

# San Francisco

Exploring the unique storm water requirements in Golden Gate City

March 2020



## The Monthly Dirt

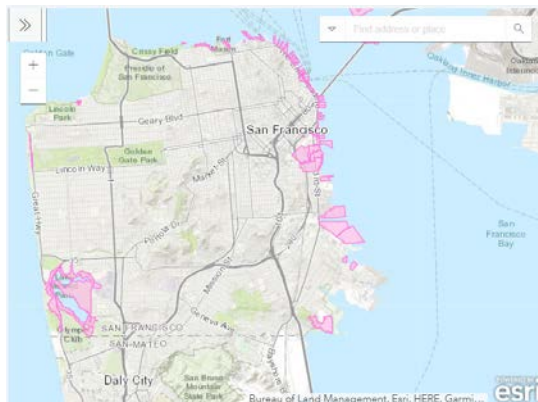
a monthly newsletter on the California Construction General Permit by WGR Southwest, Inc.

Who doesn't enjoy an outing to San Francisco? Whether you are taking a stroll in the Presidio, biking across the Golden Gate bridge, dining at Fisherman's Wharf, shopping in China Town, riding the famous cable cars, or just sampling chocolate at Ghirardelli Square, the sites, sounds, tastes, and electricity in the air connect with all of your senses. San Francisco is unique not only in atmosphere, but also in the way it manages storm water. Ninety percent of San Francisco drains into a **combined sewer system (CSS)**: the drainage pipes below the historic streets handle both sanitary sewage and storm water runoff. This is a relatively rare approach to waste water handling in California, occurring only in older cities such as San Francisco and parts of Sacramento. The State Water Board's Construction General Permit states that it is not applicable to any construction activities occurring within combined sewer system drainage areas. Now does this mean that San Francisco construction projects are "off the hook" when it comes to SWPPPs, BMPs, and QSP inspections? Not at all! This edition of **The Monthly Dirt** will address what erosion and sediment control measures and permitting requirements apply to projects in most of the City ... *San Francisco Style!*

**STORM WATER PERMITTING** Projects that disturb more than 1 acre of soil and are within the City's CSS are required to comply with the [City's Construction Site Runoff Control Ordinance](#), and must submit an Erosion Sediment Control Plan (ESCP) or a Storm Water Pollution Prevention Plan (SWPPP) and a [Construction Site Runoff Control Project Application](#) to the San Francisco Public Utilities Commission (SFPUC). Projects that disturb more than 1 acre but are within the City's MS4 area (draining to the ocean), must file for CGP coverage, submit a copy of the SWPPP to SFPUC, along with the completed [Construction Site Runoff Control Project Application](#). Smaller projects disturbing between 5,000 ft<sup>2</sup> and 1 acre are required to comply with the City's Construction Site Runoff Control Ordinance and submit an Erosion Sediment Control Plan (ESCP) or a Storm Water Pollution Prevention Plan (SWPPP), and a Construction Site Runoff Control Project Application to SFPUC. Very small projects, disturbing less than 5,000 ft<sup>2</sup>, are still required to implement best management practices, but do not need to submit a permit application to SFPUC.

**THE SF ORDINANCE** – All projects that disturb more than 5,000 ft<sup>2</sup> of soil are subject to the City's storm water ordinance. Although there are similarities with the CGP, the City's requirements are unique and include the following:

- Maintain a copy of the Construction Site Runoff Control Permit and approved plans and reports (e.g., ESCP) on the work site and available for inspection during all working hours.



Areas shown in pink shading are outside of the City's CSS and would require coverage by the CGP.

- Conduct daily inspections, maintenance, and repair on all BMP measures and maintain reporting information.
- Allow inspections by the City's Storm Water Manager, as deemed necessary.
- Notify the City's Storm Water Manager at least two working days before the following milestones: (1) Start of construction; (2) BMP measures are completely installed and stabilized; (3) final grading has been completed; and (4) project completion.
- In the event of an illicit discharge, provide immediate notification to the City's Storm Water Manager if any suspected, confirmed, or unconfirmed release of pollutants creates a risk of discharge into San Francisco's sewer system. Responsible parties should take all necessary steps to ensure the detection, containment, and clean-up of such releases.

When it comes to preparing ESCPs or SWPPPs, the City has some unique requirements:

- ESCPs / SWPPPs for projects on slopes of 15% or greater are to be prepared by a Qualified SWPPP Developer (QSD).
- ESCPs / SWPPPs for projects on slopes less than 15% are to be prepared by a QSD or other person designated by the property owner.

The BMP requirements in the City's ordinance are very similar to those in the CGP and they are included in the [City's BMP Handbook](#). However, the City does call out specific storm season BMPs, including:

- ⇒ All paved areas should be kept clear of earth material and debris. The site should be maintained so as to minimize sediment runoff to any storm drain system.
- ⇒ Sandbags or gravel bags should be stockpiled onsite and placed at intervals shown on ESCPs when the rain forecast is 40% or greater, or when directed by the inspector.
- ⇒ During periods when storms are forecasted, excavated soils should not be placed in streets or on paved areas.
- ⇒ Any excavated soils should be removed from the site by the end of the day. If stockpiles are necessary, they should be covered with a secured tarp or surrounded with fiber rolls, a gravel sediment barrier, silt fence, or other runoff controls.
- ⇒ Inlet controls should be used as needed (e.g., sediment traps, gravel berms, or sandbags) for storm drains adjacent to the project site or stockpiled soil.
- ⇒ The function and performance of BMPs should be maintained during rainfall events. Failing BMPs, such as overflowing basins, breaches in dikes, etc., should be addressed as soon as possible, and any additional measures should be implemented as necessary.
- ⇒ Inspections should be conducted prior to and after rain events and daily during extended rain events for the following BMPs: hydraulic mulch, straw mulch, soil binders, slope drains, fiber rolls, silt fences, sediment traps, and stockpile covers.
- ⇒ BMPs should be repaired or replaced as needed.
- ⇒ After rainstorms, the property owner or contractor should check for and remove sediment trapped by sandbags, fiber rolls, silt / sediment fences, and other BMPs. These BMPs should be replaced if deterioration is evident.

The City ordinance restricts when projects may occur. For projects **on slopes less than 5%**, vegetation clearing, land grading, or any other soil-disturbing activities are permissible throughout the year. But, for projects **on slopes 5% and greater**, vegetation clearing, land grading, or any other soil disturbing activities should only take place between April 1<sup>st</sup> and October 15<sup>th</sup> of any given year. Extensions of the October 15<sup>th</sup> deadline may be authorized by the SFPUC upon written request **if all of the following conditions are met**: the project is substantially complete; the work remaining can be finished in a short period of time; completion of the work involved will lessen the amount of erosion and/or sedimentation expected in the future; the BMPs specified on the ESCP/SWPPP have been installed prior to October 1<sup>st</sup>; the BMPs have been inspected and found to be adequate; and weather conditions are favorable.

**GREEN INFRASTRUCTURE** – Post-construction Storm water Management Requirements (SMRs) apply to different types of projects. The City categorizes projects by small and large; as well as, within a CSS or in the MS4. **Large Projects** are those creating and/or replacing 5,000 ft<sup>2</sup> or more of impervious surface and they must meet the Green Infrastructure SMRs. Small Projects are those creating and/or replacing between 2,500 and 5,000 ft<sup>2</sup> of impervious surface in areas served by separate sewers (MS4) and have less stringent requirements. Requirements for large projects that are located within the CSS area include:

- For sites with existing imperviousness of less than or equal to 50%, storm water runoff peak flow rate and volume shall not exceed pre-development conditions for the 1- and 2-year 24-hour design storm.
- For sites with existing imperviousness of greater than 50%, storm water runoff peak flow rate and volume shall be decreased by 25% from the pre-development conditions for the 2-year 24-hour design storm.

For projects within the MS4 area:

- In SFPUC jurisdiction areas, capture and treat the rainfall from the 90<sup>th</sup> percentile, 24-hour design storm.
- In Port jurisdiction areas, capture and treat the rainfall from the 85<sup>th</sup> percentile, 24-hour design storm.

Green infrastructure used to meet the SMR requirements must be designed in accordance with the [City's Green Infrastructure Details](#). **MD**

## Training Opportunities

*Are you working from home? So are we, but this is a great time to do some training or to get your PDHs done. Through April 10<sup>th</sup> it's free on FORGE!*



**Scheduled 2020 Events** (dates pending due to COVID-19)

**April 28—30:** QSP/QSD Class

**May 25—31:** PDU Week

**June 4:** BMP Roundup

**July 28—30:** QSP/QSD Class

**August 14:** Kayak Tour of the Lower Moku-lumne River Watershed

**Sept. 21—25:** Storm Water Awareness Week

**October 27—29:** QSP/QSD Class

**November 12:** BMP Roundup

### What Actually Happens to SF's Sewage?

*Check out the news story below to see what happens to storm water once it enters one of San Francisco's drain inlets.*



**Need a SWPPP or a QSP Inspector?  
Call us for a free quote.**

*Please contact us if you have any questions ...*

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**Technical Questions about Environmental Compliance?**

Call ...

**Mike Lewis**, QSP, CESSWI (Northern California)

[mlewis@wgr-sw.com](mailto:mlewis@wgr-sw.com), (209) 334-5363 ext. 116

**Gray Martz**, QSP/QSD, PG (Southern California)

[jgmartz@wgr-sw.com](mailto:jgmartz@wgr-sw.com), (562) 799-8510 ext. 1002

**FORGE**

STRENGTHEN YOUR CRAFT

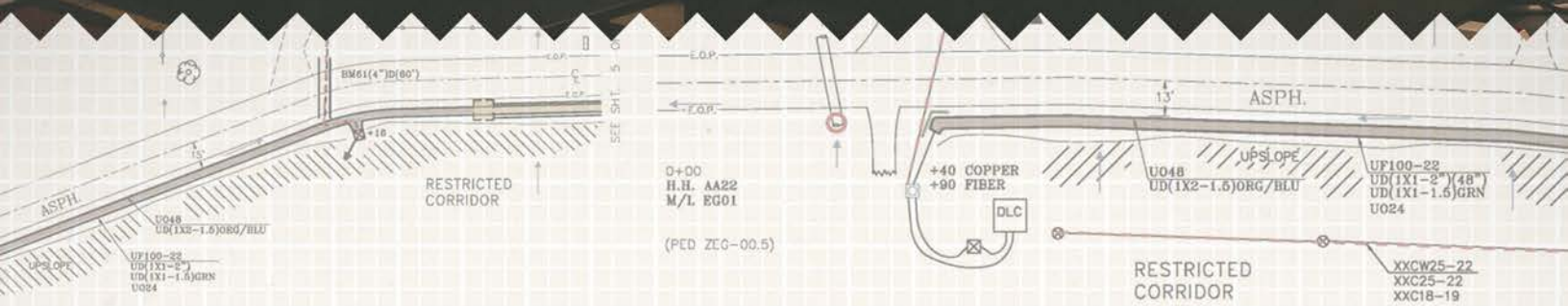
Is this you?



**Us too.**

So, let's get some PDHs done. Our three most popular courses are **free** until April 10th.

[wgr-sw.com/training](http://wgr-sw.com/training)



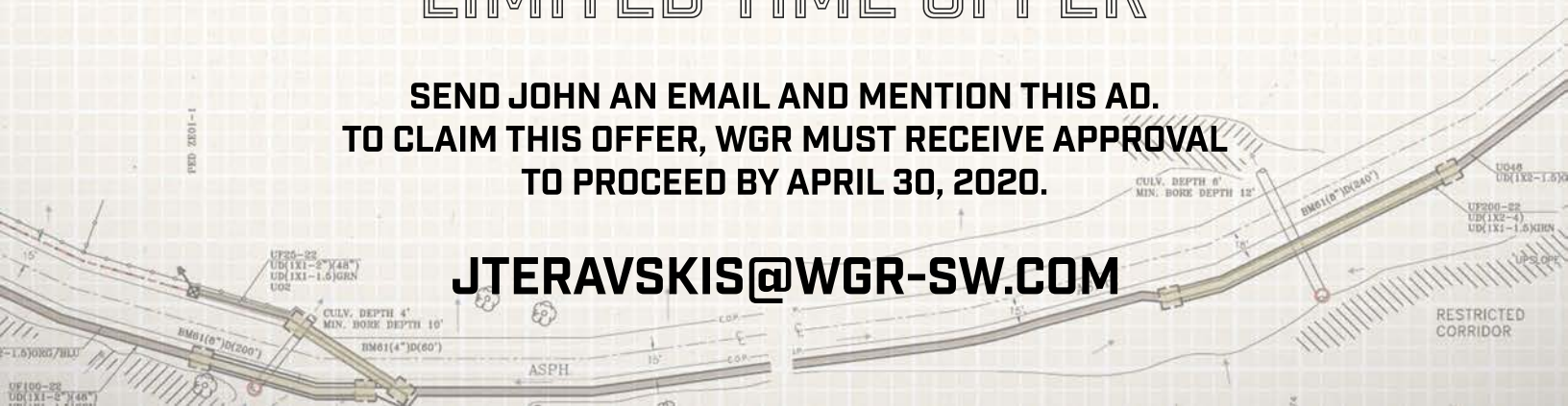
**NEED A CONSTRUCTION SWPPP?**

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SEND JOHN AN EMAIL AND MENTION THIS AD.  
TO CLAIM THIS OFFER, WGR MUST RECEIVE APPROVAL  
TO PROCEED BY APRIL 30, 2020.

[JTERAVSKIS@WGR-SW.COM](mailto:JTERAVSKIS@WGR-SW.COM)



# San Francisco's Stormwater Management Requirements and Design Guidelines



**The San Francisco Stormwater Management Requirements and Design Guidelines (SMR) describe the requirements for stormwater management for development and redevelopment projects subject to the San Francisco Stormwater Management Ordinance and give project proponents the tools to achieve compliance.**

## **THE GOAL OF THE SMR IS TO PROTECT AND ENHANCE THE FUNCTION OF THE CITY AND COUNTY OF SAN FRANCISCO'S SEWER SYSTEM AND THE QUALITY OF RECEIVING WATERS BY:**

- managing stormwater runoff from development that would otherwise mobilize pollutants and degrade local water quality;
- reducing stormwater run-off rates, volume, and nonpoint source pollution whenever possible, through stormwater management controls, and ensuring that these management controls are safe and properly maintained.

## **DOES MY PROJECT NEED TO COMPLY?**

**Large Projects** creating and/or replacing 5,000 square feet or more of impervious surface must comply with the SMR.

**Small Projects** creating and/or replacing between 2,500 and 5,000 square feet of impervious surface in areas served by separate sewers must meet less stringent requirements (see reverse).

## **IN ORDER TO PROVE COMPLIANCE WITH THE SMR, LARGE PROJECTS MUST:**

1. Determine if located in an area served by the combined sewer or separate storm sewer.
2. Meet applicable Performance Requirements (see reverse).
3. Submit a Preliminary Stormwater Control Plan (SCP) in accordance with the SCP Instructions (available on our website) to the SFPUC for review and approval prior to receiving a Site or Building Permit.
4. Submit a Final SCP to the SFPUC for review and approval to the SFPUC prior to receiving the Certificate of Final Completion.
5. Sign and record a Maintenance Agreement and Certification of Acceptable Construction.

## **SMALL PROJECTS IN SEPARATE SEWER AREAS MUST:**

1. Implement at least one Site Design Measure (see reverse).
2. Submit estimated runoff reduction volume using the State Water Board SMARTS Calculator.

## **Stormwater Management Requirements and Design Guidelines Resources**

**STORMWATER CONTROL PLAN APPLICATION** Each Large project subject to the SMR is required to submit a Stormwater Control Plan (SCP) to the SFPUC for review and approval to ensure project compliance. The SFPUC has developed [SCP Instructions](#), [SCP Preparation Checklists](#), [an Example Stormwater Management Plan with Calculations](#), [a Project Information Form](#), and [SCP Technical Report Templates](#) to assist with the development of the SCP.

**STORMWATER BMP FACT SHEETS** The [BMP Fact Sheets](#) provide design guidance for stormwater Best Management Practices (BMPs) that can be used to comply with the SMR. [Appendix C: Criteria for Infiltration-based BMPs](#) and [Appendix D: Vegetation Palette](#) can inform BMP design and plant selection.

**GREEN INFRASTRUCTURE TYPICAL DETAILS AND SPECIFICATIONS** The [Green Infrastructure Typical Details and Specifications](#) serve as templates to guide appropriate BMP design and construction. Modify as needed to suit your project.

**BMP SIZING CALCULATORS** The SFPUC has developed two BMP Sizing Calculators (one for [combined sewer areas](#) and one for [separate sewer areas](#)) to help project applicants estimate appropriate BMP sizing to achieve compliance. Small projects should use [SMARTS Calculator](#).

**MAINTENANCE AGREEMENT** The SMR requires a Maintenance Agreement and [Certification of Acceptable Construction](#) for all projects to ensure that BMPs are appropriately built and continue to provide effective stormwater management over time. The SFPUC has developed a [Maintenance Agreement Template](#) and [Recordation Instructions](#).

To access these resources and find more information, please visit [www.sfwater.org/smr](http://www.sfwater.org/smr) or email us at [stormwaterreview@sfwater.org](mailto:stormwaterreview@sfwater.org)

The City of San Francisco is encouraging the development of green infrastructure throughout its urban landscape via the Stormwater Management Requirements and Design Guidelines, including green roofs, bio-retention basins and permeable pavement.



## LARGE PROJECT PERFORMANCE REQUIREMENTS

To comply with the SMR, Large Projects (creating and/or replacing more than 5,000 square feet of impervious surface) must meet the applicable performance requirements, depending on the type of sewer system serving the project and jurisdiction:

### Combined Sewer Areas

- For sites with existing imperviousness of less than or equal to 50%, stormwater runoff peak flow rate and volume shall not exceed pre-development conditions for the 1- and 2-year 24-hour design storm.
- For sites with existing imperviousness of greater than 50%, stormwater runoff peak flow rate and volume shall be decreased by 25% from the pre-development conditions for the 2-year 24-hour design storm.

### Separate Sewer Areas:

- In SFPUC jurisdiction areas, capture and treat the rainfall from the 90<sup>th</sup> percentile, 24-hour design storm.
- In Port jurisdiction areas, capture and treat the rainfall from the 85<sup>th</sup> percentile, 24-hour design storm.

## SMALL PROJECT REQUIREMENTS

To comply with the SMR, Small Projects (creating and/or replacing 2,500 to 5,000 square feet of impervious surface) in separate sewer areas must implement one or more **Site Design Measure** and submit the project's estimated runoff reduction volume to the SFPUC using the State Water Board [SMARTS Calculator](#).

### Site Design Measures

Soil Quality Improvement	<i>Improvement of soil through soil amendments and the creation of a microbial community.</i>
Tree Planting and Preservation	<i>Planting new trees and/or preserving healthy established trees.</i>
Disconnection of Rooftop and Impervious Area	<i>Rerouting roof drainage pipes to cisterns or permeable areas (not to sewer).</i>
Permeable Pavement	<i>Pavement that allows runoff to pass through it to the soil below, thereby reducing runoff from a site.</i>
Green Roof	<i>A vegetative layer grown on a roof (rooftop garden).</i>
Vegetated Swale	<i>A vegetated open channel designed to treat and attenuate runoff.</i>
Rainwater Harvesting	<i>A system that collects and stores runoff from roofs or other impervious surfaces for non-potable reuse.</i>
Stream Setback or Buffer	<i>A vegetated area with trees, shrubs, and herbaceous vegetation that exists or is established to protect a stream system, lake, reservoir, or coastal estuarine area.</i>



SAN FRANCISCO  
**stormwater management requirements**  
 and design guidelines

The SMR describe an engineering, planning, and regulatory framework for developing new infrastructure in a manner that reduces pollution in stormwater runoff as well as stormwater flow rate and volume. The SMR include in-depth information on design, plan approval, and ongoing maintenance requirements.

Please visit [www.sfwater.org/smr](http://www.sfwater.org/smr) to download a copy of the Stormwater Management Requirements and Design Guidelines and associated materials.



## This is a message from the State Water Resources Control Board

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Updated as of March 20, 2020

### Compliance with Water Board Requirements During the Coronavirus 2019 (COVID-19) Emergency

The State Water Resources Control Board and the nine California Regional Water Quality Control Boards (the Water Boards) are continuing their efforts to protect public health, safety, and the environment consistent with all federal, state, and local public health directives and guidelines related to COVID-19.

Please be aware that timely compliance by the regulated community with all Water Board orders and other requirements (including regulations, permits, contractual obligations, primacy delegations, and funding conditions) is generally considered to be an essential function during the COVID-19 response. As a result, the Water Boards consider compliance with board-established orders and other requirements to be within the essential activities, essential governmental functions, or comparable exceptions to shelter-in-place directives provided by local public health officials.

If there is a specific Water Board order or requirement that cannot be timely met because it would be inconsistent with current governmental directives or guidelines related to COVID-19, the entity responsible for compliance with the Water Board order or requirement must notify the applicable Water Board immediately. The notification shall be via electronic mail to the applicable Water Board using the appropriate email address identified below, and shall include:

- the specific Water Board order, regulation, permit, or other requirement that cannot be timely met,
- the inconsistent COVID-19 directive or guideline,
- an explanation of why the responsible entity cannot timely meet the Water Board order or requirement, and
- any action that the entity will take in lieu of complying with the specific Water Board order or requirement.

Water Board staff will do their best to respond within 24/48 hours.

Please note that more specific directions for certain types of Water Board orders and other requirements may also be provided.

#### Contacts for the Water Boards

State Water Board – Stormwater – [stormwater@waterboards.ca.gov](mailto:stormwater@waterboards.ca.gov)

North Coast Water Board – [r1\\_stormwater@waterboards.ca.gov](mailto:r1_stormwater@waterboards.ca.gov)

San Francisco Bay Water Board – [r2stormwater@waterboards.ca.gov](mailto:r2stormwater@waterboards.ca.gov)

Central Coast Water Board – [r3\\_stormwater@waterboards.ca.gov](mailto:r3_stormwater@waterboards.ca.gov)

Los Angeles Water Board – [r4\\_stormwater@waterboards.ca.gov](mailto:r4_stormwater@waterboards.ca.gov)

Central Valley Water Board (Redding) – [r5r\\_stormwater@waterboards.ca.gov](mailto:r5r_stormwater@waterboards.ca.gov)

Central Valley Water Board (Sacramento)

– [r5s\\_stormwater@waterboards.ca.gov](mailto:r5s_stormwater@waterboards.ca.gov)

Central Valley Water Board (Fresno) – [r5f\\_stormwater@waterboards.ca.gov](mailto:r5f_stormwater@waterboards.ca.gov)

Lahontan Water Board (South Lake Tahoe)

– [r6a\\_stormwater@waterboards.ca.gov](mailto:r6a_stormwater@waterboards.ca.gov)

Lahontan Water Board (Victorville) – [r6b\\_stormwater@waterboards.ca.gov](mailto:r6b_stormwater@waterboards.ca.gov)

Colorado River Basin Water Board – [r7\\_stormwater@waterboards.ca.gov](mailto:r7_stormwater@waterboards.ca.gov)

Santa Ana Water Board – [r8\\_stormwater@waterboards.ca.gov](mailto:r8_stormwater@waterboards.ca.gov)

San Diego Water Board – [r9\\_stormwater@waterboards.ca.gov](mailto:r9_stormwater@waterboards.ca.gov)