stormwater Management Plan.
18. An as-built certification signature block to be executed by the responsible registered civil engineer after project completion.
19. If required by the City, certification by a qualified third-party engineer that the proposed stormwater treatment controls comply with the City's Guidelines and Provision C.3 of the MRP.
20. Any other information as may be required by the Fire Chief.
21. A statement of qualifications for the engineer certifying the Stormwater Management Plan as described in Section VI.B of these Guidelines.

VI. Preparation of the Stormwater Management Plan

- A. The Stormwater Management Plan shall be prepared under the direction of a professional civil engineer registered in the State of California. The responsible professional civil engineer shall stamp and sign the approved Stormwater Management Plan.
- B. The City may require a developer to provide a signed certification from the civil engineer responsible for preparing the Stormwater Management Plan that all stormwater Best Management Practices have been designed to meet the City's stormwater quality requirements. Each certifying civil engineer shall establish to the City's satisfaction that such person has been trained on the design of stormwater quality Best Management Practices not more than three (3) years prior to the certification signature date. Each certifying civil engineer shall also show an understanding of groundwater protection principles applicable to the project site. Groundwater protection principles are listed in Provisions C.3.c.i(2)(b) and C.3.d.iv of NPDES Permit CAS612008, Order No. R2-2009-0074. Qualifying training shall be conducted by an organization with stormwater quality management expertise, such as a university, the Bay Area Stormwater Management Agencies Association, the American Society of Civil Engineers, the American Public Works Association, the California Water Environment Association or a local stormwater agency such as the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP).
- C. The City may require a developer to provide certification from a qualified third-party engineer that the proposed stormwater treatment controls comply with the City's Guidelines and Provision C.3 of the MRP. A list of qualified engineers is available at: <http://www.scvurppp-w2k.com/consultants.htm>.

VII. Stormwater BMP Operation and Maintenance Responsibility

- A. For the life of the project, all on-site stormwater management facilities shall be operated and maintained in good condition and promptly repaired by the property owner(s), an owners or homeowners association or other legal entity approved by the City.
- B. Any repairs or restoration and maintenance shall be in accordance with City-approved plans.
- C. The property owner(s) shall develop a maintenance schedule for the life of any stormwater management facility and shall describe the maintenance to be completed, the time period for completion and who shall perform the

maintenance. This maintenance schedule shall be included with the approved Stormwater Management Plan.

VIII. Stormwater BMP Operation and Maintenance Agreement

- A. Prior to final sign-off of any building or occupancy permit requiring stormwater management BMPs, the owner(s) of the site shall enter into a formal written stormwater BMP operation and maintenance agreement with the City. The City shall record this agreement, against the property or properties involved, with the County of Santa Clara and it shall be binding on all subsequent owners of land served by the stormwater management treatment BMPs.
- B. The stormwater BMP operation and maintenance agreement shall require that the BMPs not be modified and that BMP maintenance activities not alter the designed function of the facility from its original design unless approved by the City prior to the commencement of the proposed modification or maintenance activity.
- C. The stormwater BMP operation and maintenance agreement shall provide that in the event that maintenance or repair is neglected or the stormwater management facility becomes a danger to public health or safety, the City shall have the authority to perform maintenance and/or repair work and to recover the costs from the owner.
- D. The City shall provide the owner with a copy of the stormwater BMP operation and maintenance agreement. The owner shall return two signed and notarized copies of the stormwater BMP operation and maintenance agreement to the City. The agreement will then be signed by the City and returned to the owner for recordation with the County of Santa Clara. The property owner shall then provide a copy of the recorded agreement to the City. The signing and recordation of said agreement must be completed prior to final building occupancy.

IX. Stormwater BMP Inspection Responsibility

- A. The property owner(s) shall be responsible for having all stormwater management facilities inspected for condition and function.

B. Unless otherwise required by the City, stormwater facility inspections shall be done at least twice per year, once in the fall, in preparation for the wet season, and once in the winter. Written records shall be kept of all inspections and shall include, at minimum, the following information:

1. Site address;
2. Date and time of inspection;
3. Name of the person conducting the inspection;
4. List of stormwater facilities inspected;
5. Condition of each stormwater facility inspected;
6. Description of any needed maintenance or repairs; and
7. As applicable, the need for site reinspection.

X. Records of Maintenance and Inspection Activities

On or before April 1 of each year, the party responsible for the operation and maintenance of on-site stormwater management facilities shall provide the City with records of all inspections, maintenance and repairs.

XI. Failure to Maintain

- A. If the responsible party fails or refuses to meet the requirements of the stormwater BMP operation and maintenance agreement, the City, after thirty (30) days written notice, may correct a violation of the design standards or maintenance requirements by performing the necessary work to place the facility or practice in proper working condition.
- B. In the event the City determines that the violation constitutes an immediate danger to public health or public safety, 24 hours written notice from the City shall be sufficient.
- C. The City may assess the owner(s) of the property for the cost of repair work and any penalties. This may be accomplished by placing a lien on the property, which may be placed on the tax bill for such property and collected in the ordinary manner for such taxes.

XII. Access for Inspection

The City shall have access to all on-site stormwater treatment facilities for the purpose of inspection and repair. This includes the right to enter a property when the City has a reasonable basis to believe that a violation of the City's Municipal Code is occurring or has occurred and to enter when necessary for abatement of a public nuisance or correction of a violation.

DEFINITIONS

1. **APPLICANT.** Any person, firm or governmental agency who executes the necessary forms to procure official approval of a project or a permit to carry out construction of a project.
2. **BEST MANAGEMENT PRACTICE (BMP).** A structural device or nonstructural practice designed to temporarily store and/or treat stormwater runoff in order to reduce pollution, mitigate flooding and provide other amenities.
3. **CITY.** All the territory lying within the municipal boundaries of the City of Mountain View.
4. **DEVELOPMENT.** A land development or land development project.
5. **DRAINAGE MANAGEMENT AREA.** Area within a site that drains to a stormwater management facility.
6. **EXISTING CONDITIONS.** Refers to the conditions that exist on a site before the commencement of a land development project and at the time the City of Mountain View approves plans for the land development of a site. Where phased development or plan approval occurs (preliminary grading, roads and utilities, etc.), the existing conditions are considered those at the time before the first item being approved or permitted.
7. **FIRE CHIEF.** The Fire Chief and his or her duly authorized agents and representatives.
8. **IMPERVIOUS SURFACE.** A surface composed of any material that significantly impedes or prevents the natural infiltration of water into soil. Impervious surfaces include, but are not limited to, rooftops, buildings, streets and roads, and any concrete or asphalt surface.
9. **LAND DEVELOPMENT ACTIVITIES.** Those actions or activities that comprise, facilitate or result in land development.
10. **LOW-IMPACT DEVELOPMENT (LID) TREATMENT MEASURE.** Stormwater management facility designed to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring and/or biotreating stormwater runoff close to its source. Practices used to adhere to LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement,

preserving undeveloped open space, and biotreatment through rain gardens, biotreatment units, bioswales and planter/tree boxes.

11. **NEW DEVELOPMENT.** A land development activity on a previously undeveloped site.
12. **NPDES MUNICIPAL STORMWATER DISCHARGE PERMIT.** A National Pollution Discharge Elimination System permit issued to the City of Mountain View by the Regional Water Quality Control Board, San Francisco Bay Region.
13. **NUMERIC BMP SIZING CRITERIA.** Requirements for designing stormwater BMPs that are included in the City's NPDES Municipal Stormwater Discharge Permit and more specifically described in the Santa Clara Valley Urban Runoff Pollution Prevention Program's "Guidance for Implementing Stormwater Regulations for New and Redevelopment Projects."
14. **ON-SITE STORMWATER TREATMENT FACILITY.** A stormwater treatment facility located within the boundaries of the site.
15. **OPERATION AND MAINTENANCE AGREEMENT.** A written agreement providing for the long-term operation and maintenance of stormwater management facilities and practices on a site or with respect to a land development project, which, when properly recorded in the deed records, constitutes a restriction on the title to a site or other land involved in a land development project.
16. **OWNER.** The legal or beneficial owner of a site, including, but not limited to, a mortgagee or vendee in possession, receiver, executor, trustee, lessee or other person, firm or corporation in control of the site.
17. **PERMIT.** The permit issued by the City of Mountain View to the applicant required for undertaking any land development activity.
18. **PERSON.** Any person, firm, association, organization, partnership, business trust, joint venture, corporation or company, and includes the United States, the State of California, the County of Santa Clara, special-purpose districts and any officer or agency thereof.
19. **POSTDEVELOPMENT.** Refers to the time period, or the conditions that may reasonably be expected or anticipated to exist, after completion of the land development activity on a site as the context may require.
20. **REDEVELOPMENT.** A land development project on a previously developed site, excluding ordinary maintenance activities, interior remodeling of existing

buildings, resurfacing of paved areas and exterior changes or improvements which do not materially increase or concentrate stormwater runoff or cause additional stormwater runoff pollution.

21. **RUNOFF.** Stormwater runoff.
22. **RUN-ON.** Stormwater flow entering a specific location from elsewhere on or off the site.
23. **SANTA CLARA VALLEY URBAN RUNOFF POLLUTION PREVENTION PROGRAM (SCVURPPP).** The Santa Clara Valley Urban Runoff Pollution Prevention Program is an association of 13 cities and towns in the Santa Clara Valley, together with Santa Clara County and the Santa Clara Valley Water District. Program participants, referred to as copermittees, share a common municipal NPDES permit to discharge stormwater to South San Francisco Bay.
24. **SITE.** Any tract, lot or parcel of land or combination of tracts, lots or parcels of land, which are in one ownership or are contiguous and in diverse ownership where a development is to be performed as part of a unit, subdivision or project.
25. **SATURATED HYDRAULIC CONDUCTIVITY (Ksat).** A measure of water movement through saturated soil that is measured in inches/hour.
26. **STANDARD BMP.** Required by Chapter 35 of the Mountain View City Code as amended from time to time and the BMP matrix for development projects.
27. **STORM DRAIN.** Any pipe, conduit or sewer of the City designed or used for the disposal of storm and surface waters and drainage, including unpolluted cooling water and unpolluted industrial process water but excluding any community sanitary sewer system.
28. **STORMWATER DISCHARGE.** Any discharge from land that results or probably will result in a discharge into watercourses. The discharges represent a process whereby pollutants, debris and chemicals generated from various land uses accumulate on streets, construction sites, parking lots and other exposed surfaces and are washed off and carried away by stormwater runoff into watercourses. The major pollutants of concern in these discharges are heavy metals, sediments, petroleum hydrocarbons, organochlorine, pesticides and toxics.
29. **STORMWATER MANAGEMENT.** The collection, conveyance, storage, treatment and disposal of stormwater runoff in a manner intended to prevent increased flood damage, stream bank channel erosion, habitat degradation and water quality degradation, and to enhance and promote the public health, safety and general welfare.

30. **STORMWATER MANAGEMENT FACILITY.** Any infrastructure that controls, treats or conveys stormwater runoff.
31. **STORMWATER MANAGEMENT PLAN.** A document describing how existing runoff characteristics will be affected by a land development project and containing measures for mitigating any adverse impacts to water quality.
32. **STORMWATER POLLUTANT SOURCE CONTROL BMPS.** Measures or practices used to control stormwater pollution by eliminating contact between rainfall and the potential source of contamination.
33. **STORMWATER POLLUTION PREVENTION PLAN.** A document identifying potential stormwater pollutant sources at a construction site, the stormwater source control BMPs to be used to reduce these pollutants during and after construction and a description of required BMP monitoring. Generally applies to construction projects disturbing one or more acres.
34. **STORMWATER RUNOFF.** Water from rain, landscape irrigation or other sources that flows over the land surface without entering the soil.
35. **WASTE.** Sewage and soil from erosion and any and all other waste substances, liquid, solid, gaseous or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing or processing operation of whatever nature, including waste placed within containers of whatever nature prior to and for purposes of disposal.
36. **WATER QUALITY IMPACT.** Any deleterious effect on waters or wetlands, including their quality, quantity, surface area, species composition, aesthetics or usefulness for human or natural uses that are or may potentially be harmful or injurious to human health, welfare, safety or property, to biological productivity, diversity, or stability or which unreasonably interfere with the enjoyment of life or property, including outdoor recreation.

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