Conceptual Storm Water Mitigation Plan (CSWMitP)

For

[Insert Development/Project Name]

[Insert Development Address/Location]

[INSERT PROJECT CITY, STATE ZIP CODE]

ASSESSOR'S PARCEL NUMBER(S):

[INSERT APN(S)]

PERMIT APPLICATION NUMBERS:

Planning Action, PUD, TSM or BP

Prepared for:

[INSERT APPLICANT NAME]

[INSERT ADDRESS]

[INSERT CITY, STATE ZIP CODE]

[INSERT TELEPHONE NUMBER]

Prepared by:

[INSERT CIVIL ENGINEER NAME]

[INSERT CIVIL ENGINEER COMPANY NAME]

[INSERT ADDRESS]

[INSERT CITY, STATE ZIP CODE]

[INSERT TELEPHONE NUMBER]

[Insert Report Date]



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4. Structural Pollutant Control BMP Design

[Note: red text in brackets is provided for guidance only. Highlighted yellow portions should be updated and red text should be deleted before the report is submitted to the City of El Cajon. More detailed descriptions of the requirements are presented in the City of El Cajon BMP Design Manual. This template is designed to assist project proponents/applicants comply with design requirements. While this template and the notes provided in it are intended to help the preparer, they are not intended as a complete substitute for the content of the City of El Cajon BMP Design Manual. Each applicant is responsible for understanding and complying with the requirements of the City of El Cajon BMP Design Manual. Table templates and maps to assist applicants in completing required information for tables and appendices as part of this report are available for download from the stormwater page on the City of El Cajon website: <http://www.cityofelcajon.us/Home/ShowDocument?id=8361>].

# Conceptual SWMitP purpose

The purpose of this Conceptual Storm Water Mitigation Plan (SWMitP) is to finalize the list of anticipated pollutants from the project, determine the proposed Site Design (SD)/Low Impact Development (LID), Source Control (SC), Structural Treatment Control (TC) and Hydromodification BMPs and principals. This SWMitP template helps to finalize the sizing calculations for storm water Best Management Plan (BMPs) and submit an appropriate maintenance plan.

BMP facility feature applies to all Priority Development Projects (PDP) by providing long-term solutions to water quality and help minimize downstream erosion. This Conceptual SWMitP is intended to ensure the effectiveness of the selected BMPs proposed by checking that they have been sized properly, maintenance is feasible, and that the design is based on long-term fiscal planning. The SWMitP is a living document subject to revisions as needed by the Engineer of Work and the City of El Cajon.

This Conceptual Storm Water Mitigation Plan (CSWMitP) shall be prepared in conjunction with the City of El Cajon’s BMP Design Manual, Hydromodification Management Plan (HMP), Critical Source Sediment plan, SUSMP Ordinance and Jurisdictional Runoff Management Plan (JRMP).

The SWMitP shall be prepared under the direction of a Civil Engineer registered in the state of California. The Registered Civil Engineer shall attest to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

For assistance, please visit the following website for more information:

<http://www.cityofelcajon.us/your-government/departments/public-works/water-resources/storm-water/stormwater-forms>

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# Project Information

Table 1 summarizes basic project information.

Table 2. Project Summary

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Name** | **City of El Cajon** | | | |
| **Address/Location** | **Capital Improvement**  **City of El Cajon**  **El Cajon, CA 92020** | | | |
| **APN(s)** | **000-000-00** | | | |
| **Permit Application Numbers:** | **Planning Action No.**  **Planned Unit Development (PUD):**  **Tentative Parcel Map/Tentative Subdivision Map:**  **Building Permit (BP):** | | | |
| **Total Project Size (acres or square feet)** | **Total Project Size: X-ft2**  **(X-Ac)** | **Total Impervious: Area: X-ft2**  **(X-Ac)** | **Total Pervious: Area: X-ft2**  **(X-Ac)** | **Percent Impervious (%): 100%** |
| **Project Description** | **Project Description** | | | |
| **Existing Site Features & Conditions including Topography** | **Existing Site Features & Conditions including Topography** | | | |
| **Constrains and opportunities for storm water control** | **Constrains and opportunities for storm water control** | | | |

## Requirements Applicability

A completed storm water requirements applicability checklist, comprised of forms I-1, I-2 and I-3, are included in Appendix A. Additional detail about applicable requirements is provided below

Hydromodification projects must meet additional flow control requirements. Table 2 indicates whether projects are exempt from hydromodification and critical coarse sediment yield requirements. Projects that are exempt from hydromodification management requirements are automatically exempt from implementing critical coarse sediment yield area management measures. Supporting explanation for any exemptions claimed is provided in the table, and maps or figures are provided where applicable.

[Form I-2 & I-3 also includes information about applicability of these requirements. See the City of El Cajon storm water website for a map of critical coarse sediment yield areas.]

<http://www.cityofelcajon.us/i-want-to/view/documents-forms-library/-folder-137>.

Table 2.1. Hydromodification Management Requirements Applicability

|  |  |  |
| --- | --- | --- |
| **Requirement** | **Exempt (Y/N)** | **If Exempt, Explain Why** |
| Hydromodification management |  |  |
| Critical coarse sediment yield area management measures |  |  |

## Eligibility for Special BMP Sizing or Selection Standards

Eligibility for reduced BMP sizing or using alternative BMPs is summarized in Table 3. Any items marked “Y” are explained briefly below the table.

Table 2.2. Applicability of Special BMP Sizing or Selection Standards

|  |  |
| --- | --- |
| **Project Type** | **Applicable (Y/N)** |
| **Redevelopment qualifying for reduced BMP sizing due to 50% rule (Y/N):** See Form I-2 for details. Only impervious area created or replaced is considered to be a Priority Development Project for projects that meet this criterion. BMPs are therefore sized only for the impervious area created or replaced. |  |
| **Retrofitting or redevelopment of existing paved alleys, streets or roads that are designed and constructed in accordance with the USEPA Green Streets Guidance (Y/N):**  Eligible projects may select and design BMPs in accordance with green streets guidance. See Appendix J of the BMP Design Manual for details. |  |

# 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(SD)/Low Impact Development (LID) BMPs have also been selected for the project, as summarized in Appendix 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 a structural BMP
2. Self-mitigating
3. De minimis
4. Self-retaining DMA treated using only site design (i.e., DCV after accounting for site design BMPs is zero)

The design capture volume (DCV) has been calculated for each DMA in categories A through D above. DCV calculations for these DMAs, including reductions to the DCV from site design BMP implementation, are included in Appendix C. Tables listing self-mitigating and de minimis DMAs and demonstrating how the listed BMPs meet the appropriate criteria from the BMP Design Manual are also included in Appendix C. [Standard DMA worksheets for DCV calculations, including a worksheet with example data filled in, and for listing self-mitigating and de minimis BMPs are available in the standard tables file available for download on the City’s stormwater website at: <http://www.cityofelcajon.us/i-want-to/view/documents-forms-library/-folder-137>]

Table 3 summarizes the DMAs by category and identifies applicable structural BMPs for each DMA that drains to a Structural Treatment Control BMP.

Table 3. DMA Summary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **A** | | **B** | **C** | **D** |
| **DMA ID** | **Structural Treatment Control BMP ID(s) that Provide Pollutant Control** | **Structural Treatment Control BMP ID(s) that Provide Hydromodification (Flow) 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. | | | | |  |
| 2. See BMP Design Manual Section 5.2.2 for characteristics required to qualify. | | | | |  |
| 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 using the DMA Summary Worksheet. | | | | | |

## Hydromodification Controls

Table 5 summarizes hydromodification points of compliance and design criteria. Hydromodification design calculations and other supporting information, including electronic copies of continuous simulation model files where applicable, are provided in Appendix F.

| Table 3.1. Hydromodification Points of Compliance (POC) Summary | | | |  |
| --- | --- | --- | --- | --- |
| **POC ID** | **Receiving Water Body** | **Low Flow Threshold1** | **DMA IDs that Drain to the POC** | **Area of DMAs Draining to POC (ft2)** |
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| **Note** |  |  |  |  |
| 1. Possible values are 0.1Q2, 0.3Q2, and 0.5Q2. Any value other than 0.1Q2 must be supported by channel assessment data. See BMP Design Manual Chapter 6. | | | | |

## Summary of Structural Treatment Control BMPs

All structural BMPs, including BMPs for pollutant control and hydromodification (flow) control, are summarized in Table 6.

| Table 3.2. Structural Treatment Control BMP Summary | |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **BMP ID No.** | **Structural BMP Type**  *(Select from the list below this table)* | | **Purpose(s)** | | **DMA(s) draining to BMP** | **Construction Plan Sheet No(s).** |
| **Pollutant Control** | **Hydromodification Control** |
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| Structural BMP Types: | | | | | | |
| * Harvest and use (HU-1) * Infiltration basin (INF-1) * Bioretention (INF-2) * Permeable pavement (INF-3) * Biofiltration with partial retention (PR-1) | | * Biofiltration (without retention) (BF-1) * Biofiltration with Nutrient Sensitive Media Design (BF-2) * Detention pond or vault for hydromodification management * Other (describe) | | | | |
| **Notes** | | | | | | |
| * *Proprietary Biofiltration (BF-3) can only be used if it meets the requirements of Appendix F of the BMP Design Manual.* * *Flow-thru treatment control BMPs, unless used solely for pre-treatment, may only be used as part of an alternative compliance program. See Section 1.8 of the BMP Design Manual for more information.* | | | | | | |

Appendix A

Applicability Checklists

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

|  |  |
| --- | --- |
| **Contents** | **Included (Y/N)** |
| Form I-1 Intake Form for ALL Permit Applications |  |
| Form I-2 Applicability of Stormwater Requirements for Standard and Priority Development Projects |  |
| Form I-3B Priority Development Project |  |
| Form I-4 Source Control BMP Checklist for all Development Projects (SPs & PDPs) |  |

Appendix B

Drainage Management Area Characteristics and Calculation

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

|  |  |
| --- | --- |
| **Contents** | **Included (Y/N)** |
| * 1. Self-Mitigating DMAs *(Not required during Conceptual phase)* |  |
| * 1. De Minimis DMAs (Not required during Conceptual phase) |  |
| * 1. DMA Design Capture Volume Calculations   Form B-2.1 Design Capture Volume |  |

[Standard table formats for each of the above items are provided in PDF format and are available for download on the City’s stormwater web page: <http://www.cityofelcajon.us/i-want-to/view/documents-forms-library/-folder-137>]

Appendix C

Drainage Management Area and Hydromodification Exhibit

An exhibit illustrating the delineated DMAs is included in Appendix C.

The exhibit includes the following:

* Delineated DMA areas, along with a DMA ID (i.e., a name or ID number) for each DMA
* Natural and engineered conveyances within the project area and connections to offsite drainage systems
* Proposed buildings, paved areas, and other impervious surfaces
* Hydromodification point(s) of compliance, if applicable
* Critical coarse sediment yield areas to be protected, if any
* Pollutant source areas that require installation of pre-treatment BMPs, if applicable
* 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)
  + Structural BMPs for pollutant control and hydromodification control

Appendix D

Structural Pollutant Control BMP Design

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

|  |  |
| --- | --- |
| **Contents** | **Included (Y/N)** |
| 1. Harvest and Use Feasibility Screening (when applicable)   *Required unless the entire project will use infiltration BMPs* |  |
| 1. Categorization of Infiltration Feasibility Condition (when applicable)   *Required unless the project will use harvest and use BMPs* |  |
| 1. Pollutant Control BMP Design Worksheets / Calculations |  |
| 1. Geotechnical Report (when applicable) |  |
| 1. Impairments and Pollutants of Concern |  |

[Standard table formats for each of the above items are provided in PDF format and are available for download on the City’s stormwater web page: <http://www.cityofelcajon.us/i-want-to/view/documents-forms-library/-folder-137>]