

Introduction / How to Use this Handbook

This Chapter describes the purpose of this handbook and gives an overview of its contents.

1.1 Purpose of this Handbook

This Alameda Countywide Clean Water Program (Clean Water Program) 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 State requirements in the Municipal Regional Stormwater NPDES Permit (MRP). The municipalities have to require post-construction 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. In case of conflicting information between this handbook and the MRP, the MRP shall prevail.

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.

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permanent features included in a project to reduce pollutants in stormwater and/or erosive flows after construction is completed.

Information on best management practices (BMPs) that protect stormwater during construction, is available at www.cleanwaterprogram.org (click on “Businesses,” then “Construction”).

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 Clean Water Program?

The Clean Water Program is an association of the agencies in Alameda County that manage separate storm drain systems and creek channels that discharge urban runoff to San Francisco Bay. The Clean Water Program has 17 member agencies: the 14 cities in the County, Unincorporated Alameda County, Zone 7 Water Agency, and the Alameda County Water Conservation and Flood Control Division.

The Clean Water Program’s member agencies, and other agencies throughout the region, are joint permit holders of the MRP. Each member agency is individually responsible for implementing the MRP requirements, but participating in the Program helps them collaborate on Clean Water Program initiatives that benefit all members. More information on the Program is available on its website, www.cleanwaterprogram.org.

1.3 How to Use this Handbook

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

When using this Clean Water Program 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.

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, a synopsis of the handbook’s chapters and appendices is provided below:

- Chapter 2 explains how development affects stormwater quality, how post-construction stormwater measures/LID 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**, including guidance for self-treating and self-retaining areas, which can help reduce the size of stormwater treatment measures.
- Chapter 5 provides **general technical guidance for stormwater treatment measures**, including hydraulic sizing criteria, the applicability of non-LID 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, vegetated swales, vegetated buffer strips, tree well filters, infiltration trenches, extended detention basins, pervious paving, green roofs, and media filters.
- 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 MRP's Provision, which allows projects to contribute to off-site **alternative compliance** projects instead of constructing on-site stormwater treatment measures.
- Appendix A is provided for each agency to include its own **local requirements**, such as the agency's conditions of approval, Source Control Measures List, and Impervious Surface Form.
- Appendix B includes a **list of plants** appropriate for use in LID treatment measures. It also offers general guidance on plant selection and maintenance.
- Appendix C presents **example scenarios**, showing how site design, source controls and treatment measures can be incorporated into projects.
- Appendix D consists of the **Mean Annual Precipitation Map** for Alameda County.
- Appendix E describes manufactured stormwater treatment measures that have **limited applicability**, including inlet filters, oil/water separators, hydrodynamic separators, and media filters.
- Appendix F presents guidelines for using stormwater controls that promote on-site **infiltration** of stormwater.
- Appendix G provides guidance for **controlling mosquito production** in stormwater treatment measures.
- Appendix H includes templates for preparing stormwater treatment measure **maintenance plans**.
- Appendix I is the Hydromodification Management Susceptibility Map.
- Appendix J provides guidance on using the **Special Projects Criteria** approved by the Regional Water Board to identify infill, high density, and transit oriented development 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 contains **Site Design Requirements for Small Projects**, including guidance on implementation of these permit requirements and four fact sheets on landscape dispersion, rain gardens, pervious paving, and rain barrels and cisterns.
- Appendix M includes information on **Green Streets**, including local projects in Alameda County, ACCWP's Example GI Typical Details, and resources for more information.

1.4 Precedence

In case of conflicting information between this handbook and the Municipal Regional Stormwater NPDES 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.