

## Introduction / How to Use this Handbook

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### 1.1 Purpose of this Handbook

This countywide handbook is meant to help developers, builders, and project sponsors include post-construction stormwater controls in their projects, in order to meet local municipal requirements and requirements in the Municipal Regional Stormwater Permit (MRP). The municipalities have to require post-construct stormwater controls as part of their obligations under Provision C.3 of the MRP. This is a National Pollutant Discharge Elimination System (NPDES) permit issued by the San Francisco Bay Regional Water Quality Control Board (Water Board), allowing municipal stormwater systems to discharge to local creeks, San Francisco Bay, and other water bodies.

The Countywide Program has also prepared a Sustainable Green Streets and Parking Lots Design Guidebook to specifically assist municipalities and project applicants with **designing street and parking lot projects** that treat stormwater runoff in landscape-based treatment measures. The Guidebook includes over 400 photographs and drawings to illustrate potential design solutions to a wide range of project sites. You can download the Guidebook at [www.flowstobay.org](http://www.flowstobay.org) (click on Business, then New Development).

See the Countywide Program's **Sustainable Green Streets and Parking Lots Design Guidebook** for more design concepts on treating stormwater runoff from streets and parking lots.

#### Key Point



The term “post-construction stormwater control” refers to permanent features included in a project to reduce pollutants in stormwater and/or erosive flows during the life of the project – after construction is completed. The term “post-construction stormwater control” encompasses **Low-Impact Development** (LID), which reduces water quality impacts by preserving and re-creating natural landscape features, minimizing imperviousness, and using stormwater as a resource, rather than a waste product.

This handbook does not provide information on the construction best management practices (BMPs) that protect stormwater during construction activities.

Post-construction stormwater controls are required for both private and public projects. Although this handbook is written primarily for sponsors of private development projects, its technical guidance also applies to publicly-sponsored projects. Municipalities may also find the handbook useful for training municipal staff and consulting plan checkers.

## 1.2 What is the Countywide Program?

The San Mateo Countywide Water Pollution Prevention Program (SMCWPPP) is a program of the City/County Association of Governments, which is comprised of local elected city council representatives from each municipality, one member of the County Board of Supervisors, and representatives from the local transit district and transportation authority. Each of the Program's member agencies is responsible for preventing stormwater pollution and implementing its local stormwater pollution prevention and control activities. The Program has 21 member agencies: the 20 cities in the County and unincorporated San Mateo County.

The Program's member agencies are joint permit holders of the MRP, which is issued by the San Francisco Bay Regional Water Quality Control Board (Water Board). Each member agency is individually responsible for implementing the MRP requirements, but participating in the Program helps them collaborate on countywide initiatives that benefit all members. More information on the Program is available on its website, at [www.flowstobay.org](http://www.flowstobay.org).

## 1.3 How to Use this Handbook

When using this countywide guidance document, please keep in mind that ***some requirements may vary from one local jurisdiction to the next***. In the very early stages of project planning, contact the municipal planning staff to schedule a pre-application meeting to learn how the C.3 requirements – and other planning, zoning and building requirements – will apply to your project. Also, because regulatory requirements may change, be sure to ask the local municipal staff to provide any updates of information or requirements.

Some requirements in this countywide guidance document **may vary** from one local jurisdiction to the next.



It's important to note that post-construction stormwater design requirements are complex and technical: most projects will require the assistance of a qualified civil engineer, architect, landscape architect, and/or geotechnical engineer.

To help you get started, an overview of the handbook's chapters and appendices follows:

- Chapter 2 explains how development affects stormwater quality, how post-construction stormwater measures help reduce these impacts, and gives a detailed explanation of ***Provision C.3 requirements***.
- Chapter 3 gives an overview of how the post-construction stormwater requirements fit into a typical development review process, and offers ***step-by-step instructions*** on

how to incorporate stormwater control/LID designs into planning permit and building permit application submittals for your project.

- Chapter 4 presents information on **site design measures**, which can help reduce the size of treatment measures.
- Chapter 5 provides **general technical guidance for stormwater treatment measures**, including hydraulic sizing criteria, the applicability of non-landscape-based treatment measures, manufactured treatment measures, using “treatment trains,” infiltration guidelines, plant selection and maintenance, mosquito control, and integrating stormwater treatment with hydromodification management.
- Chapter 6 gives technical guidance for **specific types of stormwater treatment measures**, including bioretention areas, flow-through planters, tree well filters, infiltration trenches, extended detention basins, pervious paving, green roofs, rainwater harvesting, media filters and subsurface infiltration system.
- Chapter 7 explains the requirements for **hydromodification management measures**, which keep the flow rates and volumes of certain post-construction stormwater flows at pre-construction levels, in order to minimize development-induced erosion in creek channels.
- Chapter 8 explains the **operation and maintenance** requirements for stormwater treatment measures.
- Chapter 9 describes the alternative compliance provision of the MRP, which allows projects to contribute to off-site **alternative compliance** projects instead of constructing on-site stormwater treatment measures.
- Appendix A includes a **list of plants** appropriate for use in LID treatment measures. It also offers general guidance on plant selection and maintenance.
- Appendix B presents **example scenarios**, showing how site design, source controls and treatment measures can be incorporated into projects.
- Appendix C consists of the **Design Criteria Regions** for San Mateo County.
- Appendix D describes manufactured stormwater treatment measures that may have **limited applicability**, including inlet filters, oil/water separators, hydrodynamic separators, and media filters.
- Appendix E presents guidelines for using stormwater controls that promote on-site **infiltration** of stormwater.
- Appendix F provides guidance for **controlling mosquito production** in stormwater treatment measures.
- Appendix G includes templates for preparing stormwater treatment measure **maintenance plans**.
- Appendix H presents the **Hydromodification Management Susceptibility Map**.
- Appendix I includes information on determining the **Feasibility of Rainwater Harvesting and Use** and sizing curves for rainwater harvesting and use facilities.
- Appendix J provides guidance on using the **Special Projects Criteria** approved by the Regional Board to identify infill, high density and transit oriented projects that may receive LID treatment reduction credits.

- Appendix K includes regional **Soil Specifications** approved by the Regional Water Board for use in stormwater biotreatment measures.
- Appendix L features **BMP Specifications for Small Projects**,

## 1.4 Precedence

In case of conflicting information between this handbook and the Municipal Regional Stormwater Permit (MRP), the MRP shall prevail.

Any local policies, procedures and/or design standards that comply with the MRP also take precedence over the guidance in this manual.