**Instructions to preparer:**

This template provides instructions, format, organization, and some recommended content for your O&M Plan.

Instructions and notes in yellow highlight should be deleted prior to submittal.

Replace all information in [brackets] with your project-specific information.

Some of the recommended content is for bioretention facilities. For other facility types, this content should be replaced with content appropriate to your project facilities.

Your O&M Plan and attachments should be submitted in .pdf format. Check with staff for submittal instructions.

Write the Plan in the present tense as if it is already constructed and all agreements are executed and the owner is reading the document.

# [TEMPLATE FOR]
# STORMWATER FACILITIES OPERATION AND MAINTENANCE PLAN
# for
# [PROJECT NAME]
# [PROJECT NUMBER (subdivision number, or consult with staff)]

[date]
[revision date]

[Name of Owner]
[Owner's Representative and Contact Information]

*prepared by:*

[Preparer's Name]
[Preparer's Contact Information]

# TABLE OF CONTENTS



## Tables



## Figures



## Attachments

1. Stormwater Control Plan for [Project]
2. Stormwater Control Plan Exhibit
3. "As-Built" drawings
4. Manufacturer's data, manuals, and maintenance requirements for pumps, mechanical and electrical equipment, and proprietary facilities
5. Service agreements

Acronyms and Abbreviations

| | |
|---|---|
| C.3 | Provision C.3 in the Municipal Regional Stormwater Permit issued by the California Regional Water Quality Control Board for the San Francisco Bay Region |
| IMP | Integrated Management Practice |
| O&M Plan | Operations and Maintenance Plan |
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*This Stormwater Facilities Operation and Maintenance Plan was prepared using the template dated February 2018.*

## I. INSPECTION AND MAINTENANCE LOG

| | |
|---|---|
| Facility Name | |
| Address | |
| Begin Date | End Date |

| Date | BMP ID# | BMP Description | Inspected by: | Cause for Inspection | Exceptions Noted | Comments and Actions Taken |
|---|---|---|---|---|---|---|
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Instructions: Record all inspections and maintenance for all treatment BMPs on this form. Use additional log sheets and/or attach extended comments or documentation as necessary.

- BMP ID# — Always use ID# from the Operation and Maintenance Manual.
- Inspected by — Note all inspections and maintenance on this form.
- Cause for inspection — Note if the inspection is routine, pre-rainy-season, post-storm, annual, or in response to a noted problem or complaint.
- Exceptions noted — Note any condition that requires correction or indicates a need for maintenance.
- Comments and actions taken — Describe any maintenance done and need for follow-up.

## II. UPDATE TO DESIGNATION OF RESPONSIBLE INDIVIDUALS

| | |
|---|---|
| ** **Use this form to update the plan when responsible individuals change**. ** | |
| Date Completed | |
| Facility Name | |
| Facility Address | |
| Designated Contact for Operation and Maintenance | |
| Name: | Title or Position: |
| Telephone: | Alternate Telephone: |
| Email: | |
| Off-Hours or Emergency Contact | |
| Name: | Title or Position: |
| Telephone: | Alternate Telephone: |
| Email: | |
| Corporate Officer (authorized to execute contracts with the City, Town, or County) | |
| Name: | Title or Position: |
| Address: | |
| Telephone: | Alternate Telephone: |
| Email: | |

## III. UPDATES, REVISIONS, AND ERRATA

| Date | Num. | Updates, Revisions, or Errata Title | Description/Purpose | By (full name): |
|---|---|---|---|---|
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# I. INTRODUCTION

This plan addresses operation and maintenance of facilities constructed as part of the following development project:

[project name].

The final, approved Stormwater Control Plan for this project is in Appendix A.

## I.A. Background

Suggested language to include: This Stormwater Facilities Operation and Maintenance Plan (O&M Plan) is for facilities (and pervious pavement systems) constructed as part of the development project referenced above. Construction of these facilities was required by Provision C.3 in the Municipal Regional Stormwater Permit issued by the California Regional Water Quality Control Board for the San Francisco Bay Region. Provision C.3. also requires the [Agency] to verify ongoing operation and maintenance of stormwater treatment and hydromodification management facilities, and certain pervious pavement installations.

## I.B. Associated Agreements

Suggested language to include: This O&M Plan is referenced in an O&M Agreement between the property owner and the [Agency]. The agreement, [reference], grants the [Agency] access to the property to conduct inspections and, if needed, to perform maintenance on the facilities at the owner's expense. The agreement also grants access for inspections to the Contra Costa Mosquito and Vector Control District (CCMVCD).

As provided in the O&M Agreement, this O&M Plan may be modified, but only with the review and consent of the [Agency] [Public Works Director/City Engineer]. The official O&M Plan is the version which is on file at the [Agency] Public Works Department. Any modifications made to the O&M Plan with the consent of the [Public Works Director/City Engineer] must be filed at the Public Works Department.

## I.C. Funding for and Organization of Facility Operation and Maintenance

Describe how facility operation and maintenance is funded on an ongoing basis in the present tense as if it is already constructed and all agreements are executed. Include descriptions and references for agreements or associations among homeowners or other property owners, budget line items, sources and expenditures of operating funds and reserve funds, administration, and oversight. Describe the personnel positions or contracts used to conduct maintenance, and oversight of these personnel or contracts. Include or attach an organization chart.

## I.D. Site Description

Describe site location in the present tense as if it is already constructed. Include the size, topography, abutting streets and properties, structures, paved areas, underlying soils, and grading. Describe the number and type of stormwater facilities and the routing of treated runoff and untreated overflow to the public drainage system.

## II. DESIGNATION AND TRAINING OF RESPONSIBLE INDIVIDUALS

### II.A. Designated Contact for Operation and Maintenance

[name, title or position]
[address]
[telephone and email]

### II.B. Off-Hours or Emergency Contact

[name, title or position]
[address]
[telephone and email]

### II.C. Corporate Officer (authorized to execute agreements with the County)

[name, title or position]
[address]
[telephone and email]

### II.D. Initial Training of Responsible Individuals

Suggested language to include: Following completion of construction, the bioretention facilities will be maintained by the contractor for two years, except for routine policing for trash, which will be done by the owner's and lessee's personnel. During this 2-year period, the owner's landscape maintenance crew will coordinate to meet with the contractor's personnel on-site during maintenance. At these times, the contractor's personnel will demonstrate proper maintenance procedures.

### II.E. Ongoing Training of Responsible Individuals

Describe a plan for ongoing oversight and training for maintenance personnel.

## III. FACILITIES TO BE MAINTAINED

### III.A. Facility Descriptions

State the number and type(s) of facilities. Describe their common elements. For bioretention facilities, include in the description structural elements, media layers and depth of each, underdrain material, overflow structure, depth of surface reservoir, plantings (including species), irrigation system, and signage (if any). Include an explanatory sketch or schematic such as the one below. Then, include specific descriptions of each facility in the subsections below.

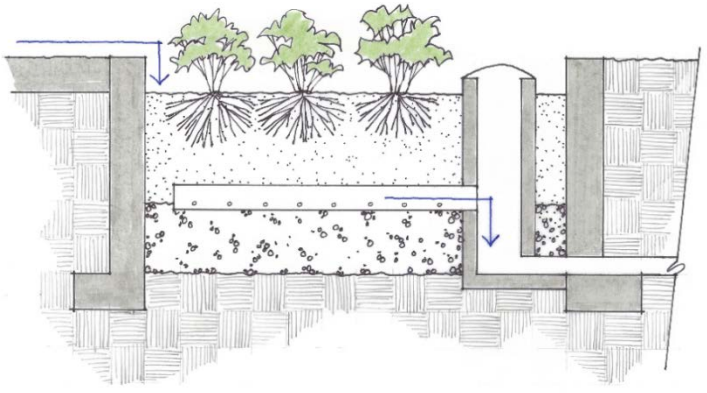

Figure [x]. Bioretention Cross-Section (schematic)

III.A.1. [Bioretention Facility #1]

Reference the Stormwater Control Plan Exhibit. Reference and describe the Drainage Management Areas (DMAs) from which the facility receives drainage, including the square footage, surface type, and features of each DMA. Describe how flow is routed from the DMA to the facility (piped, sheet flow, or curb inlet). Describe the connections of the underdrain and overflow structure. Describe any specific or special features of the facility.

III.A.2. [Bioretention Facility #2]

III.A.3. [Bioretention Facility #3]

## IV. MAINTENANCE ACTIVITIES

### IV.A. General Maintenance Rules

Suggested language to include for bioretention facilities: At no time will synthetic pesticides or fertilizers be applied, nor will any soil amendments, other than aged compost mulch or sand/compost mix, be introduced. The top of soil surface will be maintained at or near the design elevation throughout. Irrigation systems will be maintained to conserve water while maintaining plant health.

Although it is unlikely to be needed, if plants are not thriving compost tea may be applied at a recommended rate of 5 gallons mixed with 15 gallons of water per acre, up to once per year between March and June. Compost tea will not be applied when temperatures are below 50°F or above 90°F or when rain is forecast within the next 48 hours.

The following may be applied for pest control if needed:

- Beneficial nematodes
- Safer® products
- Neem oil

Plants may need to be replaced with the following mix as specified by the landscape architect [list species] or with similar plantings appropriate for the unique conditions.

### IV.B. Maintenance Schedule

Suggested language to include for bioretention facilities:

The [state number] [bioretention] facilities will be maintained on the following schedule at a minimum:

#### *IV.B.1. Routine Activities*

Suggested language to include for bioretention facilities: The facilities will be examined [daily for commercial; weekly for residential] for visible trash, and trash will be removed. Any graffiti, vandalism, or other damage will be noted and addressed within 48 hours.

The planted areas will be weeded by hand approximately monthly. At this time, plants will be inspected for health and the irrigation system will be turned on manually and checked for any leaks or broken lines, misdirected spray patterns etc. Any dead plants will be replaced.

*IV.B.2. Following Significant Rain Events*

Suggested language to include for bioretention facilities: A significant rain event will be considered to be one that produces approximately a half-inch or more rainfall in a 24-hour period. Within 24 hours after each such event, the following will be conducted:

- The surface of the facility will be observed to confirm there is no ponding.
- Inlets will be inspected, and any accumulations of trash or debris will be removed. Any erosion at inlets should be restored to grade.
- The surface of the mulch layer will be inspected for movement of material. Mulch will be replaced and raked smooth if needed.
- Outlet structure will be inspected for any obstructions to assure that mulch is not washed out.

*IV.B.3. Prior to the Start of the Rainy Season*

Suggested language to include for bioretention facilities: In September of each year, facility inlets and outlets [including flow-control orifices, if any] will be inspected to confirm there is no accumulation of debris that would block flow. Stormwater should drain freely into the bioretention facilities. If not previously addressed during monthly maintenance, any growth and spread of plantings that blocks inlets or the movement of runoff across the surface of the facility will be cut back or removed.

*IV.B.4. Annually During Winter*

Suggested language to include for bioretention facilities: Once, in December – February of each year, vegetation will be cut back as needed, debris removed, and plants and mulch replaced as needed. The concrete work will be inspected for damage. The elevation of the top of soil and mulch layer will be confirmed to be consistent with the 6-inch reservoir depth.