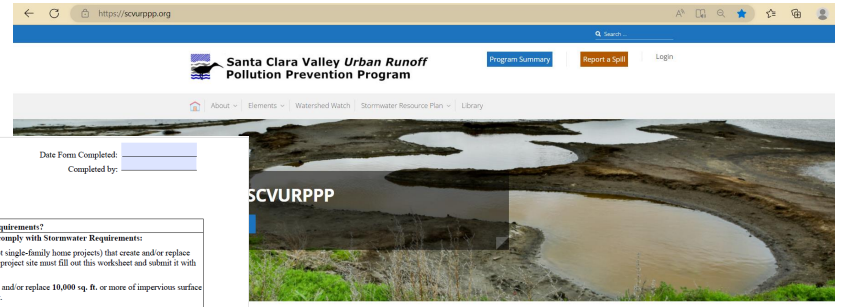
SCVURPPP C.3 Workshop
April 25, 2023

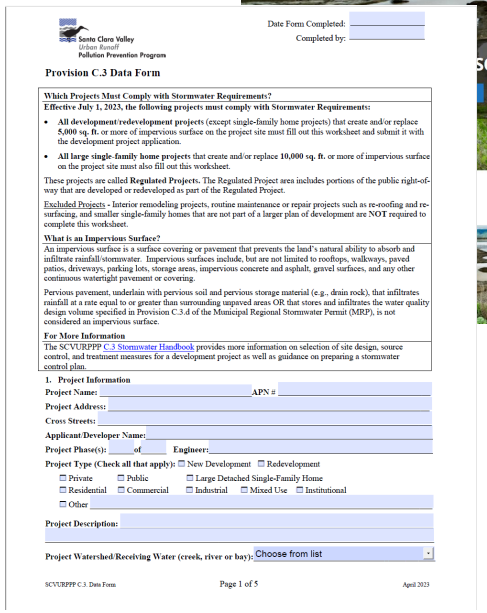
SCVURPPP New Development and Redevelopment Tools and Resources

Kathy Woo and Peter Schultze-Allen
Santa Clara Valley Urban Runoff Pollution Prevention Program

Presentation Overview

- Updates on the following tools and resources:
  - SCVURPPP Website
  - C.3 Handbook
  - C.3 Data Form
  - Outreach Fact Sheets
  - Vegetation Guide
- Q&A




Santa Clara Valley Urban Runoff Pollution Prevention Program

Date Form Completed:
Completed by:

Provision C.3 Data Form

Which Projects Must Comply with Stormwater Requirements?

Effective July 1, 2023, the following projects must comply with Stormwater Requirements:

- **All development/redevelopment projects** (except single-family home projects) that create and/or replace **5,000 sq. ft.** or more of impervious surface on the project site must fill out this worksheet and submit it with the development project application.
- **All large single-family home projects** that create and/or replace **10,000 sq. ft.** or more of impervious surface on the project site must also fill out this worksheet.

These projects are called **Regulated Projects.** The Regulated Project area includes portions of the public right-of-way that are developed or redeveloped as part of the Regulated Project.

Excluded Projects - Interior remodeling projects, routine maintenance or repair projects such as re-roofing and re-surfacing, and smaller single-family homes that are not part of a larger plan of development are **NOT** required to complete this worksheet.

What is an Impervious Surface?

An impervious surface is a surface covering or pavement that prevents the land's natural ability to absorb and infiltrate rainfall/stormwater. Impervious surfaces include, but are not limited to rooftops, walkways, paved patios, driveways, parking lots, storage areas, impervious concrete and asphalt, gravel surfaces, and any other continuous watertight pavement or covering.

Pervious pavement, underlain with pervious soil and pervious storage material (e.g., drain rock), that infiltrates rainfall at a rate equal to or greater than surrounding unpaved areas OR that stores and infiltrates the water quality design volume specified in Provision C.3.d of the Municipal Regional Stormwater Permit (MRP), is not considered an impervious surface.

For More Information

The SCVURPPP C.3 Stormwater Handbook provides more information on selection of site design, source control, and treatment measures for a development project as well as guidance on preparing a stormwater control plan.

1. Project Information

Project Name: **APN #**

Project Address:

Cross Streets:

Applicant/Developer Name:

Project Phase(s): of **Engineer:**

Project Type (Check all that apply): New Development Redevelopment

Private Public Large Detached Single-Family Home

Residential Commercial Industrial Mixed Use Institutional

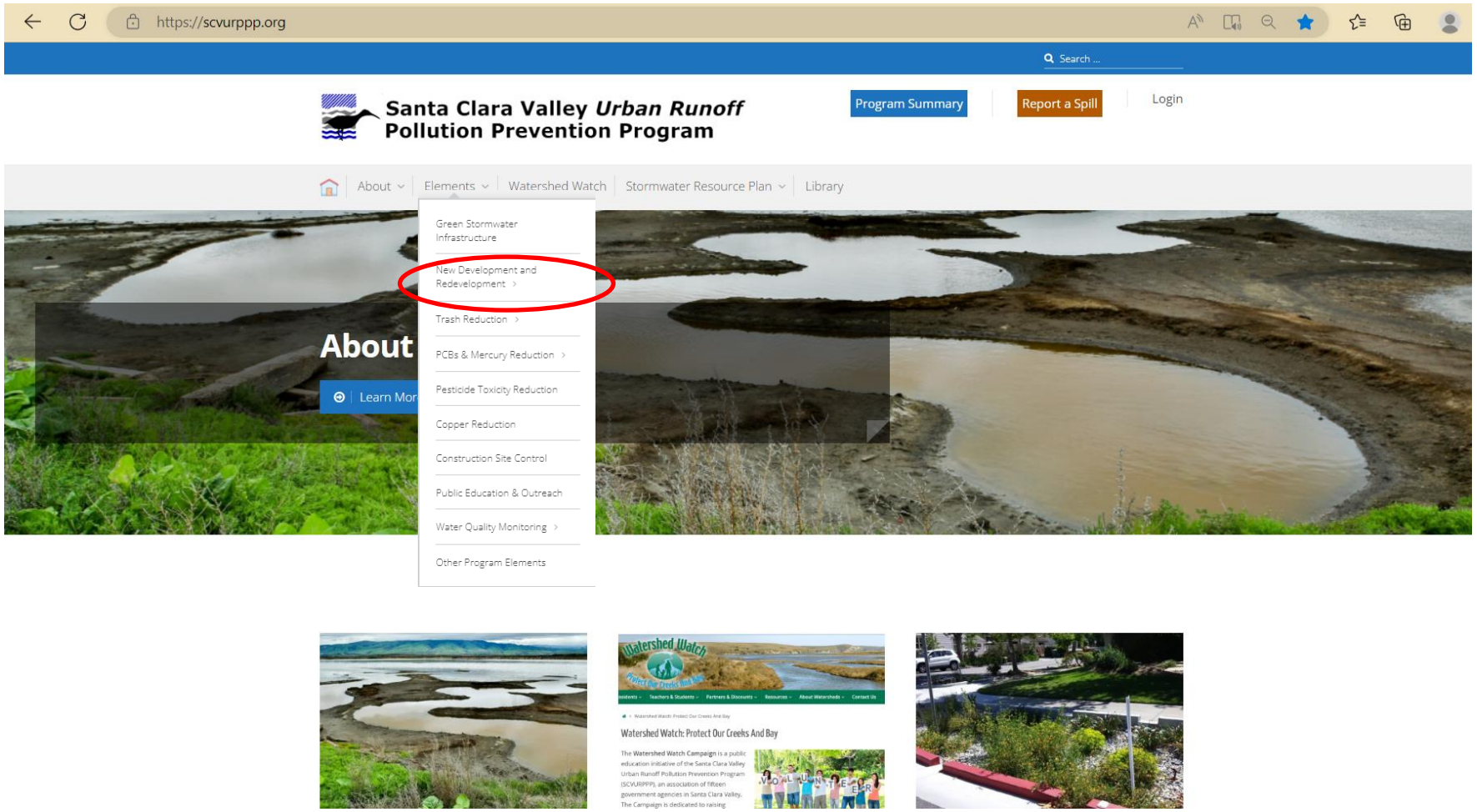
Other

Project Description:

Project Watershed/Receiving Water (creek, river or bay): Choose from list

SCVURPPP C.3. Data Form Page 1 of 5 April 2023

SCVURPPP Website

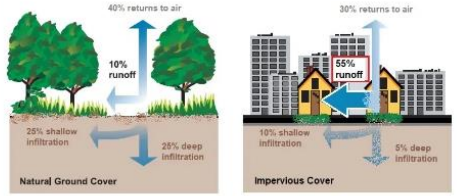


SCVURPPP Website

New Development and Redevelopment

Urban development traditionally involves replacing natural landscapes with impervious areas, such as roofs, pavements, streets, and storm drain systems, causing greater amounts of polluted stormwater runoff to flow directly into creeks.

The impact of urban development on waterways can be reduced by using Low Impact Development (LID) techniques. LID techniques reduce runoff and mimic a site's natural (predevelopment) hydrology by minimizing disturbed areas and impervious surfaces, and retaining and treating stormwater runoff using infiltration, evapotranspiration, rainwater harvesting and use, or biotreatment.



Natural landscapes filter & recycle stormwater. Impervious development causes high volumes of stormwater to "run off" into urban storm drains & creeks (Adapted from US EPA)

Private and public new and redevelopment projects that create or replace amounts of impervious surface that exceed certain thresholds are required to include appropriate **site design**, **pollutant source control**, **treatment measures**, and where appropriate, **hydromodification management measures** that improve, protect and treat urban runoff. Local municipalities have developed Green Stormwater Infrastructure (GSI) Plans for incorporating LID features into public lands, such as streets, buildings, parking lots, and parks.

Key Guidance Documents

- SCVURPPP C.3 Stormwater Handbook
- Provision C.3 Data Form
- C.3 Stormwater Treatment Measure Sizing Worksheets
- Fact Sheets on New Stormwater Quality Control Requirements
  - Information for Developers, Builders and Project Applicants
  - Information for Municipal Staff
  - Information for Large Single-Family Home Development

SCVURPPP Website

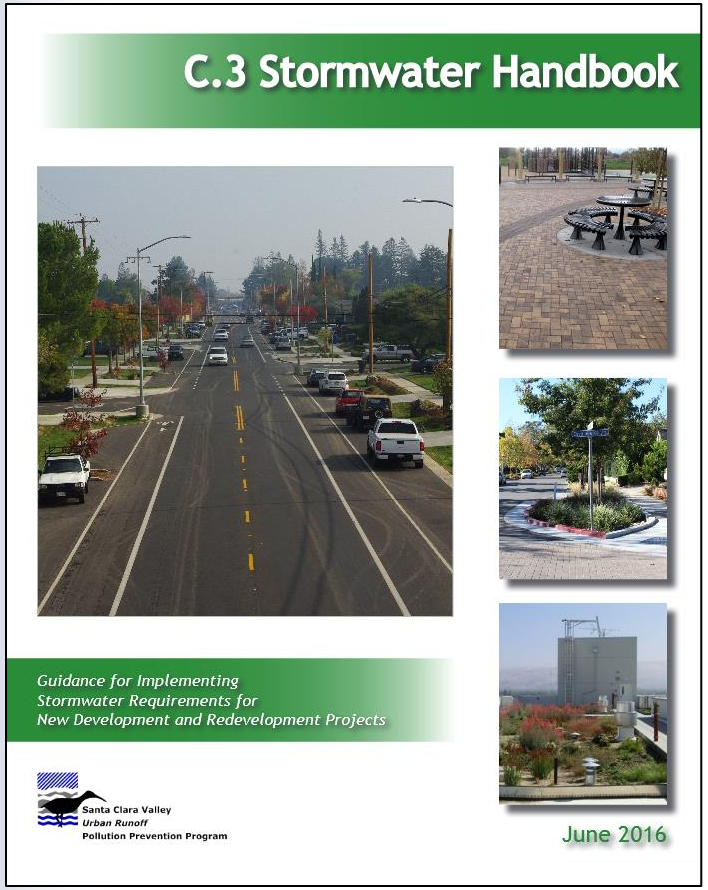
New Development & Redevelopment Documents

Show 5 entries Reset Search:

Date	Title	Categories	Tags
2/28/2023	Annual C3 Workshop – February 28, 2023	Workshops	New Development (C.3.)
1/12/2023	Stormwater Quality Control Requirements – Information for Developers, Builders and Project Applicants, Effective July 1, 2023	Fact Sheets	New Development (C.3.)
1/12/2023	Update on Stormwater Treatment Requirements for New Development and Redevelopment Projects, Effective July 1, 2023	Fact Sheets	New Development (C.3.)
12/20/2022	SCVURPPP List of Qualified Consultants	Other Documents	New Development (C.3.)
6/9/2022	Annual C3 Workshop – June 9, 2022	Workshops	New Development (C.3.)

Showing 1 to 5 of 44 entries Previous 1 2 3 4 5 … 9 Next

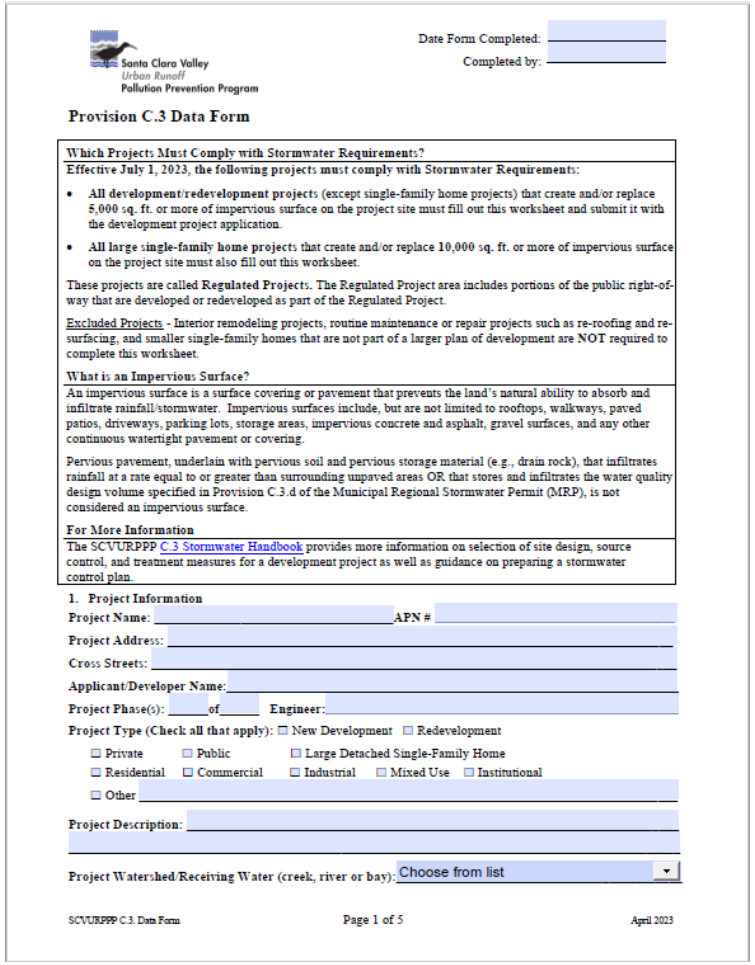
C.3 Handbook Updates



- Main updates
  - Chapter 2 - Background/Regulatory Guidance
  - Chapter 3 – Preparing Permit Application Submittals
  - Appendix J – Special Projects
  - Other editorial updates

C.3 Data Form Updates

- Main updates
  - New thresholds
  - Project Size Table
  - Drop-down menus
  - New section on additional stormwater treatment of non-regulated areas



Santa Clara Valley Urban Runoff Pollution Prevention Program

Date Form Completed: _____

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Provision C.3 Data Form

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1. Project Information

Project Name: _____ **APN #** _____

Project Address: _____

Cross Streets: _____

Applicant/Developer Name: _____

Project Phase(s): _____ of _____ **Engineer:** _____

Project Type (Check all that apply): ☐ New Development ☐ Redevelopment

☐ Private ☐ Public ☐ Large Detached Single-Family Home

☐ Residential ☐ Commercial ☐ Industrial ☐ Mixed Use ☐ Institutional

☐ Other _____

Project Description: _____

Project Watershed/Receiving Water (creek, river or bay): Choose from list

SCVURPPP C.3. Data Form Page 1 of 5 April 2023

C.3 Data Form Updates - Page 1

Santa Clara Valley
Urban Runoff
Pollution Prevention Program

Date Form Completed: _____
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☐ Private ☐ Public ☐ Large Detached Single-Family Home

☐ Residential ☐ Commercial ☐ Industrial ☐ Mixed Use ☐ Institutional

☐ Other _____

Project Description: _____

Project Watershed/Receiving Water (creek, river or bay): Choose from list

SCVURPPP C.3. Data Form Page 1 of 5 April 2023

C.3 Data Form Updates - Page 2

2. Project Size

a. Total Site Area: _____ (ft^2)		b. Total Land Area Disturbed During Construction: _____ (ft^2) (including clearing, grading, stockpiling, or excavating)			
Project Totals	**Total Existing (Pre-project) Area (ft^2)**	**Existing Area Retained[1] (ft^2)**	**Existing Area Replaced[2] (ft^2)**	**New Area Created[2] (ft^2)**	**Total Post-Project Area (ft^2)**
Impervious Area (IA)					
c. Total on-site IA					0
d. Total off-site IA[3]					0
e. Total project IA	0	0	0	0	0
f. Total new and replaced IA			0		
Pervious Area (PA)[4]					
g. Total on-site PA					
h. Total off-site PA[3]					
i. Total project PA	0				0
j. **Total Project Area (2.e.+2.i.)**	0				0

k. Percent Replacement of IA in Redevelopment Projects: (Existing on-site IA Replaced ÷ Existing Total on-site IA) x 100%
NaN %

[1] "Retained" means to leave existing IA in place. An IA that receives surface treatment (e.g., pavement resurfacing/slurry seal/grind) only is considered "retained". This category does not apply to off-site areas.

[2] The "new" and "replaced" IA are based on the total project area and not specific locations within the project. Constructed IA on a project that does not exceed the total pre-project IA will be considered "replaced" IA. A project will have "new" IA only if the total post-project IA exceeds the total pre-project IA (total post-project IA – total pre-project IA = New IA).

[3] Off-site areas include sidewalks and other parts of the public right-of-way (e.g., roads, bike lanes, curbs, ramps, park strip) that are being reconstructed as part of the project footprint. Note that gravel is considered an impervious surface.

[4] Include bioretention areas, infiltration areas, green roofs, and pervious pavement in PA calculations.

3. State Construction General Permit Applicability:

a. Is #2.b. equal to 43,560 ft^2 (1 acre) or more?

☐ Yes, applicant must obtain coverage under the State Construction General Permit (see https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

☐ No, applicant does not need coverage under the State Construction General Permit.

4. MRP Provision C.3 Applicability:

a. Is #2.f. equal to **5,000** ft^2 or more, or **10,000** ft^2 for single family homes?

☐ Yes, C.3. source control, site design and treatment requirements apply

☐ No, C.3. source control and site design requirements may apply – check with local agency

b. For redevelopment projects, is #2.k. equal to 50% or more?

☐ Yes, C.3. requirements (site design and source control, as appropriate, and stormwater treatment) apply to the entire on-site area

☐ No, C.3. requirements only apply to the impervious area created and/or replaced

5. Hydromodification Management (HM) Applicability:

a. Does the project create and/or replace one acre or more of impervious surface AND is the total post-project impervious area greater than the pre-project (existing) impervious area?

☐ Yes (continue) ☐ No – exempt from HM, go to page 3

b. Is the project located in an area of HM applicability (green area) on the HM Applicability Map? www.scvurppp.org/hmp-map

☐ Yes, the project must implement HM requirements

☐ No, the project is exempt from HM requirements

C.3 Data Form Updates Example Project

2. Project Size

a. Total Site Area: 45,000 (ft²)		b. Total Land Area Disturbed During Construction: 45,000 (ft²) (including clearing, grading, stockpiling, or excavating)			
Project Totals	**Total Existing (Pre-project) Area (ft²)**	**Existing Area Retained[1] (ft²)**	**Existing Area Replaced[2] (ft²)**	**New Area Created[2] (ft²)**	**Total Post-Project Area (ft²)**
Impervious Area (IA)					
c. Total on-site IA	45,000	1,000	44,000		0
d. Total off-site IA[3]	5,000		5,000	0	0
e. Total project IA	0	0	0	0	0
f. Total new and replaced IA			0		
Pervious Area (PA)[4]					
g. Total on-site PA	0				0
h. Total off-site PA[3]	0				0
i. Total project PA	0				0
j. **Total Project Area (2.e.+2.i.)**	0				0
k. Percent Replacement of IA in Redevelopment Projects: (Existing on-site IA Replaced ÷ Existing Total on-site IA) x 100% NaN %					

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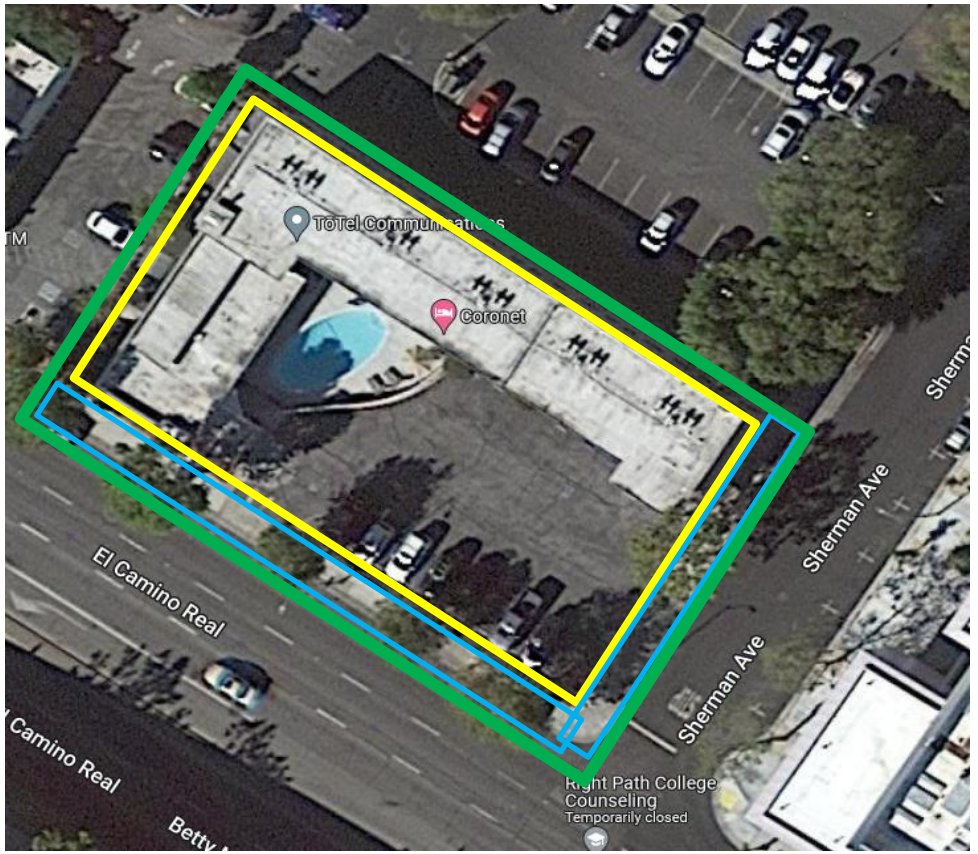

Development site boundary (45,000 sf)
Sidewalk replacement (5,000 sf)
Project boundary (50,000 sf)

C.3 Data Form Updates Example Project

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Project Totals	**Total Existing (Pre-project) Area (ft²)**	**Existing Area Retained[1] (ft²)**	**Existing Area Replaced[2] (ft²)**	**New Area Created[2] (ft²)**	**Total Post-Project Area (ft²)**
Impervious Area (IA)					
c. Total on-site IA	45,000	1,000	44,000		45,000
d. Total off-site IA[3]	5,000		5,000	0	5,000
e. Total project IA	50,000	1,000	49,000	0	50,000
f. Total new and replaced IA			49,000		
Pervious Area (PA)[4]					
g. Total on-site PA	0				0
h. Total off-site PA[3]	0				0
i. Total project PA	0				0
j. Total Project Area (2.e.+2.i.)	50,000				50,000
k. Percent Replacement of IA in Redevelopment Projects: (Existing on-site IA Replaced ÷ Existing Total on-site IA) x 100% 97.777%					

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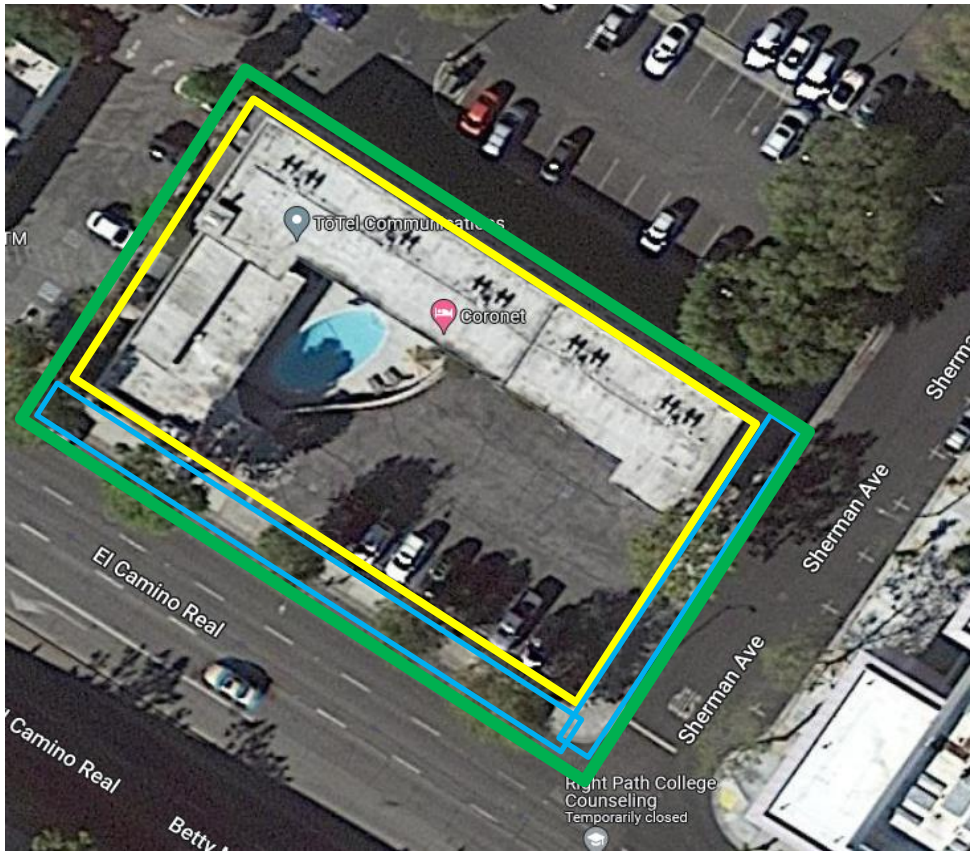
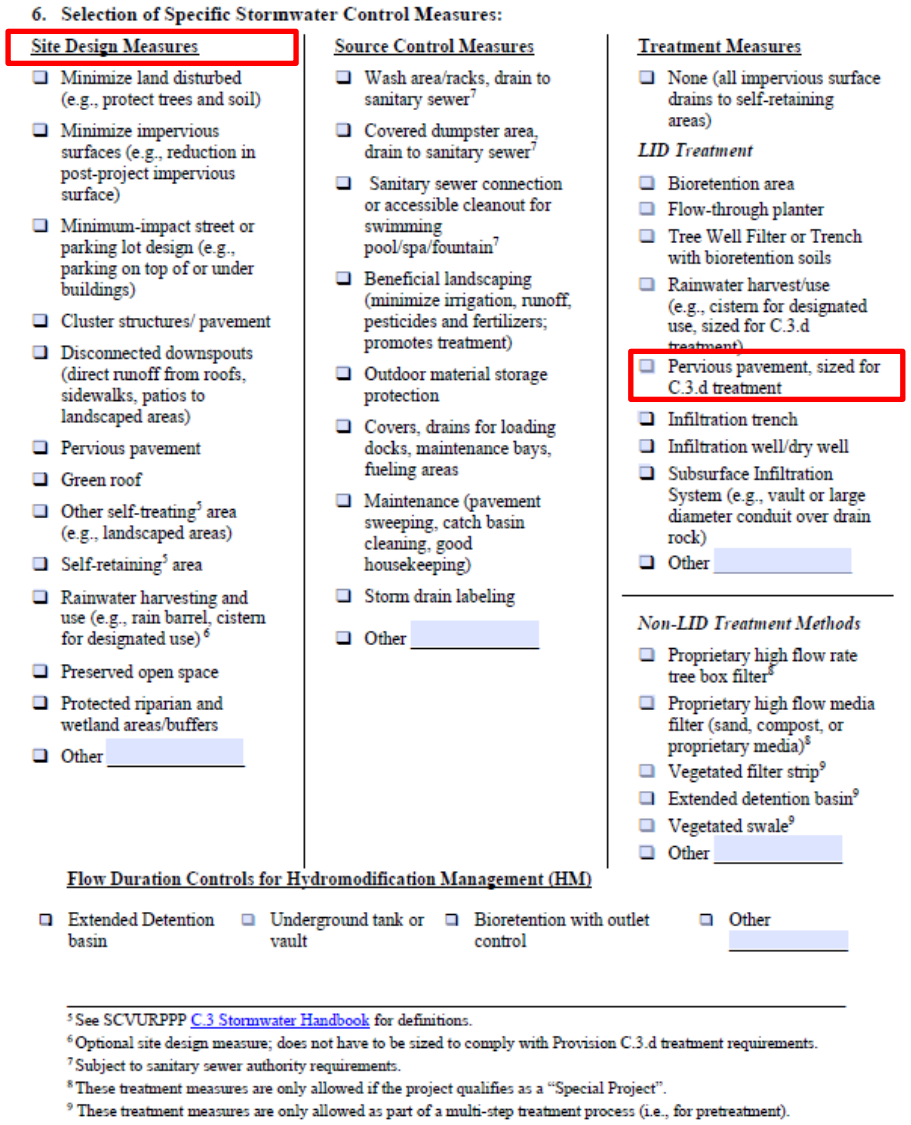


Development site boundary (45,000 sf)
Sidewalk replacement (5,000 sf)
Project boundary (50,000 sf)

C.3 Data Form Updates - Page 3



6. Selection of Specific Stormwater Control Measures:

Site Design Measures

- ❑ Minimize land disturbed (e.g., protect trees and soil)
- ❑ Minimize impervious surfaces (e.g., reduction in post-project impervious surface)
- ❑ Minimum-impact street or parking lot design (e.g., parking on top of or under buildings)
- ❑ Cluster structures/ pavement
- ❑ Disconnected downspouts (direct runoff from roofs, sidewalks, patios to landscaped areas)
- ❑ Pervious pavement
- ❑ Green roof
- ❑ Other self-treating[5] area (e.g., landscaped areas)
- ❑ Self-retaining[5] area
- ❑ Rainwater harvesting and use (e.g., rain barrel, cistern for designated use)[6]
- ❑ Preserved open space
- ❑ Protected riparian and wetland areas/buffers
- ❑ Other _____

Source Control Measures

- ❑ Wash area/racks, drain to sanitary sewer[7]
- ❑ Covered dumpster area, drain to sanitary sewer[7]
- ❑ Sanitary sewer connection or accessible cleanout for swimming pool/spa/fountain[7]
- ❑ Beneficial landscaping (minimize irrigation, runoff, pesticides and fertilizers; promotes treatment)
- ❑ Outdoor material storage protection
- ❑ Covers, drains for loading docks, maintenance bays, fueling areas
- ❑ Maintenance (pavement sweeping, catch basin cleaning, good housekeeping)
- ❑ Storm drain labeling
- ❑ Other _____

Treatment Measures

- ❑ None (all impervious surface drains to self-retaining areas)

LID Treatment

- ❑ Bioretention area
- ❑ Flow-through planter
- ❑ Tree Well Filter or Trench with bioretention soils
- ❑ Rainwater harvest/use (e.g., cistern for designated use, sized for C.3.d treatment)
- ❑ Pervious pavement, sized for C.3.d treatment
- ❑ Infiltration trench
- ❑ Infiltration well/dry well
- ❑ Subsurface Infiltration System (e.g., vault or large diameter conduit over drain rock)
- ❑ Other _____

Non-LID Treatment Methods

- ❑ Proprietary high flow rate tree box filter[8]
- ❑ Proprietary high flow media filter (sand, compost, or proprietary media)[8]
- ❑ Vegetated filter strip[9]
- ❑ Extended detention basin[9]
- ❑ Vegetated swale[9]
- ❑ Other _____

Flow Duration Controls for Hydromodification Management (HM)

❑ Extended Detention basin ❑ Underground tank or vault ❑ Bioretention with outlet control ❑ Other _____

[5] See SCVURPPP C.3 Stormwater Handbook for definitions.
[6] Optional site design measure; does not have to be sized to comply with Provision C.3.d treatment requirements.
[7] Subject to sanitary sewer authority requirements.
[8] These treatment measures are only allowed if the project qualifies as a "Special Project".
[9] These treatment measures are only allowed as part of a multi-step treatment process (i.e., for pretreatment).

SCVURPPP C.3. Data Form Page 3 of 5 April 2023

C.3 Data Form Updates - Page 4

7. Stormwater Treatment Measure (STM) Sizing for Projects with Treatment Requirements

Stormwater Treatment Measure (STM)	Hydraulic Sizing Criteria Used*
Choose from list	Choose from list

Choose from list:
Infiltration trench
Infiltration well/dry well
Pervious pavement w/ underdrain
Pervious pavement w/o underdrain
Proprietary media filter system
Proprietary tree filter
Rainwater harvest/use system
Tree filter w/ bioretention soil
Subsurface infiltration system
Choose from list

Choose from list:
Choose from list
1a
1b
2a
2b
2c
3

*Ke
2c: Flow – Uniform Intensity Method
3: Combination Flow and Volume Design Basis

8. Additional Stormwater Treatment of Non-Regulated Areas - Is the project providing stormwater treatment for non-regulated impervious area that is not included in **Item 2 Project Size**? For example, stormwater treatment of right-of-way areas that are outside the project footprint, or treatment measures that are treating more right-of-way impervious area quantities than required.

☐ Yes, complete the table below
☐ No

Additional Stormwater Treatment of Non-Regulated Areas

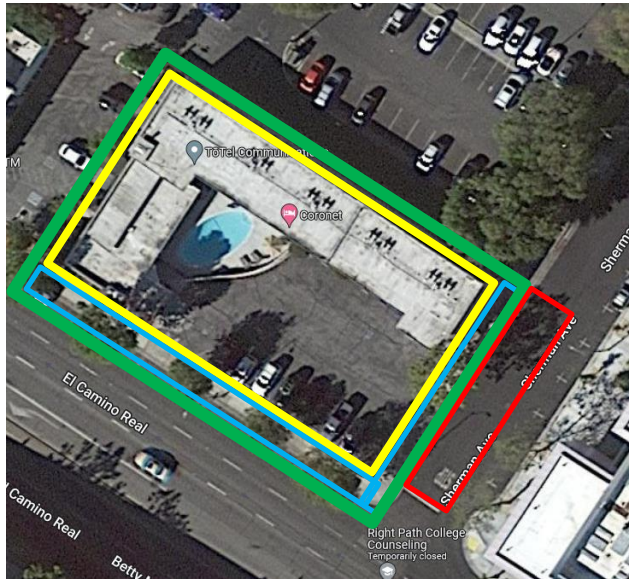
Non-Regulated Area Draining to Treatment Measure			Treatment Measures	Hydraulic Sizing Criteria
Impervious Area Treated (ft²)	Pervious Area Treated (ft²)	Total Area Treated (ft²)		
4,000	0	4,000	Choose from list	Choose from lis

Treatment Measures:
Infiltration trench
Infiltration well/dry well
Pervious pavement w/ underdrain
Pervious pavement w/o underdrain
Proprietary media filter system
Proprietary tree filter
Rainwater harvest/use system
Tree filter w/ bioretention soil
Subsurface infiltration system
Choose from list

Hydraulic Sizing Criteria:
Choose from list
1a
1b
2a
2b
2c
3

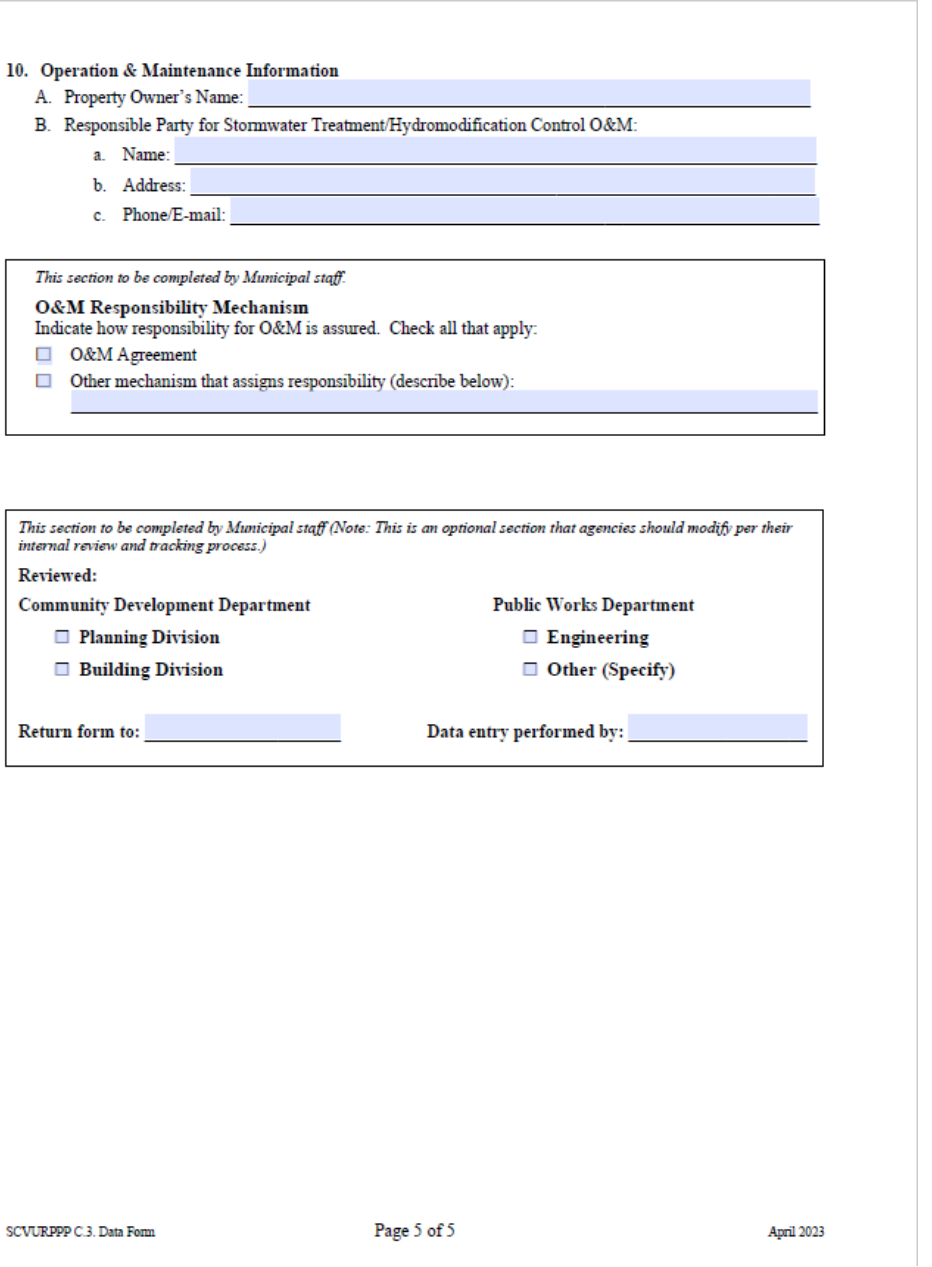
9. Alternative Certification: Was the treatment system sizing and design reviewed by a qualified third-party professional that is not a member of the project team or agency staff?

☐ Yes ☐ No Name of Third-party Reviewer _____



- Development site boundary (45,000 sf)
- Sidewalk replacement (5,000 sf)
- Non-regulated Treatment Area (4,000 sf)
- Project boundary (50,000 sf)

C.3 Data Form Updates - Page 5



10. Operation & Maintenance Information

A. Property Owner's Name: _____

B. Responsible Party for Stormwater Treatment/Hydromodification Control O&M:

a. Name: _____

b. Address: _____

c. Phone/E-mail: _____

This section to be completed by Municipal staff.

O&M Responsibility Mechanism

Indicate how responsibility for O&M is assured. Check all that apply:

☐ O&M Agreement

☐ Other mechanism that assigns responsibility (describe below):

_____

This section to be completed by Municipal staff (Note: This is an optional section that agencies should modify per their internal review and tracking process.)

Reviewed:

Community Development Department	**Public Works Department**
☐ **Planning Division**	☐ **Engineering**
☐ **Building Division**	☐ **Other (Specify)**

Return form to: _____ **Data entry performed by:** _____

SCVURPPP C.3. Data Form Page 5 of 5 April 2023

Outreach Fact Sheets

Santa Clara Valley Urban Runoff Pollution Prevention Program

Stormwater Quality Control Requirements: Information for Developers, Builders, and Project Applicants

Why Are Stormwater Quality Controls Needed?

Stormwater runoff from urbanized areas carries large amounts of pollution to creeks and San Francisco Bay. Local agencies in urbanized portions of the Bay Area are responsible for controlling stormwater pollution by complying with the Municipal Regional Stormwater Permit (MRP)[1], reissued by the Regional Water Quality Control Board in May 2022.

Overview of Stormwater Requirements for Development Projects

Since 2011, projects that create and/or replace 10,000 square feet or more of impervious surface have been required to install properly sized, **permanent LID treatment measures** as well as **site design measures, source controls**, **hydromodification management measures**, and **construction site controls**, as appropriate for the project, based on MRP requirements. These projects are called **Regulated Projects.**

Beginning July 1, 2023, the threshold for most Regulated Projects will be **5,000 square feet** of impervious surface area created and/or replaced, and **single-family homes** that create and/or replace **10,000 square feet** or more of impervious surface will also become Regulated Projects. Runoff from portions of the public right of way, such as the street frontage, that are constructed or reconstructed as part of the Regulated Project will also need to be treated using LID treatment measures. These features should be incorporated into the project design as early as possible.

Site Design Measures

Measures to reduce water quality impacts include:

- Preserving existing vegetation;
- Reducing impervious surfaces;
- Directing runoff from impervious surfaces to vegetated areas;
- Using pervious pavement to allow stormwater to infiltrate into soil.

Pervious pavement area

Source Controls

Source controls prevent potential pollutant sources from contacting rainfall and stormwater. Examples include:

- Covered trash enclosures with drains to sanitary sewers;
- Covered outdoor materials handling and storage areas;
- "No Dumping, Flows to Bay" labels on storm drain inlets;
- Sanitary sewer drains for vehicle wash areas (where approved).

Covered trash enclosure

LID Treatment Measures

LID treatment measures reduce stormwater runoff and mimic the site's predevelopment hydrology by infiltrating, storing, and/or biotreating stormwater runoff. LID measures include the following:

- Bioretention areas;
- Flow-through planters:
- Pervious pavement;
- Infiltration trenches or subsurface infiltration systems;
- Rainwater harvesting systems.

Bioretention area

[1] Visit http://www.scvurppp.org/mrp3-0 (pages C.3-1 to C.3-54)

Santa Clara Valley Urban Runoff Pollution Prevention Program

Notice to Project Applicants

Changes to Stormwater Treatment Requirements for New Development and Redevelopment Projects

Since 2011, the San Francisco Bay Municipal Regional Stormwater Permit (MRP)[1] has required development and redevelopment projects above certain impervious area size thresholds to provide stormwater treatment using the following **Low Impact Development (LID)** methods: rainwater harvesting and use, infiltration, and/or biotreatment. These projects are called **Regulated Projects.** Vault-based treatment, such as high-rate media filtration, is not allowed as a stand-alone treatment measure (except in Special Projects described below). However, vault-based treatment measures may be used as pre-treatment for a LID treatment measure, for example, to remove trash or sediment.

Changes to the stormwater treatment requirements mandated by the MRP for private and public development projects will take effect on **July 1, 2023**. The following is a summary of applicable new requirements* in Provision C.3 of the MRP.

Lower Impervious Area Thresholds for Regulated Projects

Beginning July 1, 2023, the threshold for impervious area created and/or replaced **changes from 10,000 square feet to 5,000 square feet** for most Regulated Projects.

Large Detached Single-family Homes Required to Provide LID Treatment

Beginning July 1, 2023, **single-family homes** that create and/or replace 10,000 square feet or more of impervious surface will be considered **Regulated Projects** and required to incorporate site design measures and install LID treatment measures. Previously, single-family homes that were not part of a larger project (such as a subdivision) were exempt from this requirement.

LID Treatment Required in the Public Right of Way

Runoff from portions of the public right of way (e.g., sidewalks, curb extensions, pavement replacement, and curb and gutter replacement in the street frontage) that are constructed or reconstructed as part of Regulated Projects will also need to be treated using LID measures.

Interceptor Tree Credits Not Available

Beginning July 1, 2023, the use of existing or new trees to address treatment requirements for impervious surfaces (known as Interceptor Tree Credits) is **no longer allowed.**

Changes to Special Projects Category C

Some "Smart Growth" developments called "Special Projects" can use non-LID treatment measures, such as media filters, to treat a portion of the project runoff if the use of LID treatment onsite is demonstrated to be infeasible. Beginning July 1, 2023, transit-oriented development projects will **no longer be eligible** to receive these "LID treatment reduction credits" under Category C or the Special Projects[2] provisions. However, new criteria have been added to Category C to allow certain types of affordable housing development projects to receive LID treatment reduction credits.

Will These Changes in Requirements Affect My Project?

- If you submit a development application that is approved with a stormwater control plan in compliance with the MRP prior to July 1, 2023, your project is not affected by the new requirements, and you may proceed with the approved control measures.
- If you submit a SB 330 Preliminary Application that meets the requirements of Government Code 65589.5 (o) for a housing development project that is accepted prior to July 1, 2023, your project will not be affected by the new requirements (per Government Code Section 65589.5 (o), unless you allow your SB 330 Preliminary Application to expire.
- Beginning July 1, 2023, all development applications that have not yet been approved will be subject to the new requirements.

[1] See http://www.scvurppp.org/mrp3-0 (pages C.3-1 to C.3-54)
[2] See http://www.scvurppp.org/mrp3-0 Category C (pages C.3-25 to C.3-29)

December 2022

New Stormwater Control Requirements for Large Single-Family Home Development

What is Stormwater Pollution?

In natural landscapes, most of the rainwater soaks into the soil. However, in urban areas, **impervious or hard surfaces** such as buildings, driveways, sidewalks, and streets prevent rainwater from soaking into the ground and cause **stormwater runoff**. As stormwater runoff flows over impervious surfaces, it can pick up pollutants such as litter, motor oil, metals, and pesticides, and carry them into storm drains. This polluted runoff flows directly into local creeks and San Francisco Bay, without any cleaning or filtering to remove pollutants.

Why are Stormwater Quality Controls Being Required for My Project?

Local agencies in urbanized portions of the Bay Area are responsible for controlling stormwater pollution by complying with the Municipal Regional Stormwater Permit (MRP), reissued by the Regional Water Quality Control Board in May 2022. Larger development projects have been required to implement stormwater quality controls for over a decade. A new requirement in the MRP now mandates stormwater quality controls for some large single-family homes.

How Do These Requirements Impact My Project?

Beginning July 1, 2023, single-family home projects that **create and/or replace 10,000 square feet or more of impervious surface** must meet stormwater quality requirements by including **site design measures, source control measures**, **low impact development (LID) treatment measures**, and **construction site best management practices**, as appropriate for the project. Runoff from portions of the public right of way, such as the street frontage, that are constructed or reconstructed as part of the project will also need to be treated using LID treatment measures.

These features are explained below and should be incorporated into the project design as early as possible.

Site Design Measures

Site design measures help to reduce stormwater flow and water quality impacts of the project by:

- Preserving existing vegetation;
- Reducing the amount of impervious surface using landscaping and/or pervious pavement;
- Directing flow from roof downspouts to landscaping instead of impervious surfaces.

If designed properly, site design measures can reduce or eliminate the need for treatment measures.

Source Control Measures

Source controls prevent potential pollutant sources from contacting stormwater. Examples include:

- Storing household chemicals (e.g., paints, pesticides, fertilizers, and cleaning products) indoors
- Connecting swimming pools and spas to the sanitary sewer system

LID Stormwater Treatment Measures

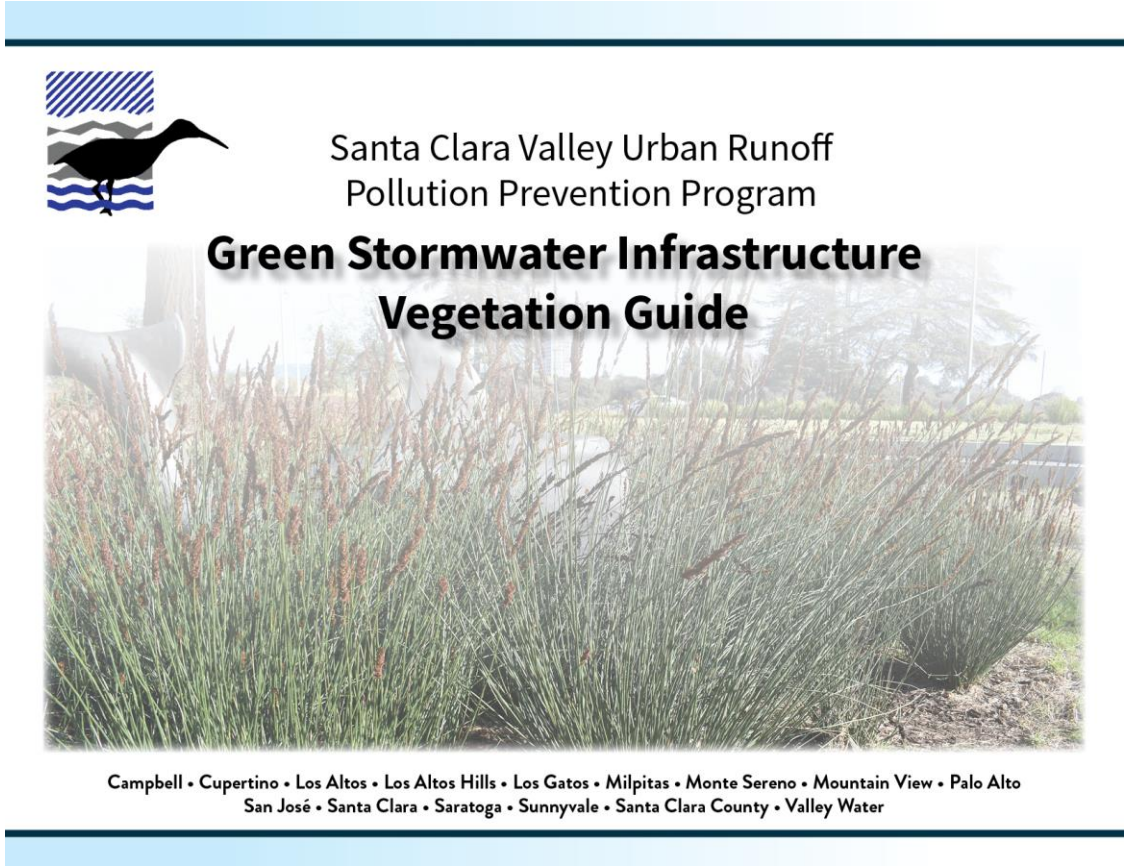
LID measures are treatment systems designed to treat a specific amount of stormwater runoff from buildings, streets, and parking lots by filtration through a special soil media, infiltration into the ground, or storage for future use. This reduces the quantity of water and pollutants flowing into storm drains and local creeks. The site design and LID treatment measures described on the next page can be used to collect runoff from roofs, driveways, and other impervious surfaces to meet stormwater quality requirements.

Santa Clara Valley Urban Runoff Pollution Prevention Program

EOA inc.

Vegetation Guide

- Audience?
  - Maintenance professionals – public and private
  - Inspectors
  - Designers who want to learn more about plants and their care
- What does it cover?
  - Small plant identification and care – not trees
  - New approach of grouping plants by maintenance practices and visual similarities
  - About 60 pages
- When will be it available?
  - Moving draft into InDesign format now
  - Will ask for comments in May
  - Finalize in June
- Thanks to the Work Group!



Rushes:

California Gray Rush "Identity" Page

CALIFORNIA GRAY RUSH

RUSHES

Juncus patens

Characteristics:	
Height:	2-3 Feet
Width:	3-4 Feet
Shape/Form:	Upright
Leaf /BladeType:	Round
Sun Exposure:	Full or Partial
Summer Appearance:	Green
Water Need:	Low
CA Native:	Yes
VW List:	Yes
Life Span:	Long

4-7

Santa Clara Valley
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Flowers:

Foothill Beardtongue “Identity” Page

FOOTHILL BEARDTONGUE

FLOWERS

Penstemon heterophyllus

Characteristics:

Height:	1-3 Feet
Width:	2-3 Feet
Shape:	Upright
Leaf Type:	Evergreen
Sun Exposure:	Full Sun
Summer Appearance:	Green with water
Water Needs:	Low
CA Native:	Yes
VW List:	Yes
Life Span:	Short

Mature

Nursery

New

Declining

Dead

4-31

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Grasses: "Care" Page

CARE — GRASSES

Berkeley Sedge and Lomandra (Pages 4-13 to 4-17):

Live Growth Pruning Area: To base of plant – approx. 2"-4" above grade
Live Growth Pruning Method: Shears - complete removal followed by hand cleaning with textured gloves and removal of dead material at base
Live Growth Pruning Season: February-March
Dead Growth Pruning Area: To base of plant – approx. 2"-4" above grade
Dead Growth Pruning Method: Complete removal to base using textured gloves or hand pruners
Dead Growth Pruning Season: As needed
Tolerates Division: Generally, yes, but species dependent
Reproduction: Division or seed

Blue Fescue, Deer Grass, Hairy Awn Muhly and Giant Wild Rye (Pages 4-17 to 4-24):

Live Growth Pruning Area: Do not prune live growth
Live Growth Pruning Method: Do not prune live growth
Live Growth Pruning Season: Do not prune live growth
Dead Growth Pruning Area: To base of plant. Approx. 2"-4" above grade
Dead Growth Pruning Method: Complete removal by shears followed by hand cleaning and removal of dead material at base
Dead Growth Pruning Season: February-March
Tolerates Division: Yes
Reproduction: Division or seed

Improper Pruning – Excess Dead Material in Base

Pruning Training

Dead Plant

Improper Pruning

Inadequate Pruning

4-25

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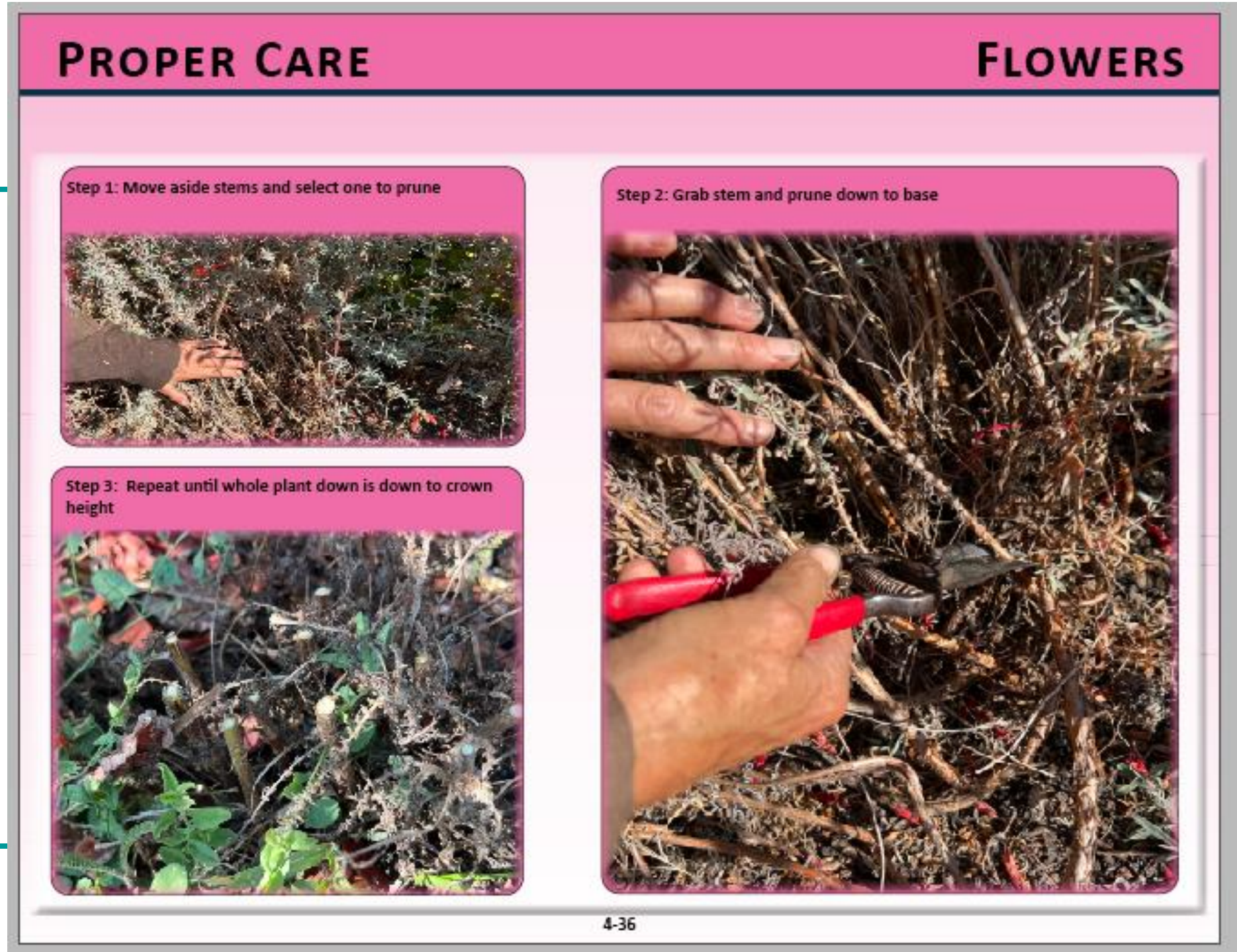
Flowers:

“Proper Care” Page



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Questions?

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