STORMWATER CONTROL PLAN - INSTRUCTIONS

How to complete and submit a Stormwater Control Plan for Parcel projects.

SCP SUBMITTAL REQUIREMENTS

Projects that create and/or replace 5,000 square feet or more of impervious surface are required to submit a Stormwater Control Plan (SCP) in compliance with the San Francisco Stormwater Management Ordinance and *San Francisco Stormwater Management Requirements and Design Guidelines* (SMR). The SCP submittal is separate from any documentation submitted to the Department of Building Inspection (DBI) for a Site or Building Permit. Please refer to the Typical SCP Project Review Process diagram on page 2.

- The SCP review process consists of two review stages: **Preliminary SCP** and **Final SCP**.
- An **SCP Review Fee Form** (and payment check) must be included in each submittal.
- Prior to submittal of a Preliminary SCP, project teams are encouraged to discuss the proposed stormwater management approach with project review staff at a **pre-application meeting**.
- Project teams must submit a Modified Compliance Application prior to submittal of the Preliminary SCP (if applicable).
- DBI will not issue a Site or Building Permit until the SFPUC approves the **Preliminary SCP.**
- DBI will not issue a Certificate of Final Completion (CFC) until the SFPUC approves the **Final SCP,** the property owner signs, submits and records the **Maintenance Agreement**, and the project applicant submits a signed **Certification of Acceptable Construction**.

A complete **Stormwater Control Plan** should include the following per the SCP **Table of Contents**:

SCP Review Fee Form

Section 1: Project Information Form
Section 2: Project Narrative
Section 2A: Separate Sewer Area BMP Selection Form (SEPARATE SEWER AREA ONLY)
Section 3: Calculation Summary and Table
Section 4: Stormwater Management Plan(s)
Section 5: BMP Inspection Schedule
Section 6: BMP Maintenance Schedule
Section 7: Source Control
Appendix A: Calculation Spreadsheets or Modeling Output
Appendix B: Supporting Documentation
Appendix C: Construction Document Drawings (excerpts related to stormwater management)

SCP SUBMITTAL TIMELINE

The SFPUC staff review SCPs based on the **Typical SCP Project Review Process** diagram (page 2). **If your project elects to go straight to a DBI Building Permit, coordinate with the SFPUC to determine the review and approval process.**

Pre-Application Meeting: Coordinate with SFPUC to schedule a meeting early during the planning and team building process. Early coordination will minimize design issues when Site Permits are filed.

Preliminary SCP: Submit prior to or concurrent with a DBI Site or Building Permit submittal.

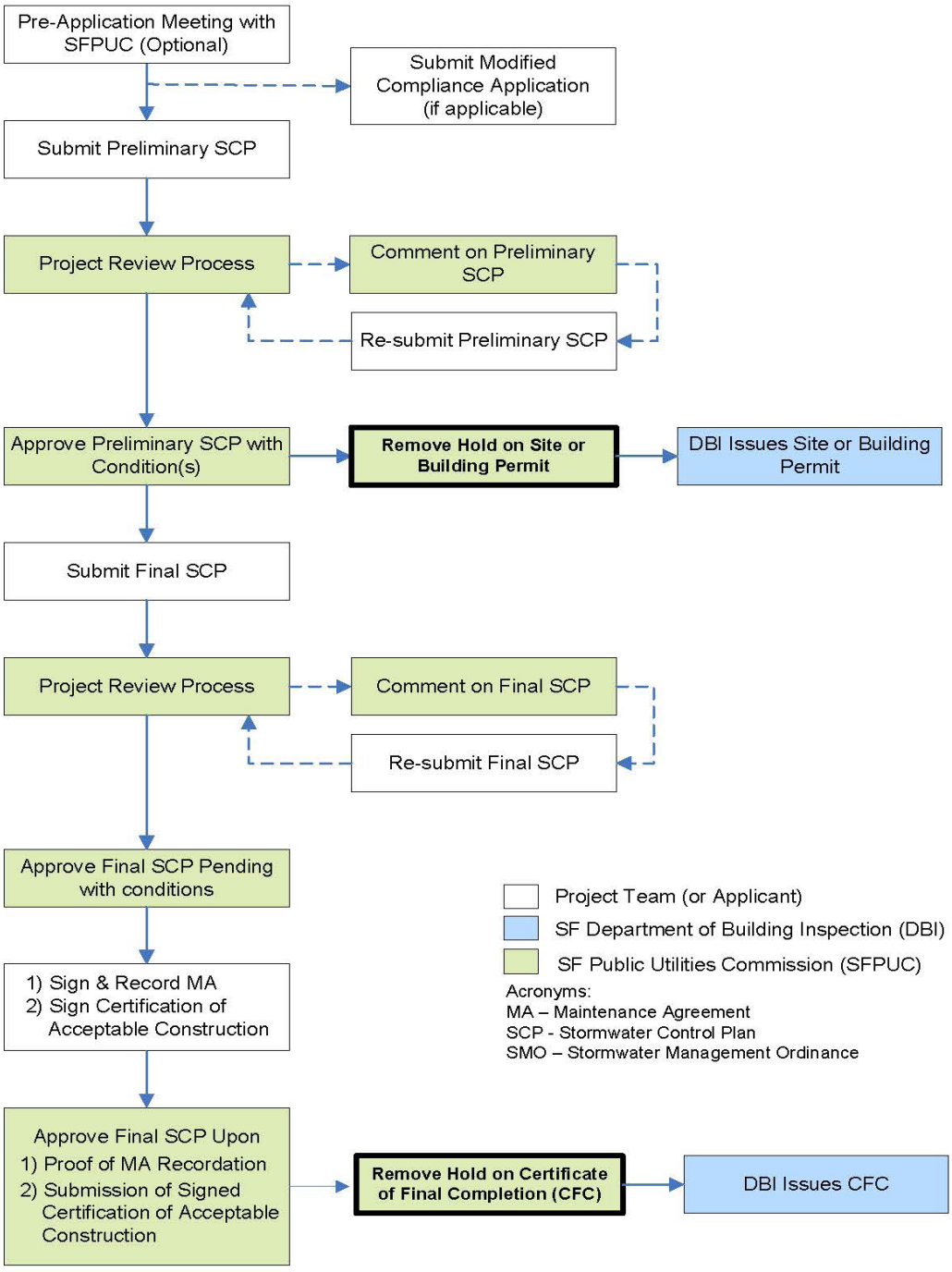
- Submit Modified Compliance Application (if applicable) **prior to** Preliminary SCP submittal.
- Attached plans should reflect design level typical of a Site Permit (e.g. 100% DD).
- Project schedules should plan for the possibility of more than one Preliminary SCP submittal prior to approval.

Final SCP: Submit concurrent with the DBI Addenda process and prior to foundation or vertical construction.

- Attached plans should reflect design level typical of a Building Permit (e.g. 100% CDs).
- Project schedules should plan for the possibility of more than one Final SCP submittal prior to approval.

STORMWATER CONTROL PLAN - INSTRUCTIONS

TYPICAL SCP PROJECT REVIEW PROCESS



STORMWATER CONTROL PLAN - INSTRUCTIONS

SCP INSTRUCTIONS

A complete SCP must include the following sections in sequential order. Refer to www.sfwater.org/smr for all supporting materials (active hyperlinks to each document are also included throughout this section).

SECTION 1: PROJECT INFORMATION FORM

Include the completed Project Information Form at the front of the Stormwater Control Plan (SCP).

- The completed Project Information Form must be submitted with both Preliminary and Final SCPs.
- The SCP Table of Contents must be accurately completed and reflect the contents of the SCP.
- Justify all items that have been omitted from the SCP submittal in the space provided at the bottom of the Table of Contents.
- **Preliminary SCP submittal**: The Statement of Certification must include the applicant's name and license number or unsigned stamp.
- **Final SCP submittal**: The Statement of Certification must include the applicant's name and license number with a signed and dated stamp, and Additional Certifications must be checked.

SECTION 2: PROJECT NARRATIVE

Include a concise narrative describing the proposed project. At a minimum, the Project Narrative must:

- Summarize the EXISTING conditions and PROPOSED development project.
- Summarize the opportunities and constraints for stormwater management, including any site conditions checked in the Project Description of the Project Information Form.
- Discuss the proposed stormwater management approach for achieving the performance requirements. Include a summary of the process used to select each proposed stormwater control Best Management Practice (BMP).
- Describe how the LID Principles and Strategies (see SMR Chapter 4 Task 4) were assessed and implemented in the stormwater site design.
- Summarize BMPs in Series and how they function (if applicable).
- For sites proposing rainwater harvesting, summarize the cistern operation and describe how the components of the rainwater harvesting system (including collection, treatment, storage, reuse, and overflow) are incorporated into the overall site design. Also describe how rainwater harvesting is integrated into other nonpotable systems at the site.
- If the project will be phased, discuss the plan for phasing and how stormwater compliance will be met at each phase of the project.

SECTION 2A: SEPARATE SEWER AREA BMP SELECTION FORM

SEPARATE SEWER AREA PROJECTS ONLY: Complete the Separate Sewer Area BMP Selection Form for separate sewer area projects (for more information see SMR Chapter 6).

STORMWATER CONTROL PLAN - INSTRUCTIONS

SECTION 3: CALCULATION SUMMARY AND TABLE

Provide a written Calculation Summary. This summary should clearly describe the stormwater BMP performance calculation methods and assumptions.

- Provide a written summary of the selected stormwater modeling calculation method(s), assumed design criteria, and data sources.
- For sites proposing rainwater harvesting, summarize the estimated water budget (i.e. on-site sources verses on-site demands).

Provide a Stormwater BMP Calculation Summary Table. This table should clearly show that the proposed overall design meets the performance requirements of the SMR. Refer to the Calculation Summary Table in the *Example Stormwater Management Plan with Calculations* for guidance.

- **Combined Sewer Areas - Provide the following results for individual Sub-Watershed Areas and sum for the full site:**
  - EXISTING peak flow rate (cfs) and total volume (cf)
  - PROPOSED peak flow rate (cfs) and volume reduction (cf)
  - REQUIRED percent reduction in peak flow rate and volume to meet the performance requirements (full site only)
  - ACHIEVED percent reduction in peak flow rate and volume (full site only)
- **Separate Sewer Areas - Provide the following results for individual Sub-Watershed Areas and sum for the full site:**
  - Total, treated, and untreated impervious area; treated area percentage.
  - Total, treated, and untreated runoff volume from impervious surfaces; treated volume percentage.

SECTION 4: STORMWATER MANAGEMENT PLAN (SMP)

NOTE: The Stormwater Management Plan (SMP) must be a black and white document, as it will be recorded with the Maintenance Agreement.

Provide a SMP in an 11x17 format (that is also legible in 8.5x11, as this will be attached to the Maintenance Agreement). This drawing is **not a construction document**; it is a new drawing created solely for the SCP and for recording maintenance obligations. Confirm that the SMP coordinates with the attached Construction Document drawings. Refer to the *Example Stormwater Management Plan with Calculations* for guidance in creating a correct and complete SMP.

- Include title block with project name, address, owner's name and contact information, designer's name and contact, project phase, north arrow, and scale.
- Show as a compiled "birds-eye" plan including adjacent sidewalks (e.g. if there is a green roof on the 5th story and a biofiltration planter on the 2nd story, the SMP should show both). Also show adjacent roads, properties, and any areas contributing overland flow from outside or inside the project boundaries (as applicable).
- Show each proposed pervious and impervious surface type (including stormwater BMPs) with a **distinct hatching type**. Label all BMPs with an **ID number** (e.g. for vegetated roof, VR-01, VR-02, etc.). Use the same BMP ID number in the Maintenance and Inspection Schedules.

(cont. on the following page)

STORMWATER CONTROL PLAN - INSTRUCTIONS

SECTION 4: SMP (CONTINUED)

- If multiple sewer connections are proposed, clearly **delineate and label all areas draining to distinct sewer connections, known as Sub-Watershed Areas** (eg. SWA-01, etc.). Provide a separate BMP Sizing Calculator for each Sub-Watershed Area.
- Within each Sub-Watershed Area, clearly **delineate and label all Drainage Management Area boundaries** (e.g. DMA-01, etc.) for the entire site, including uncaptured areas. Each DMA should include the portion of the project site that drains to a single BMP (or group of hydraulically connected BMPs) and the area of the BMP itself, or the portion of the project site that drains directly to the sewer system. Label the size of each DMA (square feet).
- Provide an **Area Summary Table** for each Sub-Watershed Area that is broken down into surface types (including BMPs) and DMAs. Present the data so that areas for whole site can be summed and easily cross-referenced with the Calculator Spreadsheet(s). Confirm that the Area Summary Table is coordinated with the the SWAs and DMAs shown in the SMP.
- Provide a **schematic piping layout** for the project that includes all necessary information to clearly demonstrate the stormwater path of travel. Include roof slope break lines, area and roof drains, and downspouts; pipes from drains to BMPs and from BMPs to sewer connections; underdrains, cleanouts, and overflows associated with BMPs; and pipes from uncaptured areas to sewer connections. Provide flow direction arrows for sheet flow and pipe flow. Coordinate with the Civil and Plumbing CDs.
- Clearly show the overflow connection to the sewer system and emergency relief routing.
- Where relevant, show and label all key stormwater BMP setbacks that define areas of non-infiltration, as described in SMR *Appendix C: Infiltration-based BMP Criteria*.
- Provide a **typical detail** or **section** for each BMP type proposed, showing information necessary to confirm Calculation Spreadsheet inputs and show context within the site design. Details pertaining to constructability (e.g. liner attachments, cleanouts, etc.) should be provided in the CDs.
- If rainwater harvesting is proposed, provide a cistern section showing tank dimensions; maximum and active volumes; inlet, outlet, float switch, and overflow elevations; and maintenance access.
- **For Final SCP Submittal:** Include the electronic stamp of an engineer or landscape architect licensed in the State of California.

SECTION 5: BMP INSPECTION SCHEDULE

Complete the BMP Inspection Schedule Template provided in the Technical Report Templates or provide a custom Inspection Schedule for enhanced inspection requirements (e.g. for proprietary vegetated roof or rainwater harvesting systems, etc.).

- Refer to the Typical Inspection Activities in the SMR *Appendix A: BMP Fact Sheets* for recommended activities and frequency.
- Customize the recommended activities provided in the SMR to reflect the specific proposed design.

NOTE: The Final BMP Inspection Schedule(s) will be recorded with the Maintenance Agreement. Refer to the Maintenance Agreement Recordation Process memo.

STORMWATER CONTROL PLAN - INSTRUCTIONS

SECTION 6: BMP MAINTENANCE SCHEDULE

Complete the BMP Maintenance Schedule provided in the Technical Report Templates or provide a custom BMP Maintenance Schedule for enhanced maintenance requirements (e.g. for proprietary vegetated roof or rainwater harvesting systems, etc.).

- Refer to the Typical Maintenance Activities in the SMR *Appendix A: BMP Fact Sheets* for recommended activities and frequency.
- Customize the recommended activities provided in the SMR to reflect the specific proposed design.
- NOTE: The Owner is responsible for securing maintenance funding for all BMPs constructed in compliance with the SMR. However, a description of the funding mechanism and annual maintenance cost is not required.

NOTE: The Final BMP Maintenance Schedule(s) will be recorded with the Maintenance Agreement. Refer to the Maintenance Agreement Recordation Process memo.

SECTION 7: SOURCE CONTROL

Complete the Source Control Template provided in the Technical Report Templates or provide equivalent.

- Check all applicable pollutant sources that may be present at the site along with corresponding structural and operational source control BMPs. Note that source control BMPs are not post-construction BMPs and do not need to be included in any construction drawings or maintenance materials in the SCP.
- Refer to the SMR *Appendix A: BMP Fact Sheets* for resources on required source control measures.

APPENDIX A: CALCULATION SPREADSHEETS OR MODELING OUTPUT

Calculation spreadsheets or modeling output should demonstrate that the SMR performance measures have been met by providing:

- Relevant stormwater calculations per the Accepted Hydrologic Calculation Methods memo, including but not limited to:
  - The SFPUC BMP Sizing Calculator(s) for Combined Sewer Areas and/or Separate Sewer Areas, or
  - Hydrologic model with input and output (e.g. SWMM, Pondpack, etc.).
  - Summary of design criteria and/or assumptions.
- Orifice control sizing calculations.

STORMWATER CONTROL PLAN - INSTRUCTIONS

APPENDIX B: SUPPORTING DOCUMENTATION

As appropriate, include additional site-specific documentation to support the stormwater management design and assumptions. Only attach the pages relevant to compliance with the SMR and clearly identify relevant information for ease of review. **Please do not attach full specifications, geotechnical reports, or manuals**.

Both Preliminary SCPs and **Final SCPs** are required to include the following supporting documentation:

- Proposed BMP proprietary product information (e.g. cut sheets, link to manufacturer's Operations and Maintenance documentation, etc. - one or two pages)
- Boring logs, soil type description, and/or groundwater elevation data
- Soil contamination analysis results (if applicable)
- If the proposed infiltration-based BMPs do not meet the setback requirements outlined in the SMR *Appendix C: Criteria for Infiltration-based BMPs*, **include signed letters from the geotechnical and/or structural engineer** stating that they have reviewed and approved the proposed design.

Only Final SCPs are required to include the following additional supporting documentation (however, projects are also encouraged to include these in Preliminary SCPs if available):

- Infiltration testing results and test methodology
- Project specifications excerpts. Include specific pages from the project specifications that relate to stormwater BMP materials or components, including aggregates, soils, green roof media, permeable paving, etc.
- BMP proprietary product sizing and/or specifications
- **Non-potable Water Budget Application** and **copy of Engineering Report** that is submitted to SFDPH (for projects proposing rainwater harvesting systems)

APPENDIX C: CONSTRUCTION DOCUMENT DRAWING EXCERPTS

Attach Construction Document drawings that adequately depict the existing and proposed conditions and are **relevant** to compliance with the *SMR*. Please include the minimal number of sheets reproduced from the most recent set of construction drawings to clearly present the proposed stormwater BMPs. All drawings should include a project title block with submittal description (e.g. 100% DD,100% CD, etc.). **NOTE: For FINAL SCP, provide a digital stamp on all plans; wet stamp or signature NOT required.**

Relevant plans may include, as needed:

- **Cover Sheet:** Include the design drawing set Cover Sheet for reference.
- **Existing Conditions Plan (or Site Survey):** A clearly labeled site and topographic survey.
- **Site Plan:** Proposed layout of overall project site.
- **Materials Plan(s):** Proposed location of materials related to stormwater BMPs (e.g. permeable paving, landscaping, etc.).
- **Grading Plan(s):** (may be combined with Drainage Plan): Proposed grading with clearly labeled site contours, spot elevations, site slopes.
- **Sidewalk Improvement Plan(s):** As needed when stormwater BMPs are proposed in sidewalk ROW, per DPW permit requirements.

STORMWATER CONTROL PLAN - INSTRUCTIONS

APPENDIX C: CD EXCERPTS (CONTINUED)

- **Drainage Plan(s)/ Utility Plan(s):** Proposed overall drainage system including connections to the combined or separate sewer system.
- **Landscape Plan(s):** Proposed BMP Planting Plan and BMP Plant Lists including species and quantities of all trees, plants, and seed mixes.
- **Architectural Plan(s):** Include if these plans show elements related to stormwater BMPs (e.g. green roof, bioretention planters, etc.).
- **Plumbing Plan(s):** Proposed plumbing plans showing pipe routing to and from BMPs. If proposing rainwater harvesting, provide a vertical stormwater riser diagram and cistern detail (see below for required components). **Note: Plumbing Plans are typically required only with the Final SCP. However, if rainwater harvesting is proposed, they are required with the Preliminary SCP.**
- **Detail Sheet(s):** Include sheets that contain all details and information necessary to ensure that proposed BMP(s) are constructed properly, such as the items below. Refer to the SMR *Appendix B: Green Infrastructure Typical Details and Specifications* for guidance.
  - Stormwater BMP plans and sections
  - Details relating to constructability and maintenance including cleanouts, liner attachments, overflow structures, orifice control structures, underdrains, etc.
  - Planting details for vegetated stormwater BMPs
  - Rainwater harvesting system showing cistern material and dimensions; maximum and active volumes; inlet, outlet, float switch, and overflow elevations; and maintenance access
  - Schematic line diagrams showing stormwater system configuration
  - Other details related to stormwater systems required to construct stormwater BMPs

SCP SUBMITTAL FORMAT

Please submit the following for each **Preliminary SCP** and **Final SCP**:

- **One (1) Hardcopy:** Bound 8.5 x 11" document with 11 x 17" plan foldouts. **NOTE: Full-size plans and stapled reports are not accepted.**
- **SCP Review Fee Form** with payment check made out to "San Francisco Water Power and Sewer" (Note: Payment is required by SFPUC ONLY)
- **One (1) Electronic Copy:** Submit as one collated PDF file. Provide means for SFPUC Project Review staff to download file or submit a CD with the Hardcopy.

Submit all SCPs or direct questions to either the SFPUC or the Port, depending on overseeing jurisdiction:

Attn.: SCP Project Reviewer
c/o Ken Kortkamp
SFPUC, Wastewater Enterprise
525 Golden Gate Ave, 11th Floor
San Francisco, CA 94102
stormwaterreview@sfwater.org

Attn.: Port Project Reviewer
c/o Richard Berman
The Port of San Francisco
Pier 1
San Francisco, CA 94111
Richard.Berman@sfport.com

NOTE: If the SCP is incomplete, not submitted in the required format, or payment has not been received, the SFPUC reserves the right to not accept the SCP and request that the Project Team resubmit.

STORMWATER CONTROL PLAN - INSTRUCTIONS

SCP PREPARATION CHECKLISTS

To streamline the SCP review and approval process, the checklists below have been prepared for the Project Team's internal use prior to submittal.

The SCP Preparation Checklists contain:
- Preliminary SCP Preparation Checklist
- Final SCP Preparation Checklist

Remember that each SCP is reviewed on a case-by-case basis and all line items in the Preparation Checklists may not apply to your particular project. A complete and carefully prepared SCP with proper QA/QC will reduce review time and increase the potential for approval.

MAINTENANCE AGREEMENT AND CERTIFICATION OF ACCEPTABLE CONSTRUCTION

Maintenance Agreement: Prior to submittal of the Final SCP, the Project Team must initiate coordination of the Maintenance Agreement with the Owner using the Maintenance Agreement Template and the Maintenance Agreement Recordation Process Memo. The Maintenance Agreement must be signed and recorded in order to receive SCP Final Approval and the DBI Certificate of Final Completion.

Determine appropriate Maintenance Agreement template

- Use the Maintenance Agreement Template for privately funded development projects.
- Alternate Maintenance Agreement templates are available upon request for projects with special circumstances, such as Federal or CCSF funded/owned projects.

NOTE: All plans and exhibits submitted with the Maintenance Agreement will be recorded and become part of the permanent record for the property.

Certification of Acceptable Construction: A Certification of Acceptable Construction signed by the project's stormwater designer (a Professional Civil Engineer or Registered Landscape Architect in California) must be submitted to the SFPUC in order to receive SCP Final Approval and DBI Certificate of Final Completion.