

Chapter 1: Introduction

How to Use this Guide

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1.1 Purpose of this Guide

The **C.3 Regulated Projects Guide** is intended to be a “one-stop shop” for developers, builders, and project managers throughout San Mateo County covering a broad range of design, construction, and maintenance guidance for stormwater control measures in parcel-based regulated projects, in order to meet local municipal requirements and requirements in the Municipal Regional Stormwater Permit (MRP). Municipalities require stormwater control measures as part of their obligations under Provision C.3 of the MRP. The MRP 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 San Mateo Countywide Water Pollution Prevention Program (Countywide Program) has developed the GreenSuite of guidance materials consisting of this **C.3 Regulated Projects Guide (this Guide)** and the **Green Infrastructure Design Guide (GI Design Guide)**. This Guide is intended to provide technical information primarily for parcel-based projects (and other regulated projects) that are required to implement stormwater control measures to comply with the MRP. This Guide updates and replaces the Countywide Program’s C.3 Stormwater Technical Guidance (Version 5.0).

The GI Design Guide assists municipalities and project applicants with designing and integrating green infrastructure facilities into street, site, and parking lot projects that may or may not be required to implement stormwater control measures. The GI Design Guide integrates complete street and green street goals (sustainable streets), and aids jurisdictions in the gradual transition of their stormwater infrastructure from “gray” to “green” over time. Both the GI Design Guide and this Guide contain design guidance and typical details for GI and LID implementation in public and private projects. The GI Design Guide updates and replaces the 2009 Sustainable Green Streets and Parking Lots Design Guidebook. The GI Design Guide can be downloaded at www.flowstobay.org/gidesignguide.

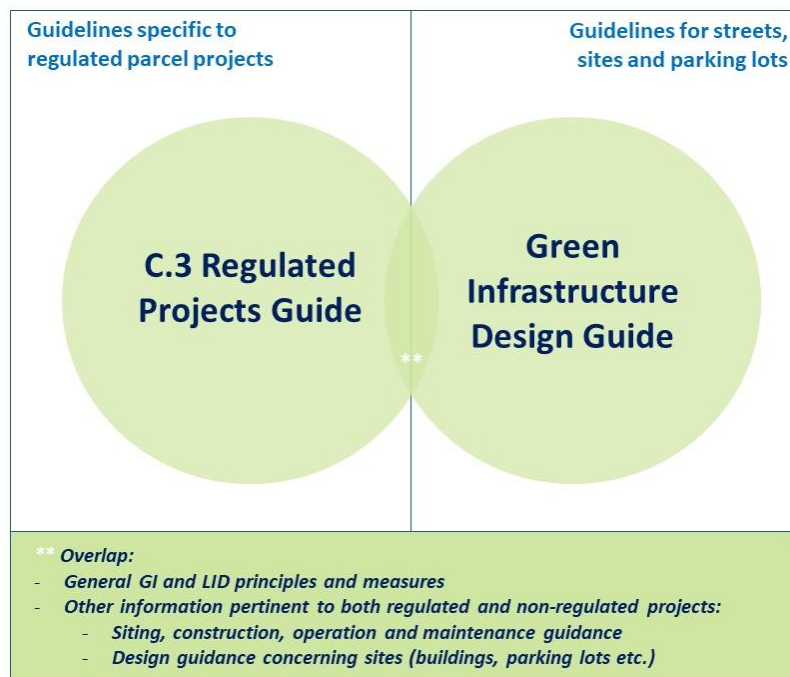


Figure 1-1: The Countywide Program GreenSuite documents – specific and overlapping areas

Key Point

The term “stormwater control measures” 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. Stormwater control measures (also known as post-construction stormwater measures) encompass Low Impact Development (LID) strategies, which reduce water quality impacts by preserving and re-creating natural landscape features, minimizing imperviousness, and using stormwater as a resource. See Chapter 2 for more details on terminology.

This Guide does not provide information on the construction best management practices (BMPs) that protect stormwater quality during construction activities. See the CASQA Construction BMP Handbook for information.¹

Stormwater control measures are required for both private and public parcel-based projects. Although this Guide is written primarily for private development project applicants, its technical guidance also applies to publicly-sponsored projects. Municipalities may also find this Guide useful for training municipal staff and contracted staff. This Guide is a “living document” and will be periodically updated to reflect new information, findings, and experience.

¹ <https://www.casqa.org/resources/bmp-handbooks>

1.2 What is the Countywide Program?

The City/County Association of Governments of San Mateo County (C/CAG), a joint powers agency whose members are the County of San Mateo and the 20 incorporated cities and towns, administers the San Mateo Countywide Water Pollution Prevention Program (Countywide Program) to assist San Mateo County Permittees with meeting requirements to reduce pollution in stormwater runoff. These requirements are contained in the San Francisco Bay Regional Water Quality Control Board's (Regional Board) Municipal Regional Permit (MRP) which covers 76 permittees in the Bay Area, including those in San Mateo County.

Each San Mateo County Permittee is individually responsible for implementing the MRP requirements, but participating in the Countywide Program helps Permittees collaborate on countywide initiatives that benefit all members. More information on the Countywide Program is available on its website, at www.flowstobay.org

1.3 How to Use this Guide

When using this Guide, 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.

Key Point

Some requirements described in this Guide **may vary** from one local jurisdiction to the next.

Remember

It is important to note that design requirements for stormwater control measures 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 Guide's chapters and appendices follows:

- **Chapter 2** explains how development affects stormwater quality and how stormwater control measures help reduce these impacts, and gives a detailed explanation of *Provision C.3 requirements*.
- **Chapter 3** gives an overview of how the stormwater control management 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 control 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 pavement, green roofs, rainwater harvesting, media filters and subsurface infiltration systems.
- **Chapter 7** explains the requirements for *hydromodification management measures* at certain sites, which keep the flow rates, volumes, and durations of 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 control 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 control and treatment measures can be incorporated into projects and how treatment measures are sized.
- **Appendix C** consists of the *Design Criteria Rainfall Regions and Mean Annual Precipitation* for San Mateo County.
- **Appendix D** describes manufactured stormwater treatment measures that have *limited applicability* on current projects, including inlet filters, oil/water separators, hydrodynamic separators, and media filters.
- **Appendix E** presents guidelines for using stormwater control measures that promote on-site *infiltration* of stormwater.
- **Appendix F** provides guidance for *controlling mosquito production* in stormwater control measures.
- **Appendix G** includes templates for preparing stormwater control measure *maintenance plans*.
- **Appendix H** presents the *Hydromodification Management Applicability Maps*, countywide and by jurisdiction.
- **Appendix I** includes information on the *Feasibility and Sizing of Rainwater Harvesting Systems* and sizing curves for design of these 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 *Biotreatment Soil Mix Specifications* approved by the Regional Water Board for use in stormwater biotreatment measures.
- **Appendix L** features *Site Design Requirements for Small Projects*

1.4 Precedence

In case of conflicting information between this Guide 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 information in this Guide.