

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. The municipalities in San Mateo County have to require post-construction stormwater controls as part of their obligations under Provision C.3 of the countywide municipal stormwater National Pollutant Discharge Elimination System (**NPDES**) **permit**, which is similar to other municipal stormwater permits in the Bay Area. In California, the responsibility for implementing the NPDES permit program has been delegated to the State Water Resources Board and its regional Water Boards.

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. This handbook does not provide information on the construction best management practices (BMPs) that protect stormwater during construction activities. Internet links to information on construction BMPs can be found in Appendix A.

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.

“Post-construction stormwater controls” are permanent features included in a project to reduce pollutants in stormwater and/or erosive flows after construction is finished.

1.2 What is the Countywide Program?

The San Mateo Countywide Water Pollution Prevention Program, which was previously named the San Mateo Countywide Stormwater Pollution Prevention Program (STOPPP) 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 countywide municipal stormwater NPDES permit, which is issued by the San Francisco Bay Regional Water Quality Control Board (Water Board). Each member agency is individually responsible for implementing the municipal stormwater permit 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.

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 designs into planning permit and building permit application submittals for your project.
- Chapter 4 presents information on ***site design measures***, including green roofs and pervious paving, 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 vegetated swales, vegetated buffer strips, tree well filters, media filters, flow-through planter boxes, bioretention areas, infiltration trenches, extended detention basins, and combining pervious pavement with stormwater treatment.
- 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.
- Appendix A lists the **Internet links** that are referred to in various chapters of the document, as well as other useful stormwater links.
- Appendix B includes a **list of plants** appropriate for use in landscape-based 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 is a placeholder in which each agency may include its own **agency-specific requirements**, such as the agency’s conditions of approval, Source Control Measures List, and Impervious Surface Form.
- Appendix E consists of the **map of treatment measure design criteria regions** for San Mateo County.
- Appendix F describes manufactured stormwater treatment measures that may have **limited applicability**, including inlet filters, oil/water separators and hydrodynamic separators.
- Appendix G presents guidelines for using stormwater controls that promote on-site **infiltration** of stormwater.
- Appendix H provides guidance for **controlling mosquito production** in stormwater treatment measures.
- Appendix I includes templates for preparing stormwater treatment measures **maintenance plans**.
- Appendix J presents the **Hydromodification Map** from the Countywide Program’s draft NPDES permit amendment.