PORT OF SAN DIEGO

STORMWATER QUALITY MANAGEMENT PLAN

FOR GREEN STREET PROJECTS

Project NAME:

Project NUMBER:

Project ADDRESS:

date:

CA CIVIL ENGINEER STAMP AND SIGNATURE:

PREPARED FOR:

[INSERT APPLICANT NAME]

[INSERT ADDRESS]

[INSERT CITY, STATE ZIP CODE]

PREPARED BY:

[INSERT COMPANY NAME]

[INSERT ADDRESS]

[INSERT CITY, STATE ZIP CODE]

Green Street SWQMP Template Date: August 2024



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Description automatically generated

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**TABLES**

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Table 4. Green Street BMP Summary Table

Acronym Sheet

BMP Best Management Practice

HSG Hydrologic Soil Group

MS4 Municipal Separate Storm Sewer System

N/A Not Applicable

NRCS Natural Resources Conservation Service

PDP Priority Development Project

PE Professional Engineer

SC Source Control

SD Site Design

SDRWQCB San Diego Regional Water Quality Control Board

SIC Standard Industrial Classification

SWQMP Storm Water Quality Management Plan

**GREEN STREETS SWQMP PREPARER'S CERTIFICATION PAGE**

**Project Name:** [Insert Project Name]

**Project Number:** [Insert Project Number]

Preparer's Certification

I hereby declare that I am the Engineer in Responsible Charge of design of storm water best management practices (BMPs) for this project, and that I have exercised responsible charge over the design of the BMPs as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the Green Street Project requirements of the Port of San Diego BMP Design Manual, which is a design manual for compliance with local Port of San Diego and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2015-0100) requirements for storm water management.

I have read and understand that the Port of San Diego has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the Port of San Diego BMP Design Manual. I certify that this Green Streets SWQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this Green Streets SWQMP by the Port of San Diego is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of storm water BMPs for this project, of my responsibilities for project design.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Engineer of Work's Signature, PE Number & Expiration Date

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Print Name

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Company

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Date

Engineer's Seal:

**GREEN STREETS SWQMP PROJECT APPLICANT’S CERTIFICATION PAGE**

**Project Name:** [Insert Project Name]

**Project Number:** [Insert Project Number]

Project Applicant’s Certification

This Green Streets SWQMP has been prepared for [INSERT PROJECT APPLICANT/COMPANY NAME] by [INSERT SWQMP PREPARER'S COMPANY NAME]. The Green Streets SWQMP is intended to comply with the Green Streets project requirements of the Port of San Diego BMP Design Manual, which is a design manual for compliance with local Port of San Diego and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. 2013-0001, as amended by Orders No. R9-2015-0001 and No. R9-2015-0100) requirements for storm water management.

The undersigned, while it owns the subject project, is responsible for the implementation of the provisions of this plan. This includes:

* **Installation of storm water BMPs,**
* **Verification of installed BMPs pursuant to the Port of San Diego’s project closeout procedures,**
* **Maintenance of BMPs annually or more frequently when necessary to maintain BMP capacity,**
* **Annual verification of BMP maintenance pursuant to the Port of San Diego’s maintenance documentation/verification requirements.**

If the undersigned transfers its interests in the property, its successor-in-interest shall bear the aforementioned responsibility to implement the best management practices (BMPs) described within this plan, including ensuring on-going operation and maintenance of green street BMPs. A signed copy of this document shall be available on the subject property into perpetuity.

|  |  |  |
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| **Signature 1: Pre-Construction**  *Project applicant’s signature is required prior to approval of the SWQMP.* | | |
| Project Applicant’s Signature: | | |
| Print Project Applicant’s Name: | Company Name: | Date: |

|  |  |  |
| --- | --- | --- |
| **Signature 2: Post-Construction**  *Project applicant’s signature is required for project closeout.* | | |
| Project Applicant’s Signature: | | |
| Print Project Applicant’s Name: | Company Name: | Date: |

# Project Information

Table 1 summarizes basic project information.

Table 1. Project Summary

|  |  |
| --- | --- |
| **Project Name** |  |
| **Address/Location** |  |
| **APN(s)** |  |
| **Project Number** |  |
| **Hydrologic Subarea** | [e.g., 908.21] |
| **Leasehold Area** |  |
| **Parcel Area** |  |
| **Area to be Disturbed (Project Area)** | [Proposed impervious area + proposed pervious area = area to be disturbed. This may be less than the parcel area]. |
| **Project Proposed Impervious Area** |  |
| **Project Proposed Pervious Area** |  |
| **Project Description** |  |
| **Description of Site Existing Drainage Patterns** | [How is storm water runoff conveyed from the site? At a minimum, this description should answer:  (1) whether existing drainage conveyance is natural or urban;  (2) Is runoff from offsite conveyed through the site?  (3) Provide details regarding existing project site drainage conveyance network, including any existing storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural or constructed channels; and  (4) Identify all discharge locations from the existing project site along with a summary of conveyance system size and capacity for each of the discharge locations. Provide summary of the pre-project drainage areas and design flows to each of the existing runoff discharge locations.] |
| **Description of Site Proposed Drainage Patterns** | [Provide same level of detail as requested for existing drainage patterns above] |

## Vicinity Map

The project vicinity map is below. It includes major roadways, geographic features or landmarks, site perimeter, downstream receiving water body, scale bar, and north arrow.

[Insert project vicinity map here]

## Requirements Applicability

A completed stormwater applicability checklist is included in Attachment A.

# Drainage Management Areas and Site Design BMPs

[The project must be divided into drainage management areas. A drainage management area is a portion of the site that all drains to a single discharge point. See Section 3.3.3 of the BMP Design Manual. Site Design BMPs must all be proposed as applicable and feasible. Implementing site design BMPs can reduce or even eliminate the need for structural BMPs.]

The entire project area has been divided into Drainage Management Areas (DMA), in accordance with the approach described in BMP Design Manual Section 3.3.3. Site design Low Impact Development (LID) BMPs have also been selected for the project, as summarized in Attachment B. Based on DMA characteristics and the extent of site design BMP implementation, each DMA has been classified using one of the following categories:

1. Drains to green street BMPs
2. Self-mitigating DMA: consists of natural or landscaped areas that drain directly offsite or to the public storm drain system. See BMP Design Manual Section 5.2.1 for additional information.
3. De minimis DMA: consists of areas that are very small and are not considered to be significant contributors of pollutants. See BMP Design Manual Section 5.2.2 for additional information.
4. Self-retaining DMA: treated using only site design; design capture volume (DCV) is zero after accounting for site design BMP adjustments. See BMP Design Manual Section 5.2.3 for additional information.

The DCV has been calculated for each DMA in categories A and D above. DCV calculations for these DMAs, including reductions to the DCV from site design BMP implementation, are included in Attachment D. Tables listing self-mitigating and de minimis DMAs and demonstrating how they meet the appropriate criteria from the BMP Design Manual are also included in Attachment D.

Table 3 summarizes the DMAs by category and identifies applicable green street BMPs for each DMA that drains to a green street BMP.

Table 2. DMA Summary

|  | **Has Green Street BMPs** | | **No Green Street BMPs** | | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | **A** | | **B** | | **C** | **D** |
| **DMA ID** | **Green Street BMP ID(s) that Provide Pollutant Control** | | **No BMPs: Self-Mitigating DMA1** | | **No BMPs: *De Minimis* DMA2** | **Self-Retaining DMA Treated Using Only Site Design3** |
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| **Notes** |  |  | |  |  |  |
| 1. See BMP Design Manual Section 5.2.1 for characteristics required to qualify. Proof of compliance is documented in Attachment D. | | | | | | |
| 2. See BMP Design Manual Section 5.2.2 for characteristics required to qualify. Proof of compliance is documented in Attachment D. | | | | | | |
| 3. See BMP Design Manual Section 5.2.3. If this option is selected, the site design BMPs must be shown to achieve a DCV of 0 in Attachment D. | | | | | | |

An exhibit illustrating the delineated DMAs is included in Attachment E. The exhibit includes the following:

* Delineated DMA areas, along with a DMA ID (i.e., a name or ID number) and direction of flow for each DMA
* Natural and engineered conveyances nearby and within the project area and connections to offsite drainage systems
* Proposed buildings, paved areas, and other impervious surfaces
* Pollutant source areas that require installation of pre-treatment BMPs, if applicable
* Approximate depth to groundwater and underlying hydrologic soil group
* Location where materials would be directly exposed to storm water
* Location of existing water wells
* Location of existing vegetation to be preserved
* Location and size, as applicable, of all
  + Site design BMPs for which DCV reduction is claimed
  + Source control BMPs that can be mapped (operational source control BMPs, such as sweeping or education, are not included on the map)
  + Green Street BMPs for pollutant control (also include the latitude/longitude, BMP type, cross-section and elevation detail).

# Source Control BMPs

Source control BMPs must be implemented, where applicable and feasible. Source control BMPs proposed for the project are indicated on Attachment C of this SWQMP.

# Green Street BMPs

## Pollutant Control BMPs

Green street BMPs for pollutant control must be designed to treat the DCV for all DMAs that drain to each pollutant control BMP, as calculated in Attachment D. BMP sizing calculations and supporting information to justify the type of BMP selected are provided in Attachment F. All BMPs and necessary information to show conformance to the applicable design standards in the BMP Design Manual are summarized in Tables 3 and 4, and reflected on the project’s plan sheets.

Table 3. General Strategy for Green Street BMP Implementation

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| --- |
| **Green Street BMP Implementation** |
| [Describe the general strategy for Green Street BMP implementation at the site, including site assessment considerations as outlined in Section K.2.1.  Note that for Green Street Projects, retention BMPs (infiltration/harvest and use) do not need to be considered to the maximum extent practicable. The selected BMPs must be designed in accordance with the USEPA Green Streets guidance (i.e., Green Streets Handbook), which provides a wider variety of BMPs compared to the options provided on the BMP Design Manual. Nonetheless, all BMPs must be sized in accordance with the guidelines stated on Appendix K.2 of the BMP Design Manual. Applicable Green Streets projects that incorporate biofiltration or other treatment types other than retention or infiltration (e.g., vegetated swales) should be sized at 1.5 times the DCV, consistent with the Green Streets requirements in the Port’s BMP Design Manual.  Additionally, if the project presents space constraints (or other) that make it impossible to perform onsite pollutant control treatment, a treatment offset can be employed. That is, an equivalent area can be treated offsite as long as it is (1) as close as possible to the project site, and (2) within the same hydrologic subarea. If the “equivalent area” approach is used, in Attachment F include an explanation of how treated the area proposed for treatment will provide a water quality benefit equal to or better than treating the project area (e.g., treats a street with comparable or higher ADT). For green street projects, annual retention requirements do not need to be considered when proposing proprietary biofiltration BMPs. |

## Summary of Green Street BMPs

All Green Street BMPs are summarized in Table 4.

| Table 4. Green Street BMP Summary Table | | |  |  |  |  | |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **BMP ID No.** | **Green Street BMP Type**  *(Select from the list below this table)* | **DMA(s) draining to BMP** | | | | | **Construction Plan Sheet No(s).** | | **Longitude** | **Latitude** |
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| Green Street BMP Types:   * Tree wells, canopy interception (SD-1) * Permeable pavement (SD-D, INF-3) * Bioretention curb extensions/stormwater planters (INF-2, PR-1, BF-1) * Vegetated swales (FT-1) * Proprietary biotreatment (BF-3, FT-5) * Infiltration basin or trench (INF-1)   **Notes**   * Other BMPs not listed above, or BMPs listed above designed in accordance with other green street or LID design manual, may also be approved at the discretion of the Port. * For proprietary biotreatment BMPs (BF-3, FT-5), annual retention requirements do not apply, and the worksheets F.2-1 and F.2-2 used to calculate annual retention and supplemental retention provided by landscape, rain barrels, etc. do not need to be completed for Green Streets projects. | | | | | | | | | | |
| **Pre-treatment BMPs**  *All BMPs that will be used for pre-treatment purposes only are described below, including the type of BMP and which of the BMPs from the table above it provides pre-treatment for. Sizing calculations are included in Attachment F.* | | | | | | | | | | |
| [Describe pretreatment BMPs, or, if none, state that none are proposed.] | | | | | | | | | | |

# Operation and Maintenance

A copy of the O&M agreement that the tenant will sign prior to project completion is included in Attachment G. The project’s operation and maintenance plan (O&M Plan) for proposed BMPs is included in Attachment G. The O&M Plan includes the following components:

* An exhibit showing the locations of all proposed pollutant control BMPs proposed. This exhibit may be the same as the DMA exhibit provided in Attachment E.
* Designated responsible party to manage the storm water BMP(s).
* When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management.
* Specific maintenance indicators and actions for proposed green street BMP(s). This shall be based on Chapter 7 of the BMP Design Manual and enhanced to reflect actual proposed components of the green street BMP(s).
* Maintenance thresholds specific to the green street BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP).
* Manufacturer and part number for proprietary parts of green street BMP(s) when applicable.
* Maintenance frequency and operating schedule.
* Additional information necessary to perform maintenance, if applicable:
  + Description of any features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the green street BMP and compare to maintenance thresholds)
  + Instructions on how to access the green street BMP(s) to inspect and perform maintenance, if access is not straightforward
  + Recommended equipment to perform maintenance, if special equipment is required
  + Necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management

# Plan Sheets Showing Permanent Storm Water BMPs

Copies of all relevant plan sheets showing the location of proposed permanent storm water BMPs are included in Attachment H. The plan sheets include the following components:

* Green Street BMP(s) with ID numbers and fully dimensioned.
* Grading and drainage design consistent with the delineation of DMAs shown on the DMA exhibit.
* Details and specifications for construction of Green Street BMP(s)
* Signage indicating the location and boundary of Green Street BMP(s).
* How to access the Green Street BMP(s) to inspect and perform maintenance.
* Features provided to facilitate inspection (e.g., observation ports, cleanouts, etc.).
* Manufacturer and part numbers for proprietary BMP(s) when applicable.
* Maintenance thresholds specific to the Green Street BMP(s).
* Recommended equipment to perform maintenance.
* Necessary special training or certification requirements for inspection and maintenance personnel, when applicable.
* Landscaping sheets showing vegetation requirements for vegetated BMP(s).
* For proprietary BMP(s), site-specific cross section with outflow, inflow, and model number.

# Project Closeout Documentation

A blank copy of the Port of San Diego Verification Closeout form and a copy of the SWQMP changes during construction form are included in Attachment I.

If applicable, a copy of review and acceptance of the SWQMP from an adjacent jurisdiction will also be included as part of Attachment I. The copy of review and acceptance of the SWQMP from adjacent jurisdiction(s) is required when a portion of the project is within the Port’s jurisdiction and a portion of the project is within another jurisdiction.

If applicable, the construction change record includes the following components:

* Description of construction change.
* Description of impacts to the storm water management design.
* Description of how the project will maintain compliance with stormwater requirements.
* A revised DMA exhibit.

Attachment A Completed Storm Water Applicability Checklist

Attachment B Site Design BMP Checklist

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Site Design BMP Checklist**  **for All Development Projects** | | **Form I-5** | | |
| **Project Identification** | | | | |
| Project Name: | | | | |
| Project Number: | | | | |
| **Site Design BMPs** | | | | |
| All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the BMP Design Manual for information to implement site design BMPs shown in this checklist.  Answer each category below pursuant to the following.   * "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix of the BMP Design Manual. Discussion / justification is not required. * "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided. * "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided. | | | | |
| **Site Design Requirement** | **Applied?** | | | |
| **SD-1** Maintain Natural Drainage Pathways and Hydrologic Features | Yes | | No | N/A |
| Discussion / justification if SD-1 not implemented: | | | | |
| **SD-2** Conserve Natural Areas, Soils, and Vegetation | Yes | | No | N/A |
| Discussion / justification if SD-2 not implemented: | | | | |
| **SD-3** Minimize Impervious Area | Yes | | No | N/A |
| Discussion / justification if SD-3 not implemented: | | | | |
| **SD-4** Minimize Soil Compaction | Yes | | No | N/A |
| Discussion / justification if SD-4 not implemented: | | | | |
| **SD-5** Impervious Area Dispersion | Yes | | No | N/A |
| Discussion / justification if SD-5 not implemented: | | | | |

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| **Form I-5 Page 2 of 2** | | | |
| **Site Design Requirement** | **Applied?** | | |
| **SD-6** Runoff Collection | Yes | No | N/A |
| Discussion / justification if SD-6 not implemented: | | | |
| **SD-7** Landscaping with Native or Drought Tolerant Species | Yes | No | N/A |
| Discussion / justification if SD-7 not implemented: | | | |
| **SD-8** Harvesting and Using Precipitation | Yes | No | N/A |
| Discussion / justification if SD-8 not implemented: | | | |

Attachment C Source Control BMP Checklist

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| --- | --- | --- | --- | --- |
| **Source Control BMP Checklist**  **for All Development Projects** | | **Form I-4** | | |
| **Project Identification** | | | | |
| Project Name: | | | | |
| Project Number: | | | | |
| **Source Control BMPs** | | | | |
| All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the BMP Design Manual for information to implement source control BMPs shown in this checklist.  Answer each category below pursuant to the following.   * "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the BMP Design Manual. Discussion / justification is not required. * "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided. * "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided. | | | | |
| **Source Control Requirement** | **Applied?** | | | |
| **SC-1** Prevention of Illicit Discharges into the MS4 | Yes | | No | N/A |
| Discussion / justification if SC-1 not implemented: | | | | |
| **SC-2** Storm Drain Stenciling or Signage | Yes | | No | N/A |
| Discussion / justification if SC-2 not implemented: | | | | |
| **SC-3** Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal | Yes | | No | N/A |
| Discussion / justification if SC-3 not implemented: | | | | |
| **SC-4** Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal | Yes | | No | N/A |
| Discussion / justification if SC-4 not implemented: | | | | |

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| **Form I-4 Page 2 of 2** | | | |
| **Source Control Requirement** | **Applied?** | | |
| **SC-5** Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal | Yes | No | N/A |
| Discussion / justification if SC-5 not implemented: | | | |
| **SC-6** Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)  On-site storm drain inlets  Interior floor drains and elevator shaft sump pumps  Interior parking garages  Need for future indoor & structural pest control  Landscape/Outdoor Pesticide Use  Use efficient irrigation systems  Pools, spas, ponds, decorative fountains, and other water features  Food service  Refuse areas  Industrial processes  Outdoor storage of equipment or materials  Vehicle and Equipment Cleaning  Vehicle/Equipment Repair and Maintenance  Fuel Dispensing Areas  Loading Docks  Fire Sprinkler Test Water  Miscellaneous Drain or Wash Water  Plazas, sidewalks, and parking lots | Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes | No  No  No  No  No  No  No  No  No  No  No  No  No  No  No  No  No  No | N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A |
| Discussion / justification if SC-6 not implemented. Clearly identify which sources of runoff pollutants are discussed. Justification must be provided for all "No" answers shown above. | | | |

Attachment D Drainage Management Area Characteristics and Calculations

**Indicate which items are included behind this cover sheet**

|  |  |
| --- | --- |
| **Contents** | **Included (Y/NA)** |
| D.1. Self-Mitigating DMAs |  |
| D.2. De Minimis DMAs |  |
| D.3. Self-Retaining DMAs |  |
| D.4. DMA Design Capture Volume Calculations |  |

**Attachment D.1. Self-Mitigating DMAs**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **DMA ID** | **All Vegetation Is Native and/or Non-Invasive, Drought-Tolerant Vegetation not Requiring Regular Use of Pesticides and Fertilizers (Y/N)** | **Soil Is Undisturbed Native Topsoil or Equivalent1 (Y/N)** | **DMA Total Area (ft2)** | **DMA Impervious Area (ft2)** | **DMA % Impervious (Must be <5%)** | **Impervious Area Is not Hydraulically Connected to Other Impervious Areas2 (Y/N)** | **Does not Drain to a Structural Pollutant Control BMP (Y/N)** |
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| **Notes** |  |  |  |  |  |  |  |
| 1. i.e., disturbed soils that have been amended and aerated to promote water retention characteristics equivalent to undisturbed native topsoil. | | | | | | | |
| 2. Impervious area that is part of the storm water conveyance system, such as brow ditches, is exempt from this requirement. If storm water conveyance is the only impervious area within the DMA that is hydraulically connected to other impervious areas, this question can still be marked as "Y". | | | | | | | |

**Attachment D.2. De Minimis DMAs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DMA ID** | **DMA Area Abuts the Perimeter of the Site (Y/N)** | **Is not Hydraulically Connected to Another De Minimis DMA (Y/N)** | **DMA Total Area (ft2) (Must be <250 ft2)** | **Explanation of Why Capturing or Treating Runoff Is not Feasible and How Site Design BMPs Have Been Used to the Maximum Extent Practicable1** |
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|  |  | **Sum of De Minimis DMA Areas (ft2)** |  |  |
|  |  | **Total Added/Replaced Impervious Area2 (ft2)** |  |  |
|  |  | **De Minimis Area/Impervious Area3 (%)** |  |  |
| **Notes** |  |  |  |  |
| 1. The explanation indicates why, due to topography and/or land ownership constraints, site design BMP implementation to make the DMA self-retaining, site layout to make the DMA self-mitigating, and structural BMP construction to treat the DCV are all technically infeasible. | | | | |
| 2. This total is for the entire project, not just for the de minimis DMAs. | | | | |
| 3. This percentage is calculated as (Sum of De Minimis DMA Areas)/(Total Added/Replaced Impervious Area for the entire project). The percentage must be less than 2% to meet BMP Design Manual Requirements. | | | | |

**Attachment D.3 Self-Retaining DMA Documentation**

[Provide calculations showing how site design BMPs achieve a DCV of 0]

**Attachment D.4. DMA Design Capture Volume Calculations**

[Add DCV calculations per Port’s BMP Design Manual]

Attachment E Drainage Management Area Exhibit

Attachment F Green Street Pollutant Control BMP Design Backup

**Indicate which items are included behind this cover sheet**

|  |  |  |
| --- | --- | --- |
| **Contents** | **Included (Y/NA)** | **Explain if marked N/A** |
| F.1. Categorization of Infiltration Feasibility Condition (when applicable)  *Required only if project proposes full or partial infiltration BMPs* |  |  |
| F.2. Pollutant Control BMP Design Worksheets / Calculations |  |  |
| F.3. Geotechnical Report (when applicable) |  |  |

[Note: projects that do not propose full or partial infiltration BMPs do not need to complete Attachment F.1. Projects that do propose full or partial retention BMPs need to complete Attachment F.1 to confirm their proposed BMP type is feasible. If a full infiltration BMP is proposed, the infiltration screening category must be “full infiltration.” If a partial infiltration BMP is proposed, the infiltration screening category must be “partial infiltration” or “full infiltration” (for Green Streets, projects in the “full infiltration” screening category are not required to propose full infiltration BMPs if full infiltration BMPs are not otherwise compatible with or desirable for the overall project design and goals—this is part of the additional BMP selection flexibility provided to Green Streets projects).]

| **Categorization of Infiltration Feasibility Condition** | | | | | **Form I-8 (Appendix F.1)** | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Part 1 - Full Infiltration Feasibility Screening Criteria**  **Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?** | | | | | | | | | | | | | |
| **Criteria** | **Screening Question** | | | | | **Yes** | | | **No** | | | | | |
| 1 | **Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in BMP Design Manual Appendix C.2 and Appendix D. | | | | |  | | |  | | | | | |
| Provide basis:  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability. | | | | | | | | | | | | | | |
| 2 | **Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in BMP Design Manual Appendix C.2. | | | | |  | | | |  | | | | |
| Provide basis:  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability. | | | | | | | | | | | | | | |
| **Criteria** | | **Screening Question** | | | | | **Yes** | | | | **No** | | | |
| 3 | | **Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, stormwater pollutants or other factors) that cannot be mitigated to an acceptable level?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3. | | | | |  | | | |  | | | |
| Provide basis:  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability. | | | | | | | | | | | | | | |
| 4 | | **Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3. | | | | |  | | | |  | | | |
| Provide basis:  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability. | | | | | | | | | | | | | | |
| **Part 1 Result\*** | | If all answers to rows 1 - 4 are “**Yes**” a full infiltration design is potentially feasible. The feasibility screening category is **Full Infiltration**  If any answer from row 1-4 is “**No**”, infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a “full infiltration” design. Proceed to Part 2. | | | | | | | | |  | | | |
| *\*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by Agency/Jurisdictions to substantiate findings* | | | | | | | | | | | | | | |
| **Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria**  **Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?** | | | | | | | | | | | | | |
| Criteria | | | | Screening Question | | | | **Yes** | | | | **No** | |
| 5 | | | | **Do soil and geologic conditions allow for infiltration in any appreciable rate or volume?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D. | | | |  | | | |  | |
| Provide basis:  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates. | | | | | | | | | | | | | |
| 6 | | | | **Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2. | | | |  | | | |  | |
| Provide basis:  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates. | | | | | | | | | | | | | |
| Criteria | | | | Screening Question | | | | **Yes** | | | | **No** | | |
| 7 | | | | **Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, stormwater pollutants or other factors)?** The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3. | | | |  | | | |  | | |
| Provide basis:  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates. | | | | | | | | | | | | | | |
| 8 | | | | **Can infiltration** **be allowed without** **violating downstream water rights**? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3. | | | |  | | | |  | | |
| Provide basis:  Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates. | | | | | | | | | | | | | | |
| **Part 2 Result\*\*** | | | If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is **Partial Infiltration.**  If any answer from row 5-8 is no, then infiltration of any volume is considered to be **infeasible** within the drainage area. The feasibility screening category is **No Infiltration.** | | | | | | | | | |  | |
| *\*\*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the Port to substantiate findings.* | | | | | | | | | | | | | | |

**Attachment F.2. Pollutant Control BMP Design Worksheets / Calculations**

**Attachment F.3. Geotechnical Report**

[Delete if not applicable]

Attachment G Operation and Maintenance

**Indicate which items are included behind this cover sheet**

|  |  |  |
| --- | --- | --- |
| **Contents** | **Included (Y/NA)** | **Explain if marked N/A** |
| G.1. Operation and Maintenance Plan |  |  |
| G.2. Port of San Diego O&M Agreement (where applicable). *The O&M agreement must be completed with project-specific information and submitted as a draft. The maintenance agreement will be recorded at the end of the project rather than at the time of SWQMP approval. Maintenance agreements are not required for projects when the Port will be responsible for all BMP operation and maintenance.* |  |  |

[See the main body of the SWQMP template for a list of required components in the O&M Plan and references to applicable BMP Design Manual tables that can be incorporated into the O&M Plan.]

Attachment H Copy of Plan Sheets Showing Permanent Storm Water BMPs

Attachment I Project Closeout Documentation

**Indicate which items are included behind this cover sheet**

|  |  |  |
| --- | --- | --- |
| **Contents** | **Included (Y/NA)** | **Explain if marked N/A** |
| I.1. Copy of Review and Acceptance of SWQMP from Adjacent Jurisdiction (when applicable) |  |  |
| I.2. SWQMP Changes During Construction (when applicable) |  |  |
| I.3. Port of San Diego Verification Closeout Form |  |  |

**Attachment I.1. Copy of Review and Acceptance of SWQMP from Adjacent Jurisdiction (when applicable)**

[Delete if not applicable]

**Attachment I.2. SWQMP Changes During Construction (when applicable)**

**CONSTRUCTION CHANGE RECORD**

During construction of the project, any changes that affect the design of storm water management features must be reviewed and approved by the Port of San Diego. This might include changes to drainage patterns that occurred based on actual site grading and construction of storm water conveyance structures, or substitutions to storm water management features. The storm water management design must be revisited to ensure the revised project layout and features meet the requirements of the BMP Design Manual and the MS4 Permit.

Design changes must be reviewed and approved by the Engineer of Record and the Port of San Diego prior to continuing construction.

Use this Table to keep a record of changes that occur during construction.

|  |  |  |
| --- | --- | --- |
| **Construction Change Number** | **Date of Approval** | **Summary of Changes** |
|  |  |  |
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**Attachment I.3. Port of San Diego Verification Closeout Form**

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| **Closeout Verification Form** |

This form must be accepted by the Port of San Diego prior to the release of construction permits or granting of occupancy for applicable portions of a project with Post-Construction BMPs. Applicants are responsible for providing all requested information. Do not leave any fields blank; indicate *N/A* for any requested item that is not applicable. Submit electronically to [SWPollutionPrevention@portofsandiego.org](mailto:SWPollutionPrevention@portofsandiego.org)

**PART 1 General Project and Applicant Information**

**Table 1: Project and Applicant Information**

|  |  |
| --- | --- |
| **A. Project Summary Information** | |
| ***Project Name*** | Click here to enter text. |
| ***Project Number*** | Click here to enter text. |
| ***Project Address*** | Click here to enter text. |
| ***SWQMP Approval Date*** | Click here to enter text. |
| ***SWQMP Prepared By*** | Click here to enter text. |
| **B. Owner Information** | |
| ***Name*** | Click here to enter text. |
| ***Address*** | Click here to enter text. |
| ***Email Address*** | Click here to enter text. |
| ***Phone Number*** | Click here to enter text. |

**PART 2 DMA and BMP Inventory Information**

Use this table to document post-construction BMPs for the project. List all Post-Construction BMPs being verified.

* The information provided for each BMP in the table must match that provided in the Stormwater Quality Management Plan (SWQMP), construction plans, maintenance agreements, and other relevant project documentation.

**Table 2: Required Information for Post-Construction BMPs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **BMP ID#** | **Description/Type of BMP** | **Construction Plan Sheet #** | **Landscape Plan Sheet #** | **BMP Maintenance- Operation and Maintenance Plan Page No.** | **Who will be responsible for maintenance of this BMP?** |
|  |  |  |  |  |  |
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**PART 3 Required Attachments for All BMPs Listed in Table 2**

|  |
| --- |
| **For ALL projects, submit the following with the BMP Closeout Verification Form (check all that are attached):**  Photographs: A photograph of each fully constructed BMP (or group of BMPs). |
| As-Built Construction Plans: An 11” X 17” copy of the most current applicable approved construction plan sheets:  Note: For each construction plan, the sheets submitted must incorporate all of the following:  A plan/cross-section of each verified as-built BMP, AND  The location of each verified as-built BMP |

**PART 4 Engineer of Work Certification**

By signing below, I certify that the BMP(s) listed in Table 2 of this Closeout Verification Form have been constructed and all are in substantial conformance with the approved plans and applicable regulations. I understand the Port of San Diego reserves the right to inspect the above BMPs to verify compliance with the approved plans and *Port of San Diego BMP Design Manual*. Should it be determined that the BMPs were not constructed to plan or code, corrective actions may be necessary before permits can be closed.

Please sign and provide your seal below.

[SEAL]

Professional Engineer's Printed Name:

\_\_\_\_Click here to enter text.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email: \_Click here to enter text.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone Number: \_Click here to enter text.\_\_\_\_\_\_\_\_

Professional Engineer's Signed Name:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_Click here to enter text.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PORT OF SAN DIEGO - OFFICIAL USE ONLY:**

For Port of San Diego Inspectors

Port of San Diego Department: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date verification received from EOW: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

By signing below, Port of San Diego Inspector concurs that BMPs listed on Table 2 of this Closeout Verification Form have been installed per plan.

Inspector Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Inspector’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_