



SAN FRANCISCO stormwater design guidelines



San Francisco
Water
Power
Sewer

Services of the San Francisco Public Utilities Commission

Stormwater Design Guidelines 2015 **Proposed Regulatory Update** Urban Watershed Management Program | WWE October 2015

PRESENTATION OUTLINE

1. Urban Watershed Management Program
2. Stormwater Management Ordinance: 5 Year Overview
3. 2015 Stormwater Design Guidelines Proposed Regulatory Update
4. New Content
5. New Materials & Tools
6. Q & A
7. Next Steps



1 Capitol Ave



Market St Whole Foods

URBAN WATERSHED MANAGEMENT PROGRAM



- Watershed Planning
- **Regulation – SF Stormwater Management Ordinance**
- Policy & Process Development
- Watershed Stewardship Programs
- Outreach & Education
- Capital Project Delivery Process



Fire Station No. 1



35 Dolores St

STORMWATER MANAGEMENT GOALS

In **separate sewer system areas**, stormwater transports pollutants to receiving waters.

Primary Goal: Protect water quality by treating stormwater before it reaches receiving water bodies.

In **combined sewer system areas**, stormwater contributes to localized flooding and combined sewer discharges.

Primary Goal: slow the rate and reduce the volume of stormwater reaching the Combined Sewer System.



Collection System Types

STORMWATER DESIGN GUIDELINES: 5 YEAR OVERVIEW

STORMWATER MANAGEMENT OVERVIEW

ADOPTED 2010

THRESHOLD Applies to projects disturbing 5,000 sf or more of ground surface

STRATEGY Requires projects to achieve performance measures outlined in the Stormwater Design Guidelines & maintain facilities in perpetuity



Mission Bay Traffic Circle



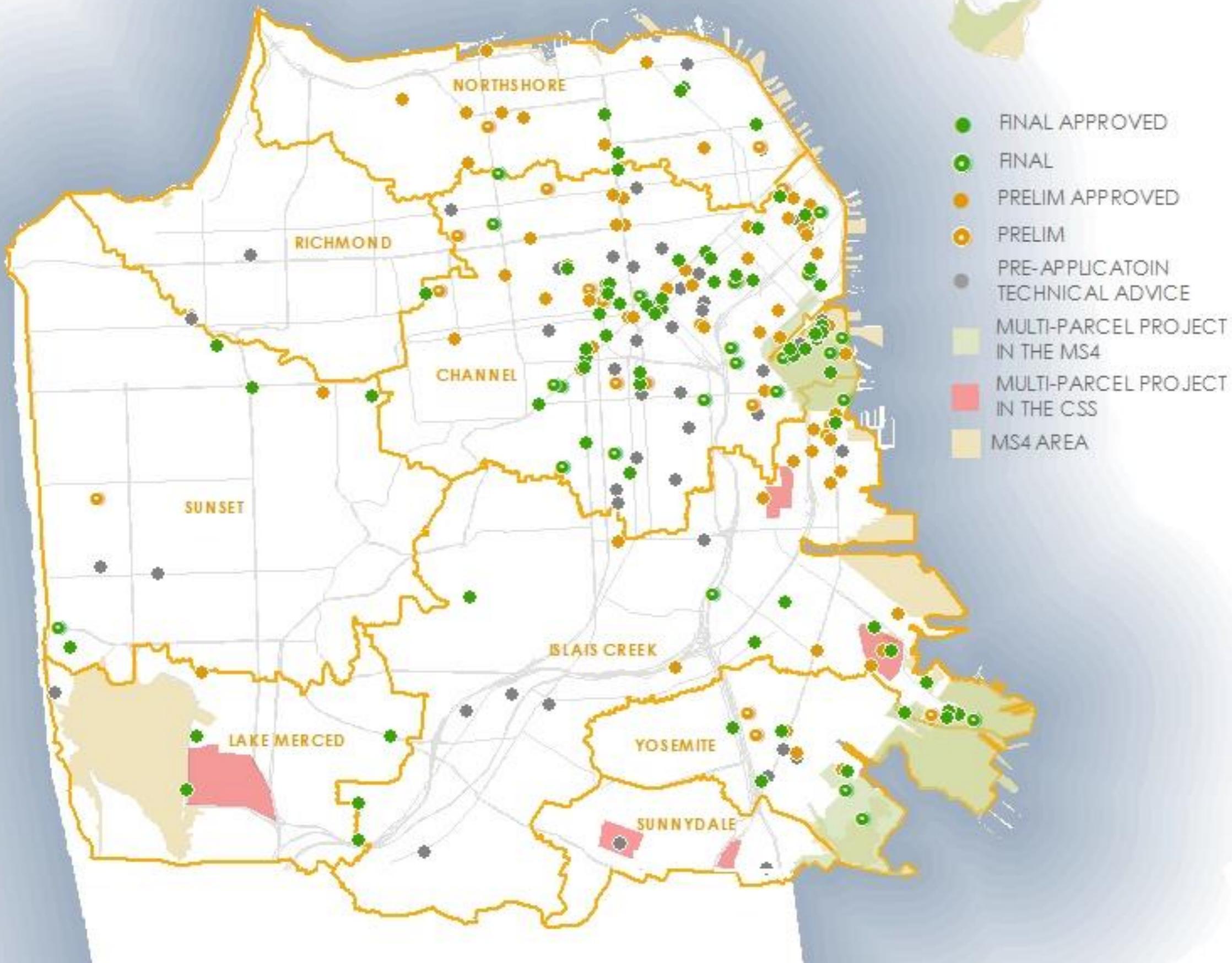
San Francisco Zoo Playground



Stevenson Alley

NUMBER OF FINAL APPROVED SCPs: **86**

NUMBER OF SDG PROJECT APPLICATIONS: **213**



Combined Sewer Area Projects

- **130 million gal** of stormwater managed annually in **250 ac** of DMA
- **30 million gal** of stormwater removed annually from the Combined Sewer

Separate Sewer Area Projects

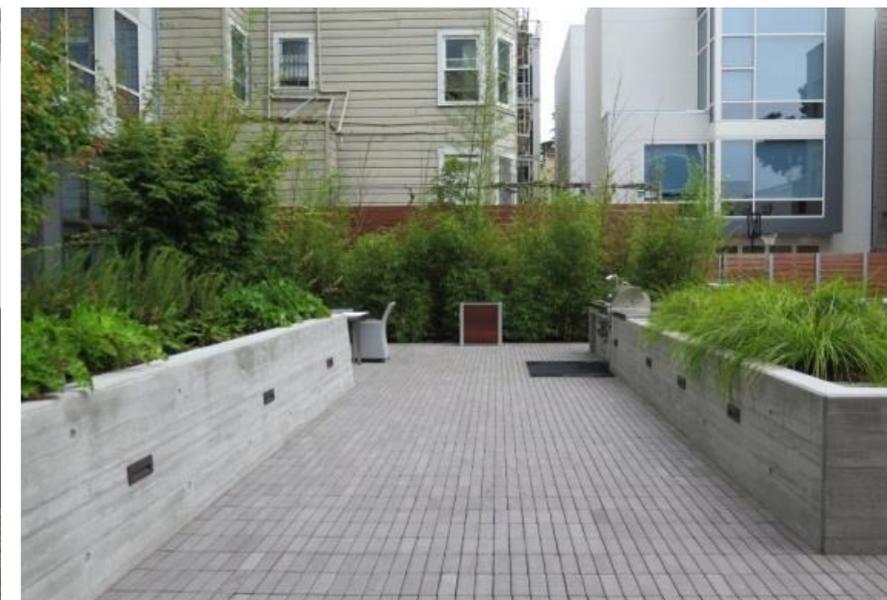
- **57 million gal** managed annually from first **110 ac** of DMA
- Over **1500 ac** of DMA managed when redevelopment projects completed



USF



1645 Pacific Ave



1800 Van Ness Ave

**2015 STORMWATER DESIGN GUIDELINES
PROPOSED REGULATORY UPDATE**

Regulatory

- SFPUC is regulated by the State Water Quality Control Board via the **NPDES General Permit**
 - Required passing of Stormwater Management Ordinance (SMO) in 2010
 - State Board re-issues Permit every 5 years

Lessons Learned

- Implementing lessons learned from 5 years of stormwater program implementation
 - Streamline the process
 - Clarify requirements
 - Include stakeholder feedback
 - Provide additional resources

Updated Stormwater Management Ordinance is anticipated to become effective **Early 2016**

Guidance Documents

- Stormwater Management Ordinance (SMO)
- Stormwater Design Guidelines (SDG)
- BMP Fact Sheets
- Vegetation Palette
- Pre-Application Meeting Packet
- SCP Instructions
- Maintenance Agreement Template
- Maintenance Agreement Recordation Instructions
- Modified Compliance Program
- SDG Informational Letter
- SDG Comment Form

Tools

- Green Stormwater Infrastructure Typical Details
- Inspection Checklists
- Stormwater Control Plan Preparation Checklists
- Example Stormwater Management Plan & Calculations
- Interactive Separate Sewer Map
- GI Sizing Calculators
- Maintenance Schedules
- Source Control Template
- Hydrologic Calculation Methods

The Stormwater Design Guidelines is now...



The proposed new name better exemplifies that the majority of this document explains **regulatory requirements**.



STORMWATER MANAGEMENT ORDINANCE: PROPOSED NEW LANGUAGE

2010 SMO Language	2015 Proposed SMO Language	Implication
<p>Development Project: disturb 5,000sf or more of ground surface</p>	<p>Large Development Project: <i>create and/or replace</i> 5,000sf or more of <i>impervious surface</i></p>	<ul style="list-style-type: none"> • Will reduce number of open space projects subject to the SMR • Clarifies application of SMR to the public ROW
<p>Small projects were not regulated</p>	<p>Small Development Project: create and/or replace <i>2,500-5,000sf</i> of impervious surface</p>	<ul style="list-style-type: none"> • Separate Sewer Area ONLY • Very few projects of this size anticipated in the Separate Sewer Area • Technology-based requirements
<p>Development Projects seeking permits in the City and County of San Francisco need to comply</p>	<p>Development Projects that <i>connect to the City's Combined or Separate Sewer System</i> need to comply</p>	<ul style="list-style-type: none"> • Captures projects that do not go through DBI

NEW SMR CONTENT

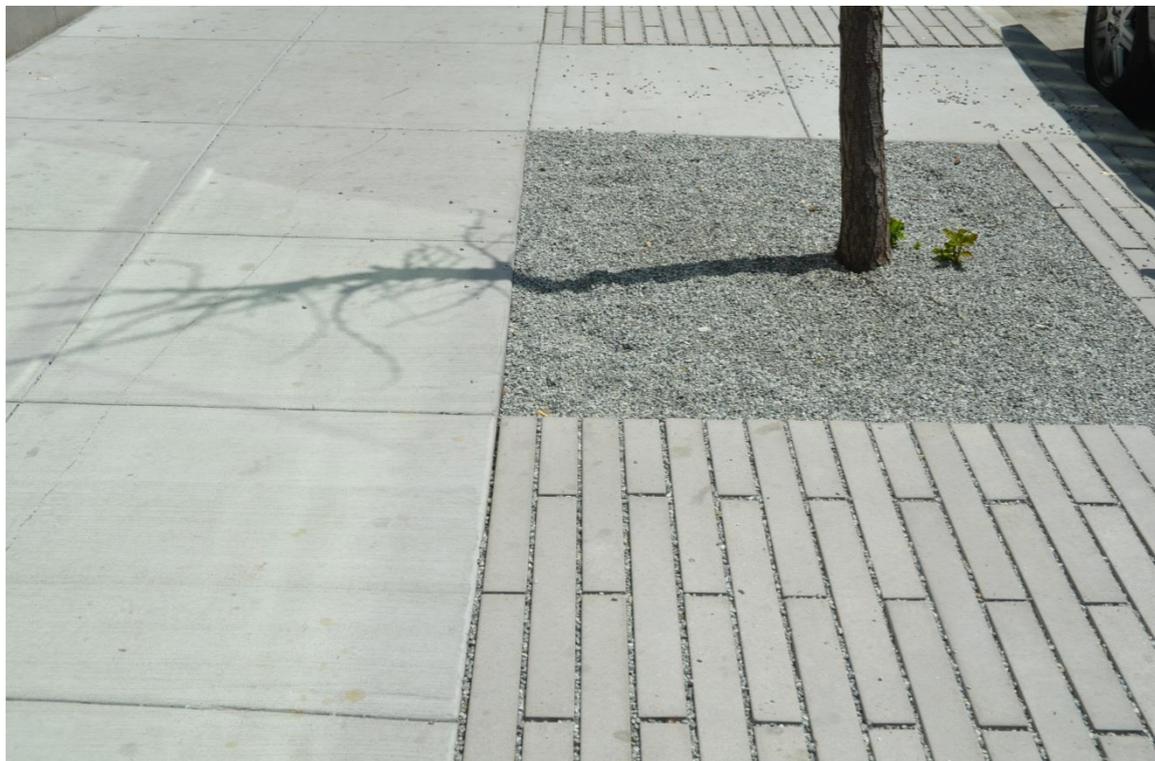


STORMWATER MANAGEMENT REQUIREMENTS: TABLE OF CONTENTS

- | | |
|---|--|
| 1. Introduction | Appendix A: BMP Fact Sheets |
| 2. Regulatory Context | Appendix B: Green Infrastructure Typical Details |
| 3. Low Impact Design in San Francisco | Appendix C: Infiltration Guidance |
| 4. Green Infrastructure Design Approach | Appendix D: Vegetation Palette for Bioretention BMPs |
| 5. Combined Sewer Area Performance Requirements | Appendix E: Illustrative Green Infrastructure Examples |
| 6. Separate Sewer Area Performance Requirements | |
| 7. Stormwater Management in the Streets | |
| 8. Green Building Certification Credits | |
| 9. Stormwater Control Plan Requirements | |
| 10. Inspection and Enforcement | |

STORMWATER MANAGEMENT REQUIREMENTS: COMBINED AND SEPARATE SEWER AREA CHAPTERS

- **New trigger language:** created/replaced impervious surface
- **Small Projects:** added to the Separate Sewer Area requirements
- **Modified Compliance Program:** allows Combined Sewer Area projects with site constraints to adjust performance requirements
- **BMP Hierarchies:** reuse > infiltration > biotreatment > detention > mechanical filtration



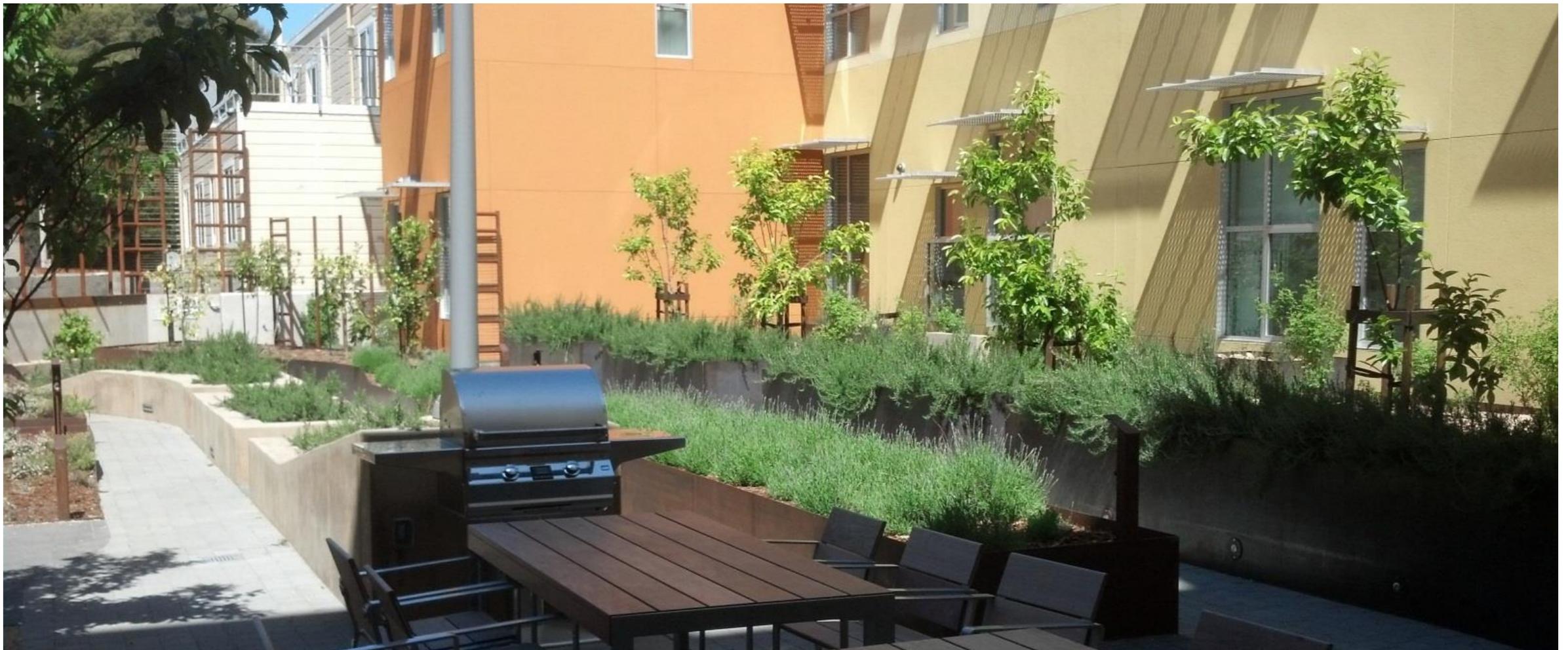
55 9th St



2559 Van Ness Ave

STORMWATER MANAGEMENT REQUIREMENTS: NEW CHAPTERS

- **Stormwater Management in the Streets:** describes which street projects need to comply with the SMR
- **Green Building Certification Credits:** describes how the SMR requirements can apply to LEED and GreenPoint Rated systems



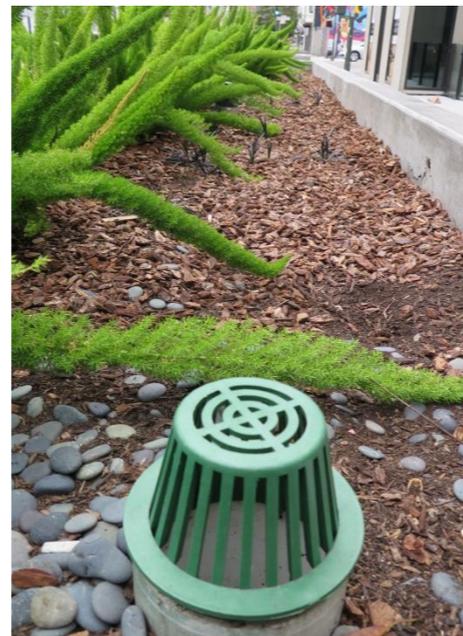
1075 Le Conte Ave

STORMWATER MANAGEMENT REQUIREMENTS: NEW APPENDICES

- **Appendix B. Green Infrastructure Typical Details:** typical details to assist in GI design
- **Appendix C. Infiltration Guidance:** siting requirements for infiltration-based BMPs and guidance on approved infiltration tests
- **Appendix D: Vegetation Palette for Bioretention BMPs:** updated to include locally available climate-appropriate plants



1645 Pacific Ave



1515 15th



555 Bartlett St

UPDATED MATERIALS & TOOLS

NEW & UPDATED MATERIALS

- **Project Information Form:** created new Separate Sewer area ONLY page that includes BMP Selection Form
- **Source Control Checklist:** checklist with potential pollutant sources and associated Source Control BMPs
- **Certificate of Acceptable Construction:** requires Engineer of Record to observe BMP installation to ensure proper construction



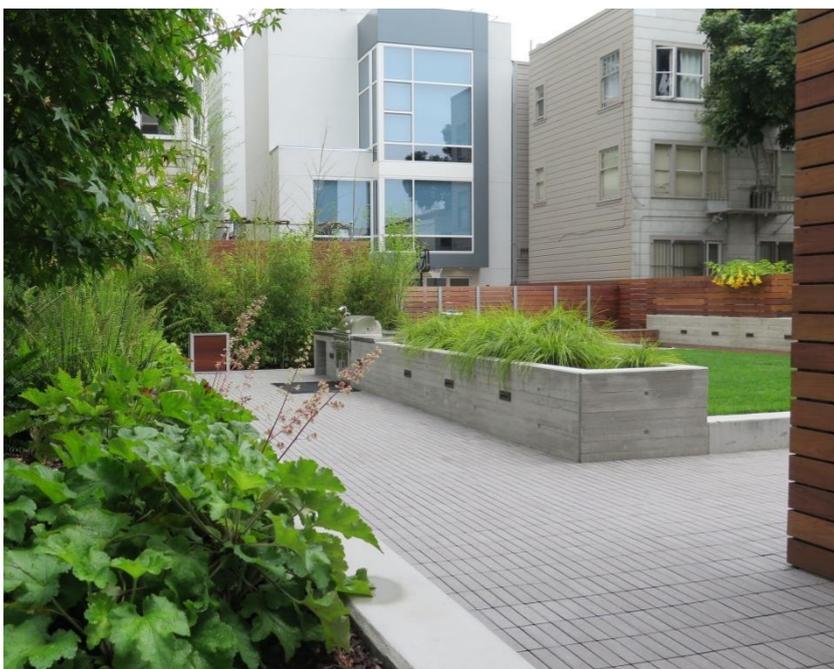
Public Safety Building



1145 4th St

UPDATED CALCULATORS (v2.0)

- **Combined Sewer Area BMP Sizing Calculator v2.0**
 - Released August 2015
 - Improved rainwater harvesting calculations
- **Separate Sewer Area BMP Sizing Calculator v2.0**
 - Anticipated release Early 2016
 - New, easier format similar to CSS calculator



1800 Van Vess Ave



1759 Lincoln Way

NEXT STEPS

NEXT STEPS

- Complete outreach (Fall 2015)
- SFPUC Management approval (Fall 2015)
- San Francisco Public Utilities Commission approval (Fall 2015)
- Board of Supervisors approval (Winter 2015/2016)
- Mayoral signature (Early 2016)
- Effective date (Early 2016 – TBD)

Thank you! Any questions?

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