County of San Diego

Stormwater Quality Management Plan (SWQMP)

For Priority Development Projects (PDPs)

Use for all PDPs (see Storm Water Intake Form, Part 4)

Priority Development Project

Project Information	**Development type** ☒ New development ☐ Redevelopment	
Project Name	Spring Valley TM (TM 5636)	
Project Address	(Vacant) Grand Avenue, Spring Valley, CA 91977	
Assessor's Parcel # (APN)	578-161-02	
Permit # / Record ID	PDS2019-TM-5636	
Project category (select one)	☐ Commercial	☐ Minor subdivision*
	☐ Industrial	☒ Major subdivision*
	☐ Single family residential lot	☐ Multi-family residential*
	*If residential, is a Homeowners Association (HOA) proposed? ☐ Yes ☒ No	

Project Applicant / Project Proponent		
Name	Mark Khouoli	
Address	1620 La Presa Avenue, Spring Valley, CA 91977	
Phone	(619) 300-6040	**Email:** markkhouoli@sbcglobal.net

SWQMP Preparer		
Name	Brendan Hofstee	
Company (if applicable)	Walsh Engineering & Surveying, Inc.	
Address	607 Aldwych Road, El Cajon, CA 92020	
Phone	(619) 588-6747	**Email:** brendan@walsh-engineering.com
PE Number (if applicable)		

Preparer's Certification

I understand that the County of San Diego has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the County of San Diego BMP Design Manual. The BMP Design Manual is a design manual for compliance with local County of San Diego Watershed Protection Ordinance (Sections 67.801 et seq.) and regional MS4 Permit (California Regional Water Quality Control Board San Diego Region Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 and Order No. R9-2015-0100) requirements for storm water management.

This SWQMP is intended to comply with applicable requirements of the BMP Design Manual. I certify that it has been completed to the best of my ability and accurately reflects the project being proposed and the applicable BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this SWQMP by County staff is confined to a review and does not relieve me as the person in charge of overseeing the selection and design of storm water BMPs for this project, of my responsibilities for project design.

Signature	Brendan Hofstee	**Date**	10-25-23

COUNTY ACCEPTED

SWQMP Approved By: *Approval Date:*

**** NOTE* Approval does not constitute compliance with regulatory requirements.***

Scope of SWQMP Submittal (Required)

Select the option that describes the scope of this SWQMP Submittal. Document your selection as indicated.

SWQMP Scope	Required Documentation
☒ ***a. SWQMP addresses the entire project***	No additional documentation.
☐ ***b. SWQMP implements requirements of an earlier master SWQMP submittal***	Include a copy of the previous submittal as **Attachment 4**.
☐ ***c. First of multiple SWQMP submittals***	Identify below the elements addressed in this submittal and in future submittals.

(1) Elements addressed in current submittal (streets, common areas, first project phase, etc.):

(2) Elements to be addressed in future submittal(s) (individual lots, future project phases, etc.):

Submittal Record: List the dates of SWQMP and plan submittals and updates. Briefly describe key changes from previous versions. If responding to plan check comments, note this in the entry and attach the responses as applicable.

No.	Date	Summary of Changes
Preliminary Design / Planning / CEQA		
1	4-15-21	Initial Submittal
2	10/08/21	Addressing County comments dated 6-30-21.
3	5/20/22	Addressing County comments dated 1-10-22.
4	10/25/23	Updating SWQMP based on drainage study updates. Only a few DMA areas changed.
Final Design		
1		Initial Submittal
2		
3		
Plan Changes		
1		Initial Submittal
2		
3		

General Directions

Note: These directions may be omitted from the print version of the SWQMP submittal.

① Scope of SWQMP Submittal and Submittal Record (inside front cover)

Use the ***Submittal Scope*** table to document the scope of activities covered under this SWQMP Form. Select one of the three options presented.

- ***SWQMP addresses the entire project***. If this SWQMP form addresses the entire project from start to finish, additional documentation of the project scope is not required.
- ***SWQMP implements requirements of an earlier master SWQMP submittal***. If this SWQMP Form implements requirements identified in an earlier master SWQMP Form, documentation of those earlier requirements must be provided. Include a copy of the previous submittal as **Attachment 4**.
- ***First of multiple SWQMP submittals***. If this is the first of multiple SWQMP submittals, use the spaces provided under Part c to identify and briefly describe which project elements are addressed in this submittal and which ones will be addressed in future submittals. For example, this PDP addresses only streets and roads, but individual lots will be documented in future submittals.

Use the ***Submittal Record*** table to list the dates of any updates to the SWQMP or construction plans. Briefly describe key changes from previous versions. If responding to plan check comments, note this in the entry and attach the responses as applicable.

② PDP SWQMP Submittal Checklist

The checklist on Page 1 summarizes the tables and attachments to be included with this PDP SWQMP submittal. It should be filled out after completing the remainder of the form. Tables and attachments with boxes already checked (☒) are required for all projects. All tables are required. The applicability of attachments not already checked will be identified during the completion of this form.

③ Attachment 1: Stormwater Intake Form

Submit a copy of your completed ***Storm Water Intake Form*** as **Attachment 1**.

④ Tables 1, 2, and 3: Baseline Site Design and Source Control BMPs

Table 1 Completion: Complete **Table 1** to document existing and proposed site features and the BMPs to be implemented for them. All BMPs must be implemented ***where applicable and feasible***. Applicability is generally assumed if a feature exists or is proposed.

Table 2 Completion: Table 2 is not required for Small Residential Projects. Applicants should check the box at the top of the table to confirm it does not apply.

Small Residential Projects are those requiring *either:* a Building Permit, Minor Residential Grading Permit, or Site Plan Permit for a single family home; *or* a Tentative Parcel Map Permit for up to 4 single family homes and a remainder parcel.

All other projects must complete **Table 2** to identify applicable requirements for documenting pollutant-generating sources/ features and source control BMPs.

BMPs must be implemented for **Table 1** and **2** features ***where feasible***. Leaving the box for a BMP unchecked means it will not be implemented (either partially or fully) either because it is inapplicable or infeasible. Explanations must be provided in **Table 3**. Tables 1 and 2 both provide specific instructions on when explanations are required.

⑤ Attachment 5: Existing Site and Drainage Description

Complete **Attachment 5** to provide a description of (1) the existing pre-development condition of the site, and (2) existing and proposed drainage conditions for the site. If required, include a copy of the site Drainage Study with Attachment 5.

⑥ Structural Performance Standards

Determine which Structural Performance Standards apply to the PDP, where they apply, and which compliance strategies you will use to satisfy them. Record your selections in **Table 4** as follows.

Table 4, Part A.1, Selection of Standards: First select the standards that apply to the project.

- *Pollutant control plus hydromodification* — Select if the PDP is not exempt from hydromodification management requirements. It must satisfy both the Pollutant Control Performance Standard (BMPDM Section 2.2) and the Hydromodification Management Performance Standard (BMPDM Section 2.3).
- *Pollutant control only* — Select if the PDP is exempt from hydromodification management requirements per BMPDM Section 6.1. Document the exemption in **Attachment 9**.

Table 4, Part A.2, Application of Standards: Next indicate where on the site the standards apply.

- If this is a **New Development Project**, the standards apply to all impervious surfaces on the site.
- If this is a **Redevelopment Project**, their applicability will depend on the ratio of created or replaced impervious areas to existing impervious areas (see BMPDM Section 1.7). Complete the calculations in the table to determine your obligation. The **percent (%) impervious created or replaced (c)** is determined by dividing the **impervious area created or replaced (b)** by the **existing impervious area (a)** and multiplying the result by 100.
  - **If c is 50% or more**: The standards apply to all impervious surfaces on the site (a + b).
  - **If c is less than 50%**: The standards apply only to created or replaced impervious surfaces (b only).

Table 4, Part B.1: Summary of Required Attachments (1 through 5)

Use this part of the table to summarize which of Attachments 1 through 5 will be included with the SWQMP submittal. If you are completing an **electronic version** of this form, your selections will be automatically recorded based on your previous input. If you are completing a **hard copy** of this form, you must manually select Attachments 3 and 4 as applicable (see pages 4 and 6). Note that Attachments 1,2, and 5 are required for all projects.

Table 4, Part B.2: Selection of Compliance Strategies

Complete Part B.2 to document which compliance options will be used to satisfy the applicable standards for the site. Before doing so, you must determine which option will be used for each DMA. The following four potential design options are presented in detail in BMPDM Chapters 5 and 6.

1. **Self-mitigating DMAs** (BMPDM Section 5.2.1)
2. **De Minimis DMAs** (BMPDM Section 5.2.2)
3. **Self-retaining DMAs** (BMPDM Section 5.2.3)
4. **Structural BMPs**
   - Pollutant Control BMPs (BMPDM Sections 5.4)
   - Hydromodification BMPs (BMPDM Chapter 6)
   - Alternative Compliance Project (BMPDM Section 1.8)

Only one compliance option may be used per individual DMA. Regardless of which option is selected for any DMA, it must fully satisfy the applicable standard(s) determined in Part A.1.

On the left side of Part B, check the applicable boxes for each compliance option to be used.

⑦ Summary of Additional Required Attachments (6 through 12)

You must complete and submit each attachment identified for the compliance options selected. Applicable attachments are listed to the right of each compliance option. If you are completing an **electronic version** of this form, the required attachments for each design option will automatically be selected when you choose the compliance option. As noted above, these selections will also be recorded on the PDP SWQMP Submittal Checklist (Page 1). If you are completing a **hard copy** of this form, you will need to manually check the boxes for each applicable attachment on both pages.

Note that Attachment 9 (Critical Coarse Sediment Yield Areas) is required for all PDPs. If the PDP is exempt from hydromodification requirements, the exemption must be documented in Attachment 9.

⑧ Table 5: Critical Coarse Sediment Yield Area Requirements

Complete **Table 5** to select a compliance pathway for addressing Critical Coarse Sediment Yield Area (CCSYA) requirements for the PDP. See BMPDM Appendix H for additional description of requirements and options. Document Table 5 selections, including hydromodification management exemptions, in **Attachment 9**.

⑨ Tables 6 and 7: Temporary Construction Phase BMPs

Complete **Table 6** to document the minimum construction BMPs to be implemented for the project. Each BMP must be implemented ***where applicable and feasible***. At least one BMP must be selected for each construction activity listed in the table (except Erosion Control for Disturbed Slopes, which requires one BMP per season).

If applicable, use **Table 7** to describe why BMPs not selected in Table 6 are either infeasible or are only partially feasible. Justifications must be provided for all construction activity types for which NO BMPs were selected. If requested by County staff, also justify why specific individual BMPs were not selected.

⑩ Attachment 2: DMA Exhibits and Construction Plans

Exhibits and construction plan sets incorporating all applicable site features, activities, and BMPs identified in **Tables 1, 2, and 6** must be submitted as **Attachment 2 (DMA Exhibits and Construction Plan Sheets)**. See the Attachment 2 cover sheet for additional instructions.

PDP SWQMP Submittal Checklist

SWQMP Tables: All of the tables below must be completed.

SWQMP Attachments[1]: Use the checklist below to identify which attachments will be included with this submittal. Attachments with boxes already checked (☒) are required for all projects. The applicability of other attachments will be determined upon completing this form.

☒ Attachment 1: Storm Water Intake Form

☒ Attachment 2: DMA Exhibits and Construction Plan Sheets

☐ Attachment 3: Reserved for Future Use

☐ Attachment 4: Previous SWQMP Submittals

☒ Attachment 5: Existing Site and Drainage Description

☒ Attachment 6: Documentation of DMAs without Structural BMPs

☐ Attachment 7: Documentation of DMAs with Structural Pollutant Control BMPs

☐ Attachment 8: Documentation of DMAs with Structural Hydromodification Management BMPs

☒ Attachment 9: Management of Critical Coarse Sediment Yield Areas

☒ Attachment 10: BMP Installation Verification Form

☐ Attachment 11: BMP Maintenance Agreements and Plans

☐ Attachment 12: Documentation of Alternative Compliance Projects (ACPs)

After completing the remainder of this form, check the applicable SWQMP Attachment boxes to summarize your selections.

[1] All SWQMP Attachments are available at www.sandiego.gov/stormwater under the Development Resources tab, Submittal Templates.

Table 1 – Baseline BMPs for Existing and Proposed Site Features

A. BMPs for Existing Natural Site Features (See Fact Sheet BL-1)

1. Check the boxes below for each existing feature on the site.

2. Select the BMPs to be implemented for each identified feature. Explain why any BMP not selected is infeasible in Table 3.

	Conserve natural features (SD-G)	Provide buffers around waterbodies (SD-H)
☐ Natural waterbodies	☐	☐
☐ Natural storage reservoirs & drainage corridors	☐	---
☒ Natural areas, soils, & vegetation (incl. trees)	☒	---

B. BMPs for Common Impervious Outdoor Site Features (See Fact Sheet BL-2)

1. Check the boxes below for each proposed feature.

*2. Select the BMPs to be implemented for each proposed feature. If neither BMP **SD-B** nor **SD-I** is selected for a feature, explain why both BMPs are infeasible in Table 3.*

	a. Direct runoff to pervious areas (SD-B)	b. Construct surfaces from permeable materials (SD-I)	c. Minimize the size of impervious areas
☐ Streets and roads	☐	☐	☒ *Check this box to confirm that all impervious areas on the site will be minimized where feasible.*
☐ Sidewalks & walkways	☐	☐	
☐ Parking areas & lots	☐	☐	
☒ Driveways	☐	☐	*If this box is not checked, identify the surfaces that cannot be minimized in Table 3, and explain why it is infeasible to do so.*
☐ Patios, decks, & courtyards	☐	☐	
☐ Hardcourt recreation areas	☐	☐	
☐ Other:	☐	☐	

C. ☒ **BMPs for Rooftop Areas:** *Check this box if rooftop areas are proposed and select at least one BMP below.* **(See Fact Sheet BL-3)**

If no BMPs are selected, explain why they are infeasible in Table 3.

1. Direct runoff to pervious areas (SD-B)	2. Install green roofs (SD-C)	3. Install rain barrels (SD-E)
☒	☐	☐

D. ☒ **BMPs for Landscaped Areas:** *Check this box if landscaping is proposed and select at least one BMP below.* **(See Fact Sheet BL-4)**

If no BMPs are selected, explain why they are infeasible in Table 3.

1. Sustainable Landscaping (SD-K)
☒

Note: All features and BMPs must be shown on applicable construction plans. See applicable Fact Sheets in Appendix C of the BMP Design Manual for additional information.

Note: Use Table 3 to explain BMP infeasibility or inapplicability, or to describe features or BMPs not listed in this table. Additional explanation may be required by the County.

Table 2 – Baseline BMPs for Pollutant-generating Sources

☒ If this is a **Small Residential Project**, check this box and skip the rest of this table.

A. Management of Stormwater Discharges

1. Identify all proposed outdoor work areas below (☐ *Check here if none are proposed*)	**2. Which BMPs will be used to prevent materials from contacting rainfall or runoff?** (See Fact Sheet BL-5) *(Select all feasible BMPs for each work area[2])*			**3. Where will runoff from the work area be routed?** (See Fact Sheet BL-6) *(Select one or more option for each work area)*			
	Overhead covering (rooftops, etc.) (SC-A)	**Separation of flows from adjacent areas (berms, etc.) (SC-B)**	**Wind protection (screens, etc.) (SC-C)**	**Sanitary sewer[3] (SC-D)**	**Containment system (SC-E)**	**Stormwater S-BMP or SSD-BMP[4]**	**Other[5]**
☐ Trash & Refuse Storage	☐	☐	☐	☐	☐	☐	☐
☐ Materials & Equipment Storage	☐	☐	☐	☐	☐	☐	☐
☐ Loading & Unloading	☐	☐	---	☐	☐	☐	☐
☐ Fueling	☐	☐	---	☐	☐	☐	☐
☐ Maintenance & Repair	☐	☐	---	☐	☐	☐	☐
☐ Vehicle & Equipment Cleaning	☐	☐	---	☐	☐	☐	☐
☐ Other:	☐	☐	---	☐	☐	☐	☐

B. Prevention of Non-stormwater Discharges (See Fact Sheet BL-7)

Select one option for each feature below:

• **Storm drain inlets and catch basins ...**	☐ are not proposed	☐ will be labeled with stenciling or signage to discourage dumping **(SC-F)**
• **Educational BMP Signage ...**	☐ are not proposed	☐ will be labeled with educational signage for BMP **(SC-G)**
• **Interior work surfaces, floor drains, & sumps ...**	☐ are not proposed	☐ will not discharge directly or indirectly to the MS4 or receiving waters
• **Drain lines (e.g., air conditioning, boiler, etc.) ...**	☐ are not proposed	☐ will not discharge directly or indirectly to the MS4 or receiving waters
• **Fire sprinkler test water ...**	☐ are not proposed	☐ will not discharge directly or indirectly to the MS4 or receiving waters

Note: All outdoor features and BMPs in this table must be shown on applicable construction plans. See applicable Fact Sheets in Appendix C of the BMP Design Manual for additional information. **Note:** Use Table 3 to explain BMP infeasibility or inapplicability, or to describe features or BMPs not listed in this table. Additional explanation may be required by the County.

[2] Each BMP is required where feasible. If none are selected for any feature, explain why they are infeasible in Table 3.

[3] Separate wastewater agency approvals may be required.

[4] Structural Treatment Control BMPs (S-BMPs) and Significant Site Design BMPs (SSD-BMPs) may not receive discharges from work areas that concentrate pollutants in a manner that will impair their functioning. Discharges from the proposed work area must also be included in DCV calculations for the applicable BMP.

[5] Describe other proposed options for managing stormwater discharges in Table 3.

Table 3 – Explanations and Justifications for Table 1 and 2 Baseline BMPs

☒ **Check here if no explanations or justifications for Table 1 or 2 BMPs are required.**

- **Required Justifications**: Provide explanations of BMP inapplicability and/or infeasibility as indicated per Tables 1 and 2.
- **If Requested**: Justify why specific BMPs will not be implemented or will only be partially implemented.
- **Additional Explanation**: Describe any proposed features and/or BMPs not listed in Tables 1 or 2.

BMP-Feature Combination		Explanation
Feature		
BMP		
Feature		
BMP		
Feature		
BMP		
Feature		
BMP		
Feature		
BMP		
Feature		
BMP		
Feature		
BMP		

Table 4: DMA Structural Compliance Strategies and Documentation

Part A – Selection and Application Structural Performance Standards

1. Selection of Standards (select one; see BMPDM Section 6.1)

☒ a. Pollutant control + hydromodification ☐ b. Pollutant control only (project is exempt from hydromodification requirements)

2. Application of Structural Performance Standards (select one; see BMPDM Section 1.7)

☒ **New Development Projects:** Standards apply to all impervious surfaces.

☐ **Redevelopment Projects:** Complete the calculations below. Select the applicable scenario based on the results.

a. Existing impervious area (ft²)	b. Impervious area created / replaced (ft²)	c. % Impervious created / replaced [(b/a)*100]

☐ *Scenario 1: c is 50% or more*: Performance standards apply to all impervious surfaces (a + b).

☐ *Scenario 2: c is less than 50%*: Performance standards apply only to created or replaced impervious surfaces (b only).

Part B – Compliance Strategies and Required Attachments

***1.** Complete and submit each of the applicable attachments on the right.*

Att. 1	Att. 2	Att. 3	Att. 4	Att. 5
Storm Water Intake Form	DMA Exhibits and Construction Plan Sheets	N/A	Previous SWQMP Submittals (see inside cover)	Existing Site and Drainage Description
☒	☒	☐	☐	☒

***2.** Indicate each compliance strategy below that will be used for one or more DMAs on the site.*

	Att. 6 DMAs without Structural BMPs	Att. 7 DMAs w/ Structural Pollutant Control BMPs	Att. 8 DMAs w/ Structural Hydromod. BMPs	Att. 9 Critical Coarse Sediment Yield Areas	Att. 10 BMP Installation Verification Form	Att. 11 Maintenance Agreements/ Plans	Att. 12 Alternative Compliance Projects
☒Self-mitigating DMAs (BMPDM Section 5.2.1)	☒			☒			
☐De Minimis DMAs (BMPDM Section 5.2.2)	☐			☐			
☒Self-retaining DMAs (BMPDM Section 5.2.3)	☒			☒	☒		
Structural BMPs (select all that apply)							
☐Pollutant Control BMPs (BMPDM Section 5.4)		☐		☐	☐	☐	
☐Hydromodification Control BMPs (BMPDM Chapter 6)			☐	☐	☐	☐	
☐Alternative Compliance Project (BMPDM Section 1.8)				☐	☐	☐	☐

- *Attachments 1, 2, and 5 are required for all projects.*

Table 5: Critical Coarse Sediment Yield Area (CCSYA) Requirements

- Identify one applicable compliance pathway for the PDP below.
- Document your selection in **Attachment 9**.

A. Hydromodification Management Exemption (BMPDM Sections 1.6 and 6.1)

☐ **PDP is Exempt from Hydromodification Management Requirements**

Select if hydromodification management exemption was selected in Table 4 Part A.1.

B. Watershed Management Area (WMAA) Mapping (BMPDM Appendix H.1.1.2)

☒ **WMAA mapping demonstrates the following:**

a. <5% of potential onsite CCYSAs will be impacted (built on or obstructed)

b. All potential upstream offsite CCYSAs will be bypassed

C. Resource Protection Ordinance (RPO) Methods (BMPDM Appendix H.1.1.1)

☐ **RPO Scenario 1: PDP is subject to and in compliance with RPO requirements**

a. Project requires one or more discretionary permits (RPO applicability is confirmed during discretionary review)

b. Onsite AND upstream offsite CCSYAs will be avoided and/or bypassed

☐ **RPO Scenario 2: PDP is entirely exempt/not subject to RPO requirements**[6]

a. Project does not require discretionary permits

b. Project will bypass all upstream offsite CCSYAs (no requirements for onsite CCSYAs)

D. No Net Impact Analysis (BMPDM Appendix H.4)

☐ **Project demonstrates no net impact to receiving waters**

[6] Does not include PDPs utilizing exemption(s) via RPO Section 86.604(e)(2)(cc) or 86.604(e)(3).

Table 6 –Minimum Construction Stormwater BMPs

Minimum Required BMPs by Activity Type Select all applicable activities and at least one BMP for each.	References Caltrans[7]	 County of San Diego
☒ **Erosion Control for Disturbed Slopes** (choose at least 1 per season)		
☐ Vegetation Stabilization Planting[8] (Summer)	SS-2, SS-4	
☒ Hydraulic Stabilization Hydroseeding (Summer)	SS-4	
☐ Bonded Fiber Matrix or Stabilized Fiber Matrix[9] (Winter)	SS-3	
☐ Physical Stabilization Erosion Control Blanket (Winter)	SS-7	
☒ **Erosion control for disturbed flat areas (slope < 5%)**		
☐ County Standard Lot Perimeter Protection Detail	SC-2	PDS 659[10]
☐ Use of Item A erosion control measures on flat areas	SS-3, SS-4, SS-7	
☐ County Standard Desilting Basin (must treat all site runoff)	SC-2	PDS 660[11]
☒ Mulch, straw, wood chips, soil application	SS-6, SS-8	
☒ **Energy dissipation (required to control velocity for concentrated runoff or dewatering discharge)**		
☒ Energy Dissipater Outlet Protection	SS-10	RSD D-40[12]
☒ **Sediment control for all disturbed areas**		
☐ Silt Fence	SC-1	
☒ Fiber Rolls (Straw Wattles)	SC-5	
☒ Gravel & Sand Bags	SC-6, SC-8	
☐ Dewatering Filtration	NS-2	
☒ Storm Drain Inlet Protection	SC-10	
☐ Engineered Desilting Basin (sized for 10-year flow)	SC-2	
☒ **Preventing offsite tracking of sediment**		
☒ Stabilized Construction Entrance	TC-1	
☐ Construction Road Stabilization	TC-2	
☐ Entrance/Exit Tire Wash	TC-3	
☐ Entrance/Exit Inspection & Cleaning Facility	TC-1	
☐ Street Sweeping and Vacuuming	SC-7	
☒ **Materials Management**		
☒ Material Delivery & Storage	WM-1	
☒ Spill Prevention and Control	WM-4	
☒ **Waste Management[13]**		
☒ Waste Management Concrete Waste Management	WM-8	
☒ Solid Waste Management	WM-5	
☒ Sanitary Waste Management	WM-9	
☒ Hazardous Waste Management	WM-6	

[7] See Caltrans 2017 Construction Site Best Management Practices (BMP) Manual available at: https://dot.ca.gov/programs/construction/storm-water-and-water-pollution-control/manuals-and-handbooks
[8] Planting or Hydroseeding may be installed between May 1st and August 15th. Slope irrigation must be in place and operable for slopes >3 feet. Vegetation must be watered and established prior to October 1st. A contingency physical BMP must be implemented by August 15th if vegetation is not established by that date. If landscaping is proposed, erosion control measures must also be used while landscaping is being established. Established vegetation must have a subsurface mat of intertwined mature roots with a uniform vegetative coverage of 70 percent of the natural vegetative coverage or more on all disturbed areas.
[9] All slopes over three feet must have established vegetative cover prior to final permit approval.
[10] County PDS 659. Standard Lot Perimeter Protection Design System (Bldg. Division)
[11] County PDS 660. County Standard Desilting Basin for Disturbed Areas of 1 Acre or Less Bldg. Division
[12] Regional Standard Drawing D-40 – Rip Rap Energy Dissipater (also acceptable for velocity reduction)
[13] Applicants are responsible to apply appropriate BMPs for specific wastes (e.g., BMP WM-8 for concrete).

Table 7 – Explanations and Justifications for Construction Phase BMPs

☒ **Check here if no explanations or justifications for Table 6 BMPs are required.**		
Justifications for Table 6 Temporary Construction Phase BMPs • **Required Justifications**: Justify all construction activity types for which NO BMPs were selected. • **If Requested**: Justify why specific individual BMPs were not selected. • **Additional Explanation**: Describe any proposed features and/or BMPs not listed in Table 6.		
Activity Type / BMP		**Explanation**
Activity Type		
BMP		
Activity Type		
BMP		
Activity Type		
BMP		
Activity Type		
BMP		
Activity Type		
BMP		
Activity Type		
BMP		
Activity Type		
BMP		

County of San Diego
Stormwater Quality Management Plan (SWQMP)
Attachment 1: Storm Water Intake Form for All Permit Applications

This form establishes Stormwater Quality Management Plan (SWQMP) requirements for Development Projects per Sections 67.809 and 67.811 of the County of San Diego Watershed Protection Ordinance (WPO).
See ***Storm Water Intake Form Instructions*** for additional guidance and explanation of terms.

Part 1. Project Information	
Project Name:	Spring Valley TM (TM 5636)
Record ID (Permit) No(s):	PDS2019-TM-5636
Assessor's Parcel No(s):	578-161-02
Street Address (or Intersection):	(Vacant) Grand Avenue
City, State, Zip:	Spring Valley, CA 91977
Part 2. Applicant / Project Proponent Information	
Name:	Mark Khouoli
Company:	
Street Address:	1620 La Presa Avenue
City, State, Zip:	Spring Valley, CA 91977
Phone Number	(619) 300-6040
Email:	markkhouoli@sbcglobal.net

Part 3. Required Information for All Development Projects

Ⓐ **1. Existing (pre-development) impervious surfaces (ft²)**	**2. Created or replaced impervious surfaces (ft²)**	**3. Total disturbed area (acres or ft²)**
0	23,969	51,530 ft^2

Ⓑ ☐ Check here and provide a WDID# if this project is subject to the California Construction General Permit (Order No. 2009-0009-DWQ)[1]	**WDID # (if issued)**
	TBD

For County Use Only	Reviewed By:	Review Date:
☐ Standard SWQMP	☐ PDP SWQMP	☐ Green Streets PDP Exemption SWQMP

[1] Available at: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html

Part 4. Priority Classification & SWQMP Form Selection

(A) *If your project is the following … (select one)*	(B) *You must complete …*
☐ **Standard Project** ☐ a. Project is East of the Pacific/Salton Sea Divide ☐ b. None of the PDP criteria below applies	➔ **Standard *SWQMP Form***
☒ **Priority Development Project (PDP)** ☐ 1. Project is part of an existing PDP**,** OR ☐ 2. Project does any of the following: ☒ a. Creates or replaces a total of 10,000 ft² or more of impervious surface ☐ b. Creates or replaces a combined total of 5,000 ft² or more of impervious surface within one or more of the following uses: (1) parking lots; (2) streets, roads, highways, freeways, and/or driveways; (3) restaurants; and (4) hillsides ☐ c. Creates or replaces a combined total of 5,000 ft² or more of impervious surface within one or more of the following uses: (1) automotive repair shops; and (2) retail gasoline outlets ☐ d. Discharges directly to an Environmentally Sensitive Area (ESA) AND creates or replaces 2,500 ft² or more of impervious surface ☒ e. Disturbs one or more acres of land (43,560 ft²) and is expected to generate pollutants post-construction ☐ f. Is a redevelopment project that creates or replaces 5,000 ft² or more of impervious surface on a site already having at least 10,000 ft² of impervious surface	➔ **PDP *SWQMP Form***
☐ **Green Streets PDP Exemption**[2]	➔ **Green *Streets PDP Exemption SWQMP Form***

Part 5. Applicant Signature

I have reviewed the information in this form, and it is true and correct to the best of my knowledge.

Applicant / Project Proponent Signature: [signature]

Date: 11/3/21

- ***Upon completion*** *submit this form to the County.*
- ***If requested****, attach supporting documentation to justify selections made or exemptions claimed.*
- ***If this is a PDP that is part of a larger existing PDP****, you will be required to attach a copy of the existing SWQMP to the newer SWQMP submittal.*

[2] ***Green Streets PDP Exemption Projects*** are those claiming exemption from PDP classification per WPO Section 67.811(b)(2) because they consist exclusively of *either* 1) development of new sidewalks, bike lanes, and/or trails; *or* 2) improvements to existing roads, sidewalks, bike lanes, and/or trails.

2.0 General Requirements

- Attachment 2 consolidates exhibits and plans required for the entire project.
- Complete the table below to indicate which sub-attachments are included with the submittal. Sub-attachments that are not applicable can be excluded from the submittal.
- Unless otherwise stated, features and BMPs identified and described in each corresponding Attachment (6 through 9) must be shown on applicable DMA Exhibits and construction plans submitted for the project.

Sub-attachments	Requirement
☒ **2.1: DMA Exhibits**	All PDPs
☐ **2.2: Individual Structural BMP DMA Mapbook**	PDPs with structural BMPs
☒ **2.3: Construction Plan Sets**	All projects

2.1 DMA Exhibits

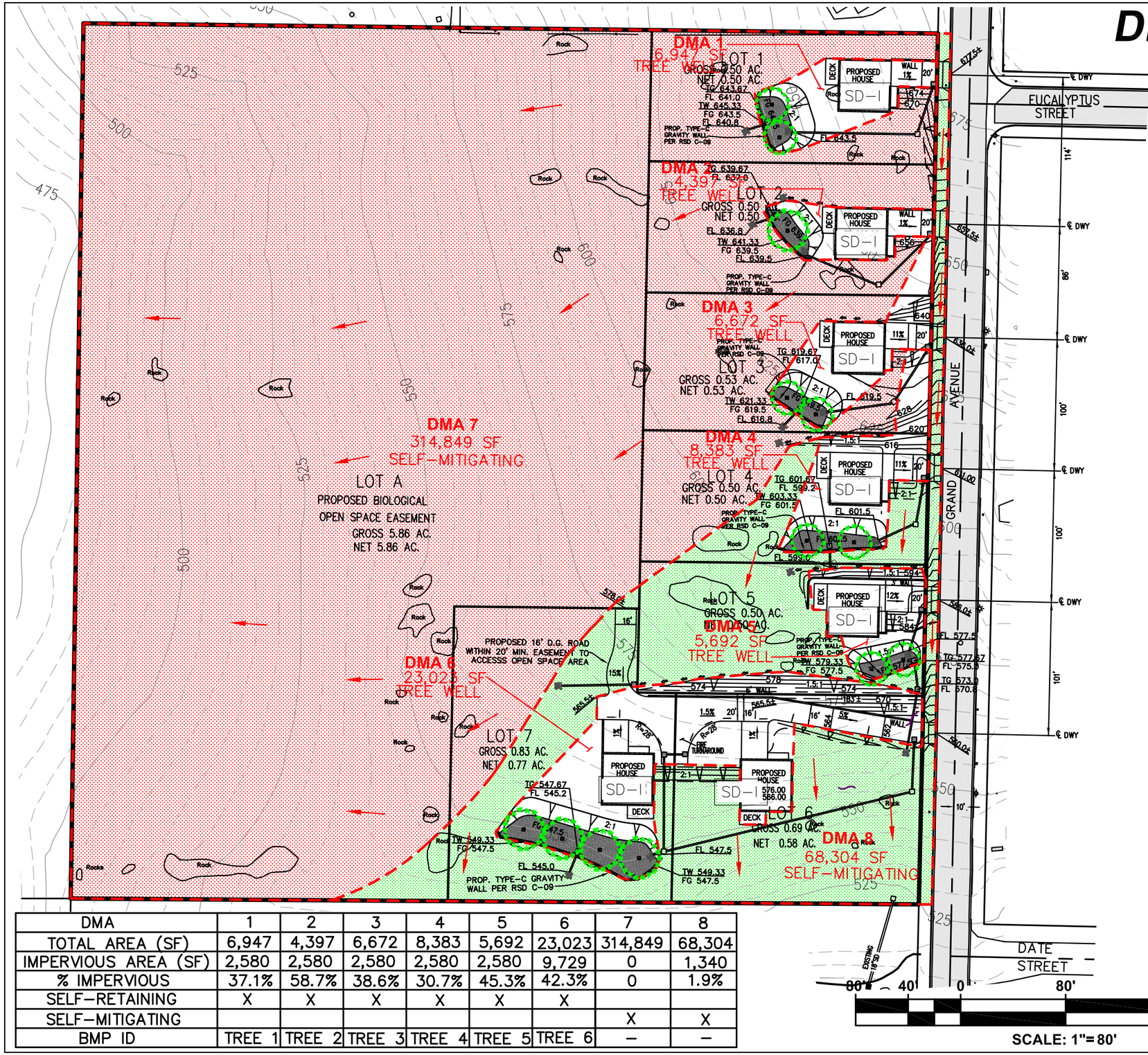
- DMA Exhibits must show all DMAs on the project site. Exhibits must include all applicable features identified in applicable SWQMP attachments.
- Exhibits may be prepared individually for the BMPs associated with each applicable SWQMP Attachment (6, 7, 8, and/or 9) or combined into one or more consolidated exhibits.
- Use this checklist to ensure required information is included on each exhibit (copy as needed).

DMA Exhibit ID #:	**DMA Exhibit 1**	
A. Features required for all exhibits		
1. Existing Site Features		
☒ Underlying hydrologic soil group (A, B, C, D)	☒ Topography and impervious areas	
☒ Approximate depth to groundwater	☒ Existing drainage network, directions, and offsite connections	
☒ Natural hydrologic features		
2. Drainage Management Area (DMA) Information		
☒ Proposed drainage network, directions, and offsite connections	☒ DMA boundaries, ID numbers, areas, and type (structural BMP, de minimis, etc.)	
3. Proposed Site Changes, Features, and BMPs		
☒ Proposed demolition and grading	☐ Construction BMPs[2]	
☒ Group 1, 2, and 3 Features[1]	☐ Baseline source control BMPs	
☐ Group 4 Features	☐ Baseline source control BMPs	
B. Proposed Features and BMPs Specific to Individual SWQMP Attachments[3]		
☒ Attachment 6	☐ SSD-BMP impervious dispersion areas ☒ SSD-BMP tree wells	
☐ Attachment 7	☐ Structural pollutant control BMPs	
☐ Attachment 8	☐ Structural hydromodification management BMPs ☐ Point(s) of Compliance (POC) for hydromodification management ☐ Proposed drainage boundary and drainage area to each POC	
☒ Attachment 9	☐ Onsite CCSYAs	☐ Bypass of onsite CCSYAs ☐ Bypass of upstream offsite CCSYAs

[1] Group 1-4 features and baseline BMPs from PDP SWQMP Tables 2 and 3.
[2] Minimum Construction Stormwater BMPs from PDP SWQMP Table 7.
[3] Identify the location, ID numbers, type, and size/detail of BMPs.

DRAINAGE MANAGEMENT AREA EXHIBIT

(VACANT) GRAND AVENUE
SPRING VALLEY, CA 91977



DMA	1	2	3	4	5	6	7	8
TOTAL AREA (SF)	6,947	4,397	6,672	8,383	5,692	23,023	314,849	68,304
IMPERVIOUS AREA (SF)	2,580	2,580	2,580	2,580	2,580	9,729	0	1,340
% IMPERVIOUS	37.1%	58.7%	38.6%	30.7%	45.3%	42.3%	0	1.9%
SELF-RETAINING	X	X	X	X	X	X		
SELF-MITIGATING							X	X
BMP ID	TREE 1	TREE 2	TREE 3	TREE 4	TREE 5	TREE 6	–	–

LEGEND:

- DMA BOUNDARY
- TREE IN TREE WELL (SEE BELOW FOR MATURE CANOPY DIAMETER SIZES PER EACH DMA 1 THROUGH 6)
- DIRECTION OF DRAINAGE
- SD-I — MINIMIZE IMPERVIOUS AREA-SMALLER FOOTPRINTS FOR HOUSES IS HOW SD-I WAS IMPLEMENTED.

NOTES:

1. SOIL: TYPE D
2. CRITICAL SEDIMENT YIELD COARSE AREAS: NONE
3. DEPTH TO GROUNDWATER: NONE ENCOUNTERED
4. NO NATURAL HYDROLOGIC FEATURES EXIST ON-SITE

NOTE: ALL TREE WELLS USE DCV MULTIPLIER TO SATISFY POLLUTANT CONTROL.

DMA SUMMARY:

DMA 1 : TWO 18' x 19.3'x 3' ~ 25' MATURE CANOPY DIAMETER TREE WELLS (1,044 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 2 : ONE 13.5' x 38' x 3' ~ 30' MATURE CANOPY DIAMETER TREE WELL (1,539 CF AMENDED SOIL VOLUME PROVIDED)

DMA 3 : TWO 12.4' x 23' x 3.5' ~ 25' MATURE CANOPY DIAMETER TREE WELLS (998 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 4 : TWO 12' x 34' x 2.5' ~ 25' MATURE CANOPY DIAMETER TREE WELLS (1,020 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 5 : TWO 12' x 21.3' x 4' ~ 25' MATURE CANOPY DIAMETER TREE WELLS (1,022 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 6 : FOUR 21' x 29.5 x 2.5' ~ 30' MATURE CANOPY DIAMETER TREE WELLS (1,549 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 7 : ON-SITE AREA DRAINING WEST/SOUTHWEST-SELF MITIGATING

DMA 8 : ON-SITE AREA DRAINING SOUTH/SOUTHEAST -SELF MITIGATING

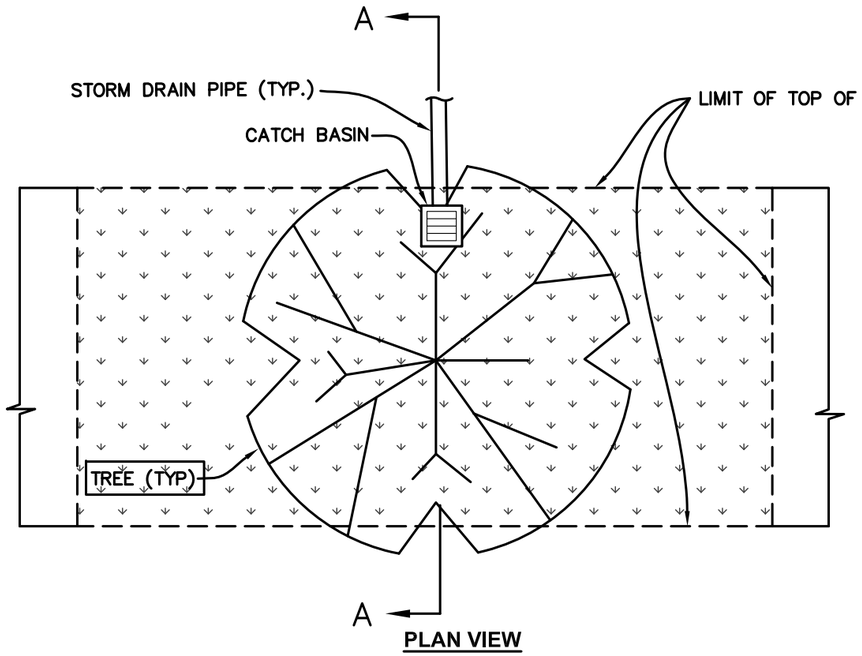
SCALE: 1"= 80'

SHEET 1 OF 2

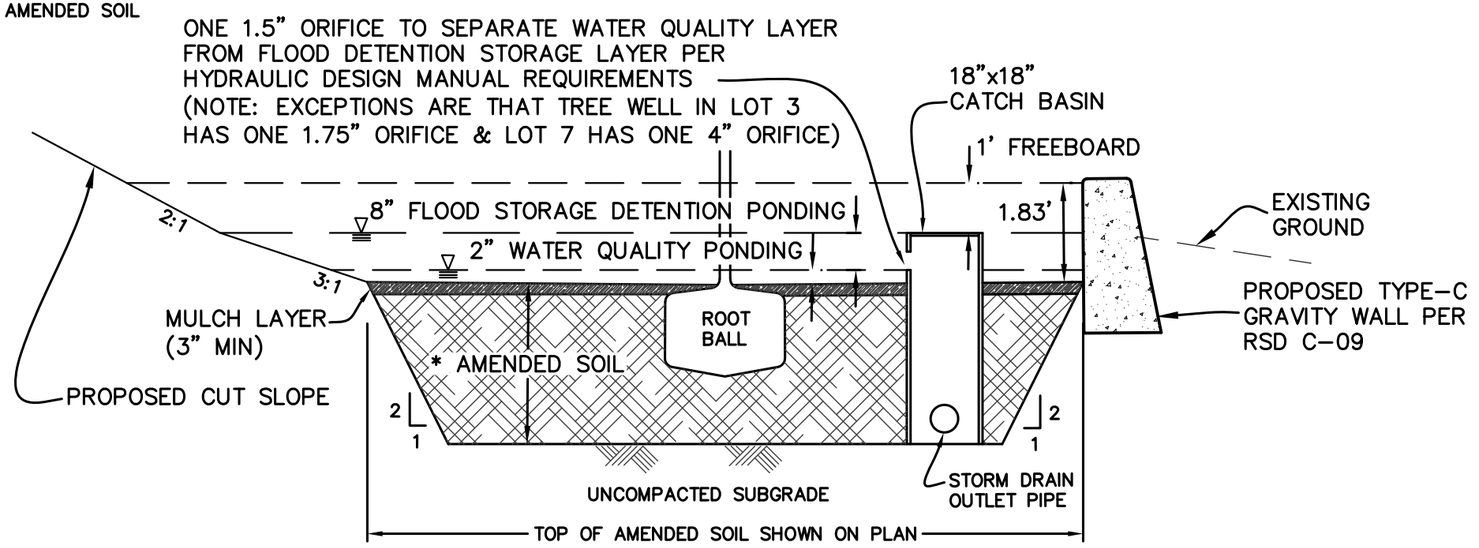
L:\PROJECTS 3D\201213-SPRING VALLEY\PRODUCTION DRAWINGS\201213 - DRAINAGE MAPS.DWG October 25, 2023 - 2:23pm

DRAINAGE MANAGEMENT AREA EXHIBIT

(VACANT) GRAND AVENUE
SPRING VALLEY, CA 91977



PLAN VIEW



SECTION A-A

TREEWELL DETAIL
NO SCALE

NOTE:

* AMENDED SOIL THICKNESS VARIES DEPENDING ON TREE WELL:
- TREE WELLS IN LOTS 4 & 7 HAVE 2.5' OF AMENDED SOIL
- TREE WELLS IN LOTS 1 & 2 HAVE 3.0' OF AMENDED SOIL
- TREE WELL IN LOT 3 HAS 3.5' OF AMENDED SOIL
- TREE WELL IN LOT 5 HAS 4.0' OF AMENDED SOIL

2.2 Individual Structural BMP DMA Mapbook

- Use this page as a cover sheet for the Structural DMA Mapbook.
- An individual Structural DMA Mapbook must be submitted for any project site with one or more structural BMPs. One Mapbook is required for each unique subsequent owner with responsibility for maintenance of a Structural BMP. Mapbook exhibits will be incorporated as exhibits in Stormwater Maintenance Agreements (SWMAs) and Maintenance Notifications (MNs). See Attachment 11 for additional information on maintenance agreements. If the Mapbook has been provided for each subsequent owner in Attachment 11, they are not required here.
- Place each map on 8.5"x11" paper.
- Show at a minimum the DMA, Structural BMP, Assessor's parcel boundaries with parcel numbers, and any existing hydrologic features within the DMA.

☐	All Mapbooks are attached
☐	All Mapbooks are in Attachment 11

2.3 Construction Plan Sets

- DMAs, features, and BMPs identified and described in this attachment must also be shown on all applicable construction and landscape plans.
- As applicable, plan sheets must identify:
    - All features and BMPs identified in Sub-attachment 2.1 (DMA Exhibits).
    - The additional information listed below.
- Use this checklist to ensure required information is included on each plan (copy as needed).

Plan Type	**Preliminary Grading Plan**
Required Information[4]	
☒ Structural BMP(s) and Significant Site Design BMPs (if applicable) with ID numbers.	
☒ The grading and drainage design shown on the plans must be consistent with the delineation of DMAs shown on the DMA exhibit.	
☒ Details and specifications for construction of Structural BMP(s) and Significant Site Design BMPs (if applicable).	
☒ Signage indicating the location and boundary of structural BMP(s) as required by County staff.	
☒ How to access the structural BMP(s) to inspect and perform maintenance.	
☒ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds).	
☒ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP).	
☒ Recommended equipment to perform maintenance.	
☒ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management.	
☒ Include landscaping plan sheets (if available) showing vegetation requirements for vegetated structural BMP(s).	
☒ All BMPs must be fully dimensioned on the plans.	
☒ When proprietary BMPs are used, site-specific cross-section with outflow, inflow, and manufacturer model number must be provided. Photocopies of general brochures are not acceptable.	
☒ Include all source control and site design measures described in the SWQMP.	
☒ Include all construction BMPs described in the SWQMP.	

[4] For Building Permit Applications, refer to Form PDS 272, https://www.sandiegocounty.gov/content/dam/sdc/pds/docs/pds272.pdf

PRELIMINARY GRADING PLAN

PDS2019-TM-5636

EASEMENTS

Ⓐ ITEM 7 EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS GRANTED IN DOCUMENT:

GRANTED TO:	SAN DIEGO GAS AND ELECTRIC COMPANY
PURPOSE:	UNDERGROUND FACILITIES AND ABOVE GROUND STRUCTURES
RECORDING DATE:	FEBRUARY 13, 1958
RECORDING NO:	BOOK 6948, PAGE 398, OF OFFICIAL RECORDS SAID LAND MORE PARTICULARLY DESCRIBED THEREIN

Ⓑ ITEM 9 EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS GRANTED IN DOCUMENT:

GRANTED TO:	SPRING VALLEY SANITATION DISTRICT
PURPOSE:	SEWER LINE
RECORDING DATE:	MARCH 9, 1962
RECORDING NO:	40574, OF OFFICIAL RECORDS

Ⓒ ITEM 10 EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS GRANTED IN DOCUMENT:

GRANTED TO:	COUNTY OF SAN DIEGO
PURPOSE:	SLOPES
RECORDING DATE:	NOVEMBER 18, 1964
RECORDING NO:	210201, OF OFFICIAL RECORDS

Ⓓ ITEM 11 EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN DOCUMENT:

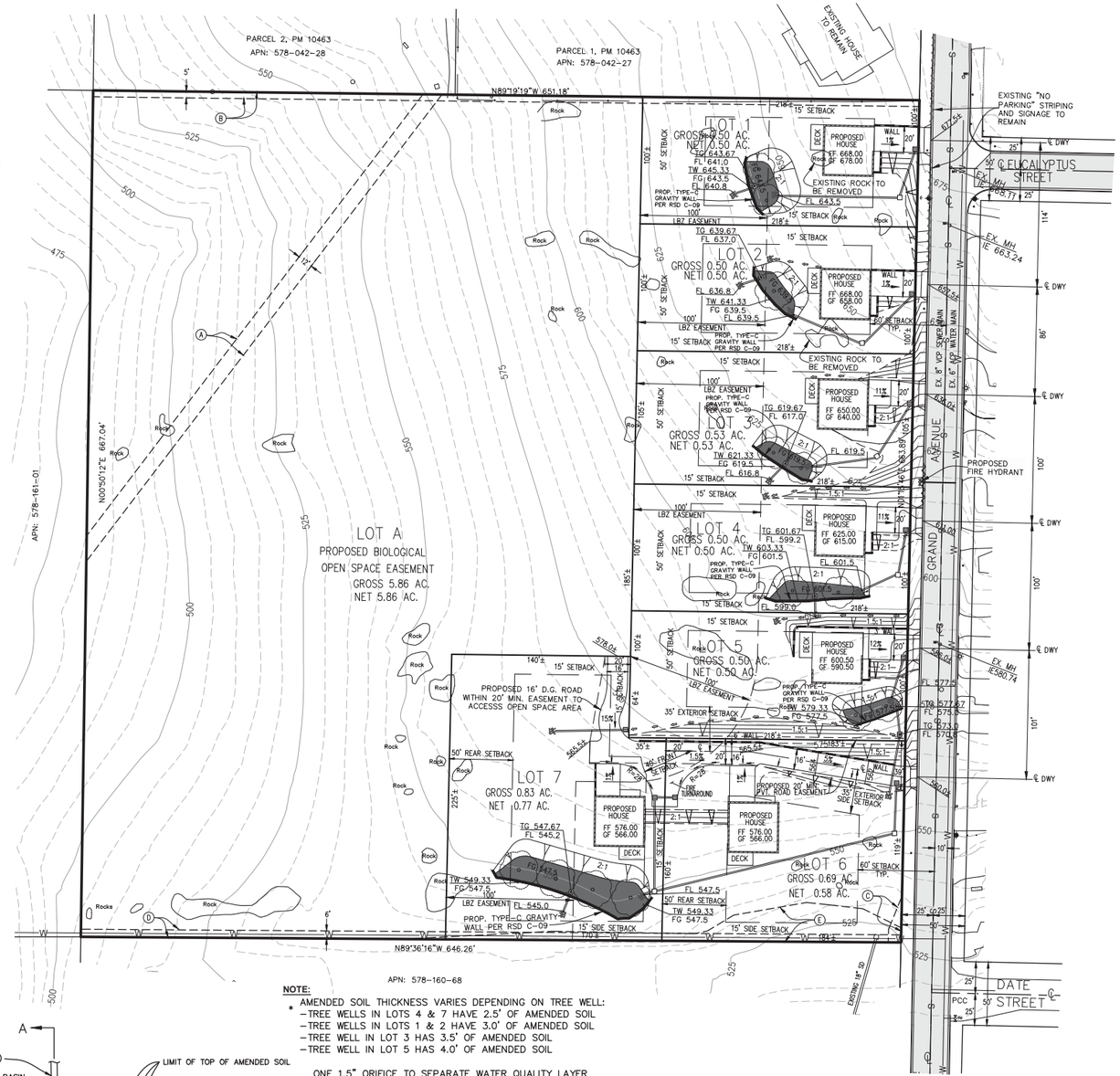
PURPOSE:	RIGHTS OF WAY TO INSTALL AND MAINTAIN WATER LINES
RECORDING DATE:	OCTOBER 16, 1967
RECORDING NO:	160118, OF OFFICIAL RECORDS

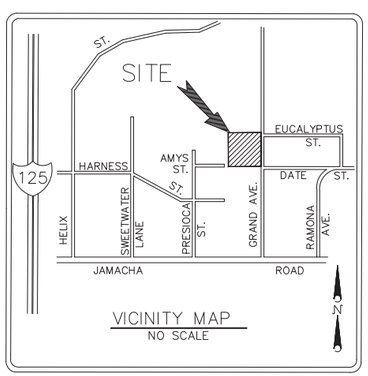
Ⓔ ITEM 14 EASEMENT FOR THE PURPOSE SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN DOCUMENT:

PURPOSE:	Off-site drainage
RECORDING DATE:	JULY 18, 2017
RECORDING NO:	2017-0322840, OF OFFICIAL RECORDS

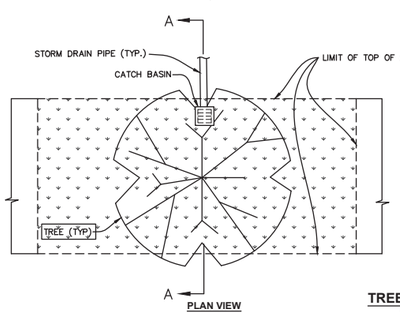
PRELIMINARY GRADING PLAN NOTE:

THIS PLAN IS PROVIDED TO ALLOW FOR THE FULL AND ADEQUATE DISCRETIONARY REVIEW OF A PROPOSED DEVELOPMENT PROJECT. THE PROPERTY OWNER ACKNOWLEDGES THAT ACCEPTANCE OR APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL TO TO PERFORM ANY GRADING SHOWN HEREON, AND AGREES TO OBTAIN A VALID GRADING PERMIT BEFORE COMMENCING SUCH ACTIVITY.





VICINITY MAP
NO SCALE

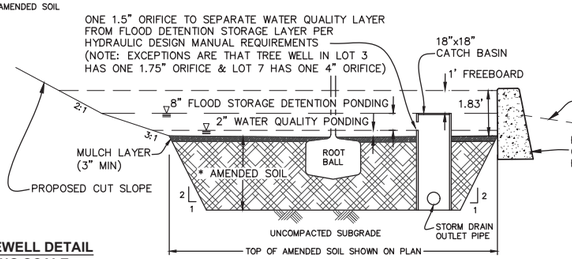


PLAN VIEW

NOTE:

* AMENDED SOIL THICKNESS VARIES DEPENDING ON TREE WELL:
- TREE WELLS IN LOTS 4 & 7 HAVE 2.5' OF AMENDED SOIL
- TREE WELLS IN LOTS 1 & 2 HAVE 3.0' OF AMENDED SOIL
- TREE WELL IN LOT 3 HAS 3.5' OF AMENDED SOIL
- TREE WELL IN LOT 5 HAS 4.0' OF AMENDED SOIL

ONE 1.5" ORIFICE TO SEPARATE WATER QUALITY LAYER FROM FLOOD DETENTION STORAGE LAYER PER HYDRAULIC DESIGN MANUAL REQUIREMENTS (NOTE: EXCEPTIONS ARE THAT TREE WELL IN LOT 3 HAS ONE 1.75" ORIFICE & LOT 7 HAS ONE 4" ORIFICE)



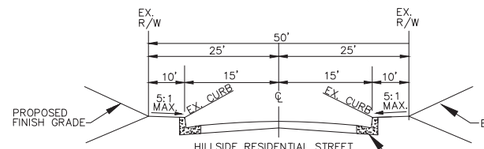
SECTION A-A

TREEWELL DETAIL
NO SCALE

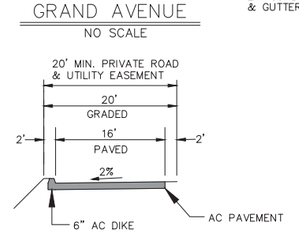
LEGEND

- BOUNDARY
- LOT LINES
- EASEMENTS
- FF FINISH FLOOR ELEVATION
- GF GARAGE FLOOR ELEVATION
- PROPOSED CUT SLOPES
- PROPOSED FILL SLOPES (2:1 TYP)
- PROPOSED CATCH BASIN
- PROPOSED CLEANOUT
- PROPOSED PCC BROW DITCH
- PROPOSED RIP RAP
- PROPOSED RETAINING WALL
- Ⓐ EASEMENT DESCRIPTION
- OPEN SPACE FENCING AND SIGNAGE
- TREE IN TREE WELL (SEE TABLE BELOW FOR TREE CANOPY SIZES)
- EXISTING "NO PARKING" STRIPING AND SIGNAGE
- PROPOSED "NO PARKING" RED CURB STRIPING AND SIGNAGE IN FRONT OF PROPOSED FIRE HYDRANT
- PROPOSED DRIVEWAY APRON PER RSD G-14A

EXISTING ROCK TO REMAIN (TYPICAL) UNLESS OTHERWISE SPECIFIED



GRAND AVENUE
NO SCALE



PRIVATE DRIVEWAY
NO SCALE

LOT #	MAX. ELEVATION DIFFERENCE BETWEEN 1ST FLOOR PERIMETER AND ADJACENT FINISHED GRADE (12' MAX. ALLOWABLE)	PERCENTAGE OF 1ST FLOOR PERIMETER THAT IS MORE THAN 6' ABOVE ADJACENT FINISHED GRADE (50% MAX. ALLOWABLE)
1	12.0'	50%
2	11.5'	50%
3	11.0'	40%
4	5.5'	0%
5	2.5'	0%
6	12.0'	45%
7	10.0'	50%

SITE ADDRESS:
GRAND AVENUE
SPRING VALLEY, CA 91977

APN:
578-161-02

EARTHWORK:
CUT: 4,700 C.Y.
FILL: 2,300 C.Y.
EXPORT: 2,400 C.Y.

TREE WELL SUMMARY

LOT #	DMA	NO. OF TREE WELLS	MATURE CANOPY DIAMETER	SOIL DIMENSIONS PER TREE
1	1	2	25'	18' x 19.3' x 3'
2	2	1	30'	13.5' x 38' x 3'
3	3	2	25'	12.4' x 23' x 3.5'
4	4	2	25'	12' x 34' x 2.5'
5	5	2	25'	12' x 21.3' x 4'
7	6	4	30'	21' x 29.5' x 2.5'

REGISTERED PROFESSIONAL ENGINEER
LAWRENCE W. WALSH
46316
CIVIL
STATE OF CALIFORNIA

PREPARED BY:

LAWRENCE W. WALSH — DATE 10/24/23

Walsh Engineering & Surveying, Inc.
607 Aldwych Road, El Cajon, CA 92020
(619) 588-6747 (619) 792-1232 Fax

5.0 General Requirements

- Each Priority Development Project (PDP) must provide a description of existing site conditions and proposed changes to them, including changes to topography and drainage.
- Has a **Drainage Report** has been prepared for the PDP?

  ☒ **Yes**

  - Review of the Drainage Report must be concurrent with the PDP SWQMP.
  - Include the summary page of the Drainage Report with this cover page, and provide the following information:

    Title: Drainage Study

    Prepared By: Walsh Engineering & Surveying, Inc.

    Date: 5-20-22

  - Do not complete the rest of this attachment (also exclude these additional pages from your submittal). Additional documentation of site and drainage conditions is not required unless requested by County staff.

  ☐ **No** -- Complete and submit the remainder of this attachment below.

WALSH ENGINEERING & SURVEYING, INC.

CEQA DRAINAGE STUDY
For
Spring Valley TM 5636
(PDS2019-TM-5636)

(Vacant) Grand Avenue
Spring Valley, CA 91977

Prepared for:
Mark Khouli, President
Light House Builders, Inc.
1620 La Presa Avenue
Spring Valley, CA 91977

(Walsh Engineering Job No 201213)

607 Aldwych Road * El Cajon, CA 92020 * Phone (619) 588-6747 * Fax (619) 792-1232
www.walsh-engineering.com

Table of Contents

Introduction
The property is located at (Vacant) Grand Avenue, Spring Valley, CA 91977 (see attached Vicinity Map and reduced Preliminary Grading Plan). The proposed subdivision on the undisturbed 9.88 acre parcel will create 7 lots with 7 residential homes, and one biological open space lot.

Pre-Developed Condition
In the current condition, the site is vacant hillside and the drainage pattern is generally northeast to southwest with an average slope of 25%. The drainage through the property exits the site at the westerly and southerly property lines in a sheet flow condition. Drainage flowing east is labeled Drainage Basin 1 and drainage flowing to the south is labeled as Drainage Basin 2 (see the Pre-Developed Drainage Map in Section 2).

The flow rate for each drainage basin was analyzed across the length of the property line due to the sheet flow condition of runoff exiting the site. Calculating the flow rate at the property line provides more accurate analysis of the onsite flow rate without influence from downstream properties. See the table on the next page for a summary of pre-developed values and flow rates.

There is also an area north of Basin 1 that is on-site that will remain undisturbed therefore, the area has been excluded from the Basin 1 calculations to better analyze the effects of the development. The flowrate does not change from the pre to post developed condition in this area and also includes an area of offsite flow coming through the site. The total of these areas (off-site and on-site) is 5.42 acres. See “Off-site area draining through site” Exhibit in Section 2 along with a summary table of calculations on right hand side of the exhibit.

Post-Developed Condition
In the post-developed condition, there will be 7 proposed single family residences with driveways for access off of Grand Avenue. Lots 6 and 7 will be accessed by a private joint driveway off of Grand Avenue. Due to the steepness of the site the proposed residences will be built on stem walls rather than graded pads and the majority of the site will be left undisturbed. The post-developed condition will have the same two Drainage Basin areas as the pre-developed condition and will maintain the same drainage patterns as the pre-developed condition described above. The increase in impervious area (C-value) is the main factor that influences the post-developed flow rate. The increase in flow rate for the post-developed condition will be mitigated by conjunctive use tree wells with 8” of flood storage ponding for detention and 1’ of freeboard on each of the lots (except for Lot 6). The tree well on Lot 7 is used for both Lots 6 and 7, and all tree wells adequately mitigate the impacts of the development. See the table on the next page for a summary of post-developed values, flow rates, and mitigation.

Summary/Conclusion

The flow rates and mitigated flow rates for Basins 1 and 2 were calculated using the Civil D and Hydraflow Express Programs. Output files from these programs showing the calculations can be found in Section 2 of this report. The mitigated flow rate was calculated by subtracting the unmitigated peak flow rate leaving each tree well within each Drainage Basin from the mitigated peak flow rate leaving each tree well after detention was provided. Detention within each tree well basin is adequately provided and an orifice (ranging from 1.5" to 4") in each tree well's catch basin separates the water quality storage layer from the flood storage ponding layer. See tree well detail in Section 2 for details and corresponding orifice sizes. The orifice sizes were determined by the Hydarflow Express program and sufficient detention has been provided to mitigate the increase in flow from the development.

The Hydraflow Express program also provides the inflow hydrograph, stage-storage relationships, and the stage-discharge relationships for the outlet structures. These results can be found in the output results in Section 2 as mentioned above. In conclusion, there is no net increase in flow from the pre to post developed condition. All impacts of the development and increase in flow rates is mitigated back to pre-developed flow rates.

Basin	Pre-Developed Effective C	Post-Developed Effective C	Pre-Developed Tc (min.)	Post-Developed Tc (min.)	Pre-Developed I (in./hr.)	Post-Developed I (in./hr.)	Pre-Developed Area (acres)	Post-Developed Area (acres)
1	0.35	0.365	11.52	9.29	4.31	4.95	6.01	6.01
2	0.35	0.422	10.04	6.71	4.71	6.10	2.24	2.24

Basin	Pre-Developed Q100 (cfs)	Post-Developed Q100 (cfs)	Mitigated Q100 (cfs)	Mitigated Velocity V100 (ft/s)
1	9.06	10.47	9.05	3.6
2	3.69	5.44	2.52	3.1

For CEQA purposes, the following information is provided in this study for project review.

Q: Will the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
A: No. The overall existing drainage patterns will be maintained, no alterations to streams or rivers will occur and no increase in off-site erosion or siltation will be caused by this project.

Q: Will the project substantially alter the existing drainage pattern of the site or area including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
A: No. The overall existing drainage patterns will be maintained. No alterations to streams or rivers will occur and the rate or amount of runoff will not significantly increase.

Q: Will the project create or contribute runoff water which will exceed the capacity of existing or planned storm water drainage systems?
A: No. The project will not create or contribute runoff water which will exceed the capacity of existing or planned storm water drainage systems.

Q: Will the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, including County Floodplain Maps?
A: No. The project does not propose to place housing within a 100-year flood hazard area.

Q: Will the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?
A: No. The project will not place structures within a 100-year flood hazard area.

Q: Will the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam on-site or off-site?
A: No. The project will not expose people or structures to a significant risk of loss, injury or death involving flooding as a result of failure of Dam(s) or levee(s)

6.0 General Requirements

- Use this attachment to document all proposed (1) self-mitigating, (2) de minimis, and (3) self-retaining DMAs. Indicate under "DMA Compliance Option" below which design options will be used to satisfy structural performance requirements for one or more DMA.

DMA Compliance Option	Required Sub-attachments	BMPDM Design Resources
☒ **Self-mitigating**	• Sub-attachment 6.1	• BMPDM Section 5.2.1
☐ **De minimis**	• Sub-attachment 6.2	• BMPDM Section 5.2.2
☒ **Self-retaining**[1]	• Sub-attachment 6.3	• BMPDM Section 5.2.3 (all options)
SSD-BMP Type(s)		
☐ **Impervious Area Dispersion**	• Sub-attachment 6.3.1	• Fact Sheet SD-B (Appendix E.8)
☒ **Tree Wells**	• Sub-attachment 6.3.2	• Fact Sheet SD-A (Appendix E.7)

- Submit this cover page and all "Required Sub-attachments" listed for each selected DMA compliance option.
- See the BMPDM sections and appendices listed under "BMPDM Design Resources" for additional explanation of design requirements. Each constructed feature must fully satisfy the requirements described in these resources, and any other guidance identified by the County.
- DMA Exhibits and Construction Plans: DMAs, features, and BMPs identified and described in this attachment must be shown on DMA Exhibits and all applicable construction plans submitted for the project. See Attachment 2 for additional instruction on exhibits and plans.

[1] If "Self-retaining" is selected, also choose the types of Significant Site Design BMPs (SSD-BMPs) to be used. SSD-BMPs are Site Design BMPs that are sized and constructed to fully satisfy all applicable Structural Performance Standards for a DMA.

6.1 Self-mitigating DMAs (complete this page once for ALL self-mitigating DMAs)

Self-mitigating DMAs consist of natural or landscaped areas that drain directly offsite or to the public storm drain system. These DMAs are excluded from DCV calculations.

- Provide the information requested below for each proposed self-mitigating DMA. Add rows or copy the table if additional entries are needed.

DMA #	*a. DMA Area (ft^2)*	*Incidental Impervious Area*		*Permit # and Sheet #*
		b. Size(ft^2)	*c. % (b/a*100)*	
7	314,849	0	0%	PDS2019-TM-5636, PGP sheet
8	68,304	1,340	1.9%	PDS2019-TM-5636, PGP sheet

- "DMA #", "DMA Area", and "Permit # and Sheet #" are required for all DMAs listed.
- "Incidental Impervious Area" calculations are required only where applicable (see below).
- Each self-mitigating DMA must <u>fully</u> satisfy all design requirements and restrictions described in BMPDM Section 5.2.1 and any other guidance or instruction identified by the County. Check the boxes below to confirm that all required conditions are satisfied <u>for every DMA listed</u>.

☒ Each DMA is hydraulically separate from other DMAs that contain permanent storm water pollutant control BMPs.

<u>Natural and Landscaped Areas</u>

☒ Each DMA consists solely of natural or landscaped areas, except for incidental impervious areas (see below).

☒ Each area drains directly offsite or to the public storm drain system.

☒ Soils are undisturbed native topsoil, or disturbed soils that have been amended and aerated to promote water retention characteristics equivalent to undisturbed native topsoil.

☒ Vegetation is native and/or non-native/non-invasive drought tolerant species that do not require regular application of fertilizers and pesticides.

<u>Incidental Impervious Areas (if applicable; see above)</u>

Minor impervious areas may be permitted within the DMA if they satisfy the following criteria:

☒ They are not hydraulically connected to other impervious areas (unless it is a storm water conveyance system such as a brow ditch).

☒ They comprise less than 5% of the total DMA. Calculate the % incidental impervious area in the table above (c= b/a). DMAs are <u>not</u> self-mitigating if this area is 5% or greater.

6.2 De Minimis DMAs (complete this page once for ALL de minimis DMAs)

De minimis DMAs consist of areas too small to be considered significant contributors of pollutants and not practicable to drain to a BMP. They are excluded from DCV calculations. Examples include driveway aprons connecting to existing streets, portions of sidewalks, retaining walls, and similar features at the external boundaries of a project.

- Provide the information requested below for each proposed de minimis DMA. Add rows or copy the table if additional entries are needed.

DMA #	***DMA Area (ft^2)***	***Permit # and Sheet #***

- "DMA #", "DMA Area", and "Permit # and Sheet #" are required.
- Check the boxes below to confirm that each required condition is satisfied for ALL de minimis DMAs on the site.

  ☐ Each DMA listed is less than 250 square feet and not adjacent or hydraulically connected to each other.

  ☐ Each DMA listed <u>fully</u> satisfies all design requirements and restrictions described in BMPDM Section 5.2.2 De Minimis DMAs.

6.3 Self-retaining DMAs using Significant Site Design BMPs

Self-retaining DMAs use Site Design BMPs to fully-retain the entire DCV, at a minimum. Site Design BMPs that fully retain the DCV, at a minimum, therefore replacing the need for a Structural BMP (S-BMP), are classified as Significant Site Design BMPs (SSD-BMPs). To satisfy pollutant control requirements only, self-retaining means retention of the entire DCV. However, under some circumstances, a self-retaining DMA can also satisfy hydromodification management requirements by implementing BMPs that retain a greater volume of runoff.

- Provide the information requested below for each proposed self-retaining DMA. Add rows or copy the table if additional entries are needed.

DMA #	DMA Area (ft^2)	**BMP Type** (choose one per DMA)		*Permit # and Sheet #*
		Dispersion Area (Att. 6.3.1)	**Tree Wells (Att. 6.3.2)**	
1	6,947	☐	☒	PDS2019-TM-5636, PGP sheet
2	4,397	☐	☒	PDS2019-TM-5636, PGP sheet
3	6,672	☐	☒	PDS2019-TM-5636, PGP sheet
4	8,383	☐	☒	PDS2019-TM-5636, PGP sheet
5	5,692	☐	☒	PDS2019-TM-5636, PGP sheet
6	23,023	☐	☒	PDS2019-TM-5636, PGP sheet
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

- "DMA #", "DMA Area", and "Permit # and Sheet #" are required.
- Select one BMP Type per DMA. Provide detailed documentation for each DMA in Attachments 6.3.1 (Impervious Dispersion Areas) and/or 6.3.2 (Tree Wells) below.
- Each self-retaining DMA must <u>fully</u> satisfy all design requirements and restrictions described in BMPDM Section 5.2.3, applicable BMPDM Appendix E Fact Sheets, and any other guidance or

[2]Applicants wishing to utilize parameters less conservative than listed here must submit modeling to support their proposal. Consult your project manager for more information.
[3]Including the permeable pavement.

instruction identified by the County.

6.3.1 Self-retaining DMAs with Impervious Dispersion Areas

Impervious area dispersion (dispersion) refers to the practice of effectively disconnecting impervious areas from directly draining to the storm drain system by routing runoff from impervious areas such as rooftops (through downspout disconnection), walkways, and driveways onto the surface of adjacent pervious areas. The intent is to slow runoff discharges and reduce volumes. Dispersion with partial or full infiltration results in significant volume reduction by means of infiltration and evapotranspiration. When adequately sized, dispersion can also be used to satisfy both the pollutant control and hydromodification management structural performance standards for a DMA.

- Each self-retaining DMA with impervious area dispersion must fully satisfy all design requirements and restrictions described in BMPDM Section 5.2.3, Fact Sheet SD-B: Impervious Area Dispersion, and any other guidance or instruction identified by the County.
- Documentation of compliance with all applicable conditions must be submitted with this sub-attachment using the ***Summary Sheet for DMAs with Impervious Area Dispersion*** on the next page. One version of this Summary Sheet must be completed for each applicable DMA.
- Applicants are responsible to comply with all other applicable requirements, regardless of whether they are included in the summary sheet.
- The following applies if the dispersion area is **native soil** (SD-B in Appendix E):
  - For pollutant control only, the DMA is considered self-retaining if the impervious to pervious ratio is:
    - 2:1 when the pervious area is composed of Hydrologic Soil Group A
    - 1:1 when the pervious area is composed of Hydrologic Soil Group B
- The following applies if the dispersion area includes **amended soil** (SD-B in Appendix E):
  - DMAs using impervious area dispersion can be considered to meet both pollutant control and hydromodification flow control requirements if the impervious to pervious area ratio is 1:1 or less and all other design requirements of SD-B are satisfied, including 11 inches of amended soil.
- The following apply if the dispersion area is **permeable pavement** (SD-D in Appendix E):
  - For pollutant control only, a DMA is considered self-retaining if the ratio of total drainage area (including permeable pavement) to area of permeable pavement is 1.5:1 or less, and all other design requirements of SD-D are satisfied.
  - Hydromodification management performance standards can be satisfied using permeable pavement only if constructed to Structural BMP specifications. In this case, the permeable pavement must be sized and constructed in accordance with the requirements of INF-3.

[2]Applicants wishing to utilize parameters less conservative than listed here must submit modeling to support their proposal. Consult your project manager for more information.
[3]Including the permeable pavement.

[2]Applicants wishing to utilize parameters less conservative than listed here must submit modeling to support their proposal. Consult your project manager for more information.
[3]Including the permeable pavement.

Summary Sheet for DMAs with Impervious Area Dispersion (Complete 1 sheet per DMA)

DMA #

A. Minimum Sizing Requirements

Verify that minimum standards are satisfied for the applicable dispersion area type below[2].

Native Soil (Pollutant Control Only) Select one and provide calculations below.

☐ Soil Group A: Ratio I:P is 2:1 or less ☐ Soil Group B: Ratio I:P is 1:1 or less

Impervious Area (ft²)	*Permeable Dispersion Area (ft²)*	*Ratio I:P*

Amended Soil (Pollutant Control plus Hydromodification Management)

Must satisfy both conditions and provide calculations below.

☐ Ratio I:P is 1:1 or less, AND

☐ 11 inches or more of the top of the pervious area consists of amended soils (Fact Sheet SD-F)

Impervious Area (ft²)	*Permeable Dispersion Area (ft²)*	*Ratio I:P*

Permeable Pavement (Pollutant Control Only) Provide calculations below.

☐ Ratio DMA area to area of permeable pavement is 1.5:1 or less

DMA Area[3] (ft²)	*Permeable Pavement Area (ft²)*	*Ratio DMA:Pavement*

B. Minimum Design Criteria

Check the boxes below to confirm that each design criterion has been satisfied for the DMA.

Impervious Areas:

☐ Are graded to ensure area that the full DCV drains to the dispersion area before the runoff discharges from the DMA.

Pervious Dispersion Areas:

☐ Are less than 5% slope and sheet flow over a distance of at least 10 feet from inflow to overflow route.

☐ Have inflow velocities of 3 ft/s or less OR use energy dissipation methods (e.g., riprap, level spreader) for concentrated inflows.

☐ Are densely and robustly vegetated with drought tolerant species.

☐ Consist of soil types capable of supporting or being amended to support vegetation (e.g., with sand or compost). If applicable, media amendments have been tested to verify that they are not a source of pollutants.

☐ Are owned by the project owner and will be dedicated to exclude future uses that might reduce their effectiveness.

[2]Applicants wishing to utilize parameters less conservative than listed here must submit modeling to support their proposal. Consult your project manager for more information.

[3]Including the permeable pavement.

Copy and Paste table here for additional DMAs

[2]Applicants wishing to utilize parameters less conservative than listed here must submit modeling to support their proposal. Consult your project manager for more information.
[3]Including the permeable pavement.

6.3.2 Self-retaining DMAs with Tree Wells

Trees wells can provide a variety of benefits such as interception and increased infiltration of rainfall, reduced erosion, energy conservation, air quality improvement, and aesthetic enhancement. They can also be used to satisfy both pollutant control and hydromodification management performance standards for a DMA.

- Each self-retaining DMA with tree wells must fully satisfy all design requirements and restrictions described in BMPDM Section 5.2.3, Fact Sheet SD-A: Tree Wells, and any other guidance or instruction identified by the County.
- For pollutant control only, the DMA must retain the entire DCV. For hydromodification management, an additional volume must be retained in accordance with the sizing requirements presented in the DCV multiplier table in Fact Sheet SD-A.
- Documentation of compliance with applicable conditions must be submitted using the ***Summary Sheet for Self-retaining DMAs with Tree Wells*** on the next page. One version of this Summary Sheet must be completed for each applicable DMA.
- If both pollutant control and hydromodification standards apply, the soil depth of all tree wells in the DMA must be selected before determining the Required Retention Volume (RRV). Each tree well must be constructed to the selected depth. For pollutant control only, tree wells within a DMA may be constructed to different soil depths.
- In most cases tree wells must use Amended Soil per Fact Sheet SD-F. However, Structural Soil is required in some cases (e.g., placing the tree well next to a curb). See ***Structural Requirements for Confined Tree Well Soil Volume*** in Fact Sheet SD-A for additional explanation. If applicable, list the DMAs and Tree Well #s below for all tree wells requiring Structural Soil.

DMA #	**Tree Wells Requiring Structural Soil (list Tree Well #s)**

- The Design Capture Volume (DCV) must be known for each DMA in order to determine the volume to be mitigated by the tree wells. Instructions for DCV calculation are provided in BMPDM Appendix B.1. An automated version of Worksheet B.1 (Calculation of Design Capture Volume) is available at www.sandiegocounty.gov/stormwater under the Development Resources tab.

Summary Sheet for Self-retaining DMAs with Tree Wells (complete one sheet per DMA)

DMA #: 1	**DMA Area (ft^2): 6,947**		
Required Retention Volume (RRV)			
a. Design Capture Volume (DCV; ft^3): 163			
b. DCV Multiplier (Fact Sheet SD-A)			
Applicable Structural Performance Standards (select one)	Tree well soil depth (inches)	Underlying soil type (A, B, C, or D)	DCV Multiplier
☐ Pollutant control only	Any	All	1.0
☒ Pollutant control plus hydromodification	36	D	3.17
c. Required Retention Volume (ft^3) [DCV * DCV Multiplier]			**517**

Tree Well Credit Volume (add records or copy this sheet as needed for additional tree wells)

Provide the information below for each tree well or group of tree wells within the DMA. A single entry can be used for any group of tree wells of the same species and soil depth.

Tree species or name	Western Redbud	**No. tree wells**	2
Mature Canopy Diameter (ft)	25	**Credit Volume per tree well (ft^3)**	290
Tree well ID #(s)	DMA 1 Tree Well	**Combined Volume (ft^3)**	**580**
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft^3)**	
Tree well ID #(s)		**Combined Volume (ft^3)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft^3)**	
Tree well ID #(s)		**Combined Volume (ft^3)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft^3)**	
Tree well ID #(s)		**Combined Volume (ft^3)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft^3)**	
Tree well ID #(s)		**Combined Volume (ft^3)**	

Total Credit Volume (ft3) Add the combined volumes above. Total credit volume must equal or exceed the RRV.	**580**

Summary Sheet for Self-retaining DMAs with Tree Wells (complete one sheet per DMA)

DMA #: 2	**DMA Area (ft²): 4,397**		
Required Retention Volume (RRV)			
a. Design Capture Volume (DCV; ft³): 129			
b. DCV Multiplier (Fact Sheet SD-A)			
Applicable Structural Performance Standards (select one)	Tree well soil depth (inches)	Underlying soil type (A, B, C, or D)	DCV Multiplier
☐ Pollutant control only	Any	All	1.0
☒ Pollutant control plus hydromodification	36	D	3.17
c. Required Retention Volume (ft³) [DCV * DCV Multiplier]			**409**

Tree Well Credit Volume (add records or copy this sheet as needed for additional tree wells)

Provide the information below for each tree well or group of tree wells within the DMA. A single entry can be used for any group of tree wells of the same species and soil depth.

Tree species or name	Strawberry Tree	**No. tree wells**	1
Mature Canopy Diameter (ft)	30	**Credit Volume per tree well (ft³)**	420
Tree well ID #(s)	DMA 2 Tree Well	**Combined Volume (ft³)**	**420**
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Total Credit Volume (ft3) Add the combined volumes above. Total credit volume must equal or exceed the RRV.			**420**

Summary Sheet for Self-retaining DMAs with Tree Wells (complete one sheet per DMA)

DMA #: 3	**DMA Area (ft²): 6,672**		
Required Retention Volume (RRV)			
a. Design Capture Volume (DCV; ft³): 159			
b. DCV Multiplier (Fact Sheet SD-A)			
Applicable Structural Performance Standards (select one)	Tree well soil depth (inches)	Underlying soil type (A, B, C, or D)	DCV Multiplier
☐ Pollutant control only	Any	All	1.0
☒ Pollutant control plus hydromodification	42	D	3.43
c. Required Retention Volume (ft³) [DCV * DCV Multiplier]			**545**

Tree Well Credit Volume (add records or copy this sheet as needed for additional tree wells)

Provide the information below for each tree well or group of tree wells within the DMA. A single entry can be used for any group of tree wells of the same species and soil depth.

Tree species or name	Western Redbud	**No. tree wells**	2
Mature Canopy Diameter (ft)	25	**Credit Volume per tree well (ft³)**	290
Tree well ID #(s)	DMA 3 Tree Well	**Combined Volume (ft³)**	**580**
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	

Total Credit Volume (ft3) Add the combined volumes above. Total credit volume must equal or exceed the RRV.	**580**

Summary Sheet for Self-retaining DMAs with Tree Wells (complete one sheet per DMA)

DMA #: 4	**DMA Area (ft²): 8,383**

Required Retention Volume (RRV)

a. Design Capture Volume (DCV; ft³): 181

b. DCV Multiplier (Fact Sheet SD-A)

Applicable Structural Performance Standards (select one)	Tree well soil depth (inches)	Underlying soil type (A, B, C, or D)	DCV Multiplier
☐ Pollutant control only	Any	All	1.0
☒ Pollutant control plus hydromodification	30	D	2.90

c. Required Retention Volume (ft³) [DCV * DCV Multiplier] | **525**

Tree Well Credit Volume (add records or copy this sheet as needed for additional tree wells)

Provide the information below for each tree well or group of tree wells within the DMA. A single entry can be used for any group of tree wells of the same species and soil depth.

Tree species or name	Western Redbud	**No. tree wells**	2
Mature Canopy Diameter (ft)	25	**Credit Volume per tree well (ft³)**	290
Tree well ID #(s)	DMA 4 Tree Well	**Combined Volume (ft³)**	**580**
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	

Total Credit Volume (ft3) Add the combined volumes above. Total credit volume must equal or exceed the RRV.	**580**

Summary Sheet for Self-retaining DMAs with Tree Wells (complete one sheet per DMA)

DMA #: 5	**DMA Area (ft²): 5,692**

Required Retention Volume (RRV)

a. Design Capture Volume (DCV; ft³): 146

b. DCV Multiplier (Fact Sheet SD-A)

Applicable Structural Performance Standards (select one)	Tree well soil depth (inches)	Underlying soil type (A, B, C, or D)	DCV Multiplier
☐ Pollutant control only	Any	All	1.0
☒ Pollutant control plus hydromodification	48	D	3.70

c. Required Retention Volume (ft³) [DCV * DCV Multiplier]	**540**

Tree Well Credit Volume (add records or copy this sheet as needed for additional tree wells)

Provide the information below for each tree well or group of tree wells within the DMA. A single entry can be used for any group of tree wells of the same species and soil depth.

Tree species or name	Western Redbud	**No. tree wells**	2
Mature Canopy Diameter (ft)	25	**Credit Volume per tree well (ft³)**	290
Tree well ID #(s)	DMA 5 Tree Well	**Combined Volume (ft³)**	**580**
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft³)**	
Tree well ID #(s)		**Combined Volume (ft³)**	

Total Credit Volume (ft3) Add the combined volumes above. Total credit volume must equal or exceed the RRV.	**580**

Summary Sheet for Self-retaining DMAs with Tree Wells (complete one sheet per DMA)

DMA #: 6	**DMA Area (ft^2): 23,023**		
Required Retention Volume (RRV)			
a. Design Capture Volume (DCV; ft^3): 570			
b. DCV Multiplier (Fact Sheet SD-A)			
Applicable Structural Performance Standards (select one)	Tree well soil depth (inches)	Underlying soil type (A, B, C, or D)	DCV Multiplier
☐ Pollutant control only	Any	All	1.0
☒ Pollutant control plus hydromodification	30	D	2.90
c. Required Retention Volume (ft^3) [DCV * DCV Multiplier]			**1,653**

Tree Well Credit Volume (add records or copy this sheet as needed for additional tree wells)

Provide the information below for each tree well or group of tree wells within the DMA. A single entry can be used for any group of tree wells of the same species and soil depth.

Tree species or name	Strawberry Tree	**No. tree wells**	4
Mature Canopy Diameter (ft)	30	**Credit Volume per tree well (ft^3)**	420
Tree well ID #(s)	DMA 6 Tree Well	**Combined Volume (ft^3)**	**1,680**
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft^3)**	
Tree well ID #(s)		**Combined Volume (ft^3)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft^3)**	
Tree well ID #(s)		**Combined Volume (ft^3)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft^3)**	
Tree well ID #(s)		**Combined Volume (ft^3)**	
Tree species or name		**No. tree wells**	
Mature Canopy Diameter (ft)		**Credit Volume per tree well (ft^3)**	
Tree well ID #(s)		**Combined Volume (ft^3)**	

Total Credit Volume (ft3) Add the combined volumes above. Total credit volume must equal or exceed the RRV.	**1,680**

SSD-BMP Automated Worksheet I-1: Step 1. Calculation of Design Capture Volume (V1.0)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	DMA 1	DMA 2	DMA 3	DMA 4	DMA 5	DMA 6	unitless
	2	85th Percentile 24-hr Storm Depth	0.54	0.54	0.54	0.54	0.54	0.54	inches
	3	Is Hydromodification Control Applicable?	Yes	Yes	Yes	Yes	Yes	Yes	yes/no
	4	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	2,580	2,580	2,580	2,580	2,580	9,729	sq-ft
	5	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)							sq-ft
	6	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)							sq-ft
	7	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)							sq-ft
	8	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)							sq-ft
	9	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)							sq-ft
	10	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)	4,367	1,817	4,092	5,803	3,112	13,294	sq-ft
SSD-BMPs Proposed	11	Does Tributary Incorporate Dispersion and/or Rain Barrels?	No	No	No	No	No	No	yes/no
	12	Does Tributary Incorporate Tree Wells?	Yes	Yes	Yes	Yes	Yes	Yes	yes/no
Dispersion Area & Rain Barrel Inputs (Optional)	13	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)							sq-ft
	14	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)							sq-ft
	15	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)							sq-ft
	16	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)							sq-ft
	17	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)							sq-ft
	18	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)							sq-ft
	19	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)							sq-ft
	20	Number of Rain Barrels Proposed per SD-E							#
	21	Average Rain Barrel Size							gal
Initial Runoff Factor Calculation	22	Total Tributary Area	6,947	4,397	6,672	8,383	5,692	23,023	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.52	0.65	0.53	0.48	0.57	0.55	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	25	Initial Weighted Runoff Factor	0.52	0.65	0.53	0.48	0.57	0.55	unitless
	26	Initial Design Capture Volume	163	129	159	181	146	570	cubic-feet
Dispersion Area Adjustment & Rain Barrel Adjustment	27	Total Impervious Area Dispersed to Pervious Surface	0	0	0	0	0	0	sq-ft
	28	Total Pervious Dispersion Area	0	0	0	0	0	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area for DCV Reduction	n/a	n/a	n/a	n/a	n/a	n/a	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	1.00	1.00	1.00	1.00	1.00	1.00	ratio
	31	Runoff Factor After Dispersion Techniques	0.52	0.65	0.53	0.48	0.57	0.55	unitless
	32	Design Capture Volume After Dispersion Techniques	163	129	159	181	146	570	cubic-feet
	33	Total Rain Barrel Volume Reduction	0	0	0	0	0	0	cubic-feet
Results	34	Final Adjusted Runoff Factor	0.52	0.65	0.53	0.48	0.57	0.55	unitless
	35	Final Effective Tributary Area	3,612	2,858	3,536	4,024	3,244	12,663	sq-ft
	36	Initial Design Capture Volume Retained by Dispersion Area and Rain Barrel(s)	0	0	0	0	0	0	cubic-feet
	37	Remaining Design Capture Volume Tributary to Tree Well(s)	163	129	159	181	146	570	cubic-feet

No Warning Messages

SSD-BMP Automated Worksheet I-3: Step 3. Tree Well Sizing (V1.0)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	Units
Standard Tree Well Inputs	1	Drainage Basin ID or Name	DMA 1	DMA 2	DMA 3	DMA 4	DMA 5	DMA 6	unitless
	2	Design Capture Volume Tributary to BMP	163	129	159	181	146	570	cubic-feet
	3	Is Hydromodification Control Applicable?	Yes	Yes	Yes	Yes	Yes	Yes	yes/no
	4	Predominant NRCS Soil Type Within Tree Well(s) Location	D	D	D	D	D	D	unitless
	5	Select a Tree Species for the Tree Well(s) Consistent with SD-A Tree Palette Table Note: Numbers shown in list are Tree Species Mature Canopy Diameters	25' - Western Redbud	30' - Hybrid Strawberry Tree	25' - Western Redbud	25' - Western Redbud	25' - Western Redbud	30' - Hybrid Strawberry Tree	unitless
	6	Tree Well(s) Soil Depth (Installation Depth) Must be 30, 36, 42, or 48 Inches; Select from Standard Depths**	36	36	42	30	48	30	inches
	7	Number of Identical* Tree Wells Proposed for this DMA	2	1	2	2	2	4	trees
	8	Proposed Width of Tree Well(s) Soil Installation for One (1) Tree	18.0	13.5	12.4	12.0	12.0	21.0	feet
	9	Proposed Length of Tree Well(s) Soil Installation for One (1) Tree	19.3	38.0	23.0	34.0	21.3	29.5	feet
Tree Data	10	Botanical Name of Tree Species	Cercis Occidentalis	Arbutus 'Marina'	Cercis Occidentalis	Cercis Occidentalis	Cercis Occidentalis	Arbutus 'Marina'	unitless
	11	Tree Species Mature Height per SD-A	25	35	25	25	25	35	feet
	12	Tree Species Mature Canopy Diameter per SD-A	25	30	25	25	25	30	feet
	13	Minimum Soil Volume Required In Tree Well (2 Cubic Feet Per Square Foot of Mature Tree Canopy Projection Area)	982	1414	982	982	982	1414	cubic-feet
	14	Credit Volume Per Tree	290	420	290	290	290	420	cubic-feet
Tree Well Sizing Calculations	15	DCV Multiplier To Meet Flow Control Requirements	3.17	3.17	3.43	2.90	3.70	2.90	unitless
	16	Required Retention Volume (RRV) To Meet Flow Control Requirements	517	409	545	525	540	1653	cubic-feet
	17	Number of Trees Required	2	1	2	2	2	4	trees
	18	Total Area of Tree Well Soil Required for Each Tree	327	471	280	393	245	565	sq-ft
	19	Approximate Required Width of Tree Well Soil Area for Each Tree	19	22	17	20	16	24	feet
	20	Approximate Required Length of Tree Well Soil Area for Each Tree	19	22	17	20	16	24	feet
	21	Number of Trees Proposed for this DMA	2	1	2	2	2	4	trees
	22	Total Area of Tree Well Soil Proposed for Each Tree	347	513	285	408	256	620	sq-ft
	23	Minimum Spacing Between Multiple Trees To Meet Soil Area Requirements (when applicable)***	25.0	n/a	25.0	34.0	25.0	30.0	feet
Results	24	Are Tree Well Soil Installation Requirements Met?	Yes	Yes	Yes	Yes	Yes	Yes	yes/no
	25	Is Remaining DCV Requirement Fully Satisfied by Tree Well(s)?	Yes	Yes	Yes	Yes	Yes	Yes	yes/no
	26	Is Hydromodification Control Requirement Satisfied by Tree Well(s)?	Yes	Yes	Yes	Yes	Yes	Yes	yes/no

No Warning Messages

Notes:

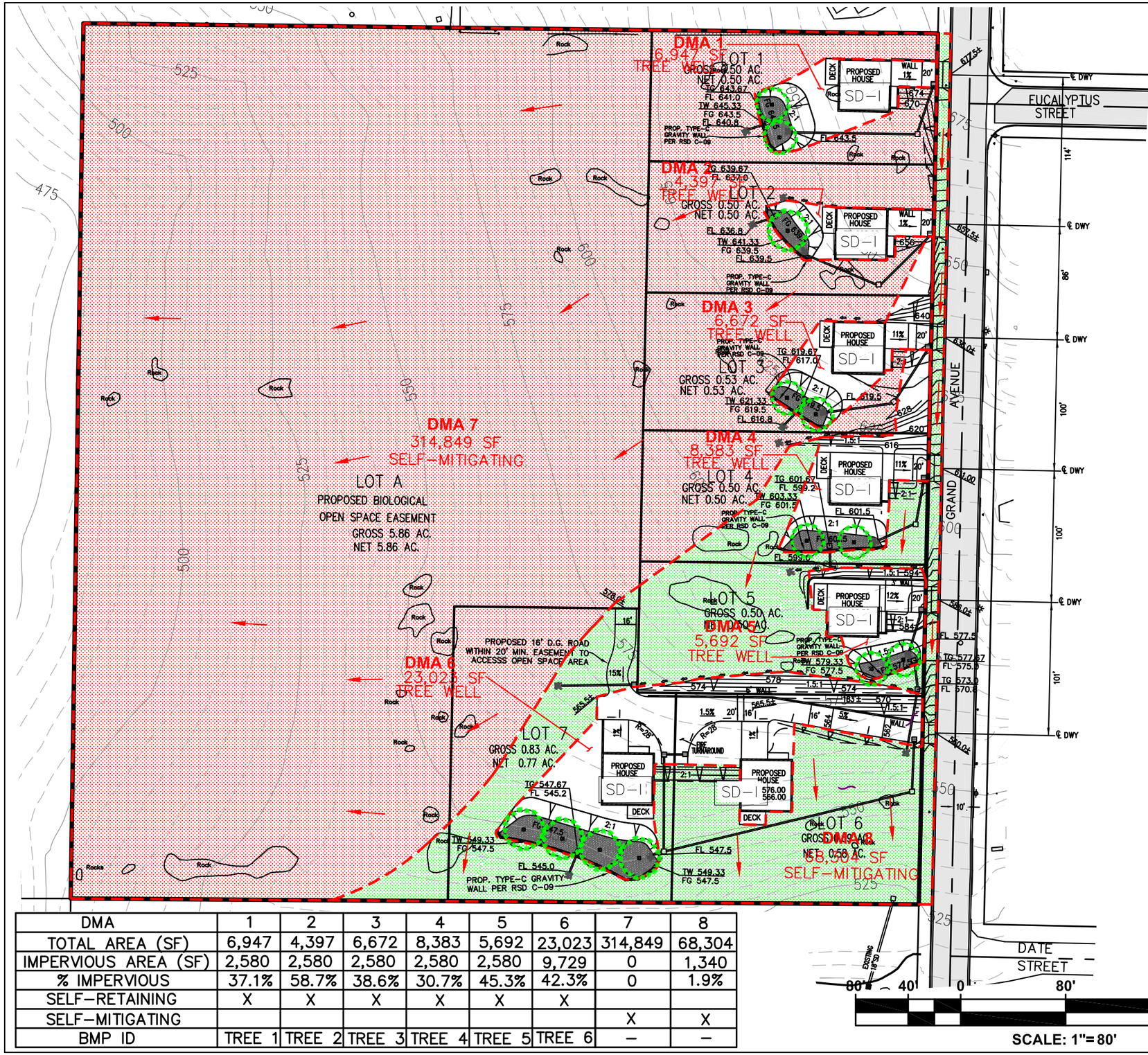
*If using more than one mature canopy diameter within the same DMA, only the smallest mature canopy diameter should be entered. Alternatively, if more than one mature canopy diameter is proposed and/or the dimensions of multiple tree well installations will vary, separate

**If the actual proposed installation depth is not available in the table of standard depths, select the next lower depth.

***Tree Canopy or Agency Requirements May Also Influence the Minimum Spacing of Trees.

HYDROMODIFICATION MANAGEMENT EXHIBIT

(VACANT) GRAND AVENUE
SPRING VALLEY, CA 91977



DMA	1	2	3	4	5	6	7	8
TOTAL AREA (SF)	6,947	4,397	6,672	8,383	5,692	23,023	314,849	68,304
IMPERVIOUS AREA (SF)	2,580	2,580	2,580	2,580	2,580	9,729	0	1,340
% IMPERVIOUS	37.1%	58.7%	38.6%	30.7%	45.3%	42.3%	0	1.9%
SELF-RETAINING	X	X	X	X	X	X		
SELF-MITIGATING							X	X
BMP ID	TREE 1	TREE 2	TREE 3	TREE 4	TREE 5	TREE 6	–	–

LEGEND:

- DMA BOUNDARY
- TREE IN TREE WELL (SEE BELOW FOR MATURE CANOPY DIAMETER SIZES PER EACH DMA 1 THROUGH 6)
- DIRECTION OF DRAINAGE
- SD-I — MINIMIZE IMPERVIOUS AREA-SMALLER FOOTPRINTS FOR HOUSES IS HOW SD-I WAS IMPLEMENTED.

NOTES:

1. SOIL: TYPE D
2. CRITICAL SEDIMENT YIELD COARSE AREAS: NONE
3. DEPTH TO GROUNDWATER: NONE ENCOUNTERED
4. NO NATURAL HYDROLOGIC FEATURES EXIST ON-SITE

NOTE: ALL TREE WELLS USE DCV MULTIPLIER TO SATISFY POLLUTANT CONTROL.

DMA SUMMARY:

DMA 1 : TWO 18' x 19.3'x 3' ~ 25' MATURE CANOPY DIAMETER TREE WELLS (1,044 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 2 : ONE 13.5' x 38' x 3' ~ 30' MATURE CANOPY DIAMETER TREE WELL (1,539 CF AMENDED SOIL VOLUME PROVIDED)

DMA 3 : TWO 12.4' x 23' x 3.5' ~ 25' MATURE CANOPY DIAMETER TREE WELLS (998 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 4 : TWO 12' x 34' x 2.5' ~ 25' MATURE CANOPY DIAMETER TREE WELLS (1,020 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 5 : TWO 12' x 21.3' x 4' ~ 25' MATURE CANOPY DIAMETER TREE WELLS (1,022 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

DMA 6 : FOUR 21' x 29.5 x 2.5' ~ 30' MATURE CANOPY DIAMETER TREE WELLS (1,549 CF AMENDED SOIL VOLUME PROVIDED PER TREE)

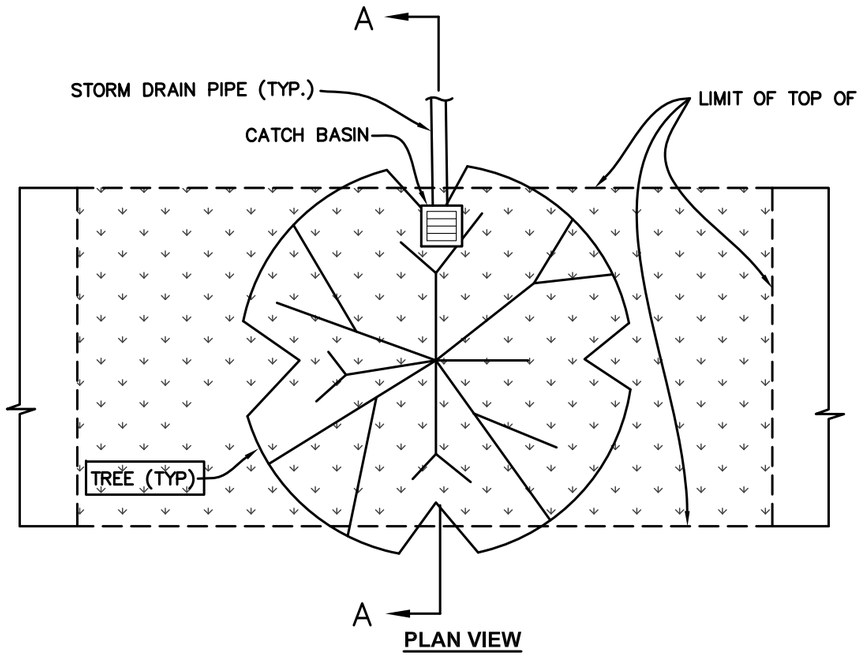
DMA 7 : ON-SITE AREA DRAINING WEST/SOUTHWEST-SELF MITIGATING

DMA 8 : ON-SITE AREA DRAINING SOUTH/SOUTHEAST -SELF MITIGATING

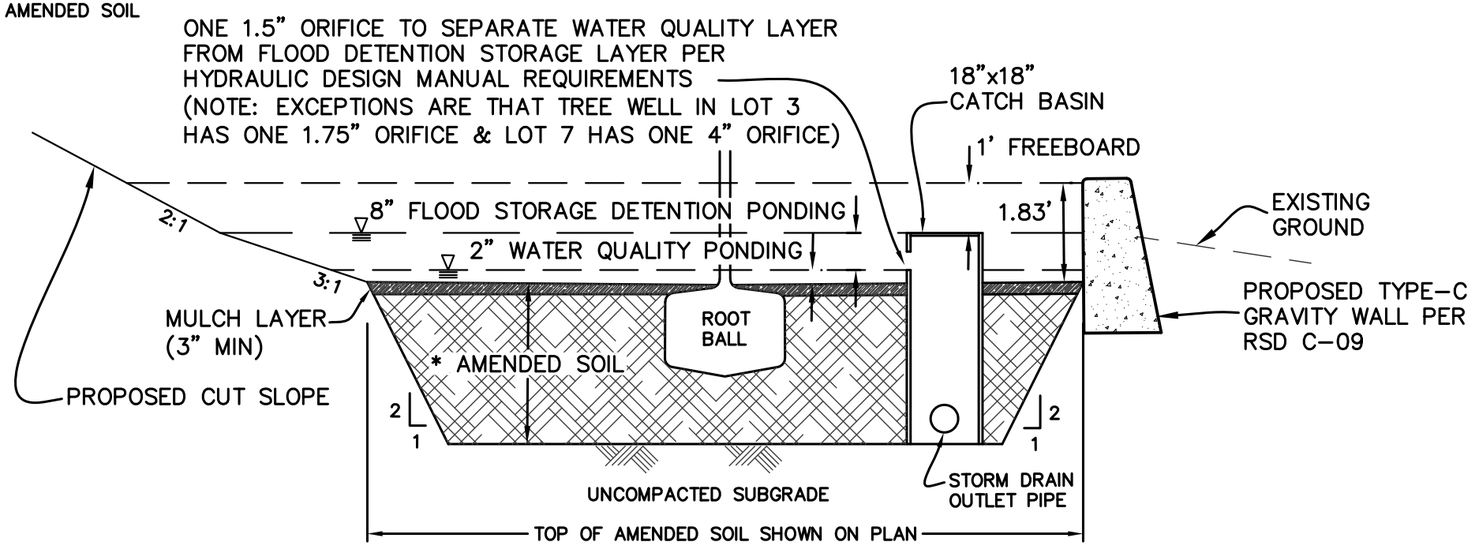
L:\PROJECTS 3D\201213-SPRING VALLEY\PRODUCTION DRAWINGS\201213 - DRAINAGE MAPS.DWG October 26, 2023 - 2:15pm

HYDROMODIFICATION MANAGEMENT EXHIBIT

(VACANT) GRAND AVENUE
SPRING VALLEY, CA 91977



PLAN VIEW



SECTION A-A

TREEWELL DETAIL
NO SCALE

NOTE:

* AMENDED SOIL THICKNESS VARIES DEPENDING ON TREE WELL:
- TREE WELLS IN LOTS 4 & 7 HAVE 2.5' OF AMENDED SOIL
- TREE WELLS IN LOTS 1 & 2 HAVE 3.0' OF AMENDED SOIL
- TREE WELL IN LOT 3 HAS 3.5' OF AMENDED SOIL
- TREE WELL IN LOT 5 HAS 4.0' OF AMENDED SOIL

9.0 General Requirements

- Complete the table below to indicate which compliance pathway was selected in PDP SWQMP Table 6. Include the corresponding sub-attachment with your SWQMP submittal. Other sub-attachments do not need to be included.
- See the BMPDM sections and appendices listed under "BMPDM Design Resources" for additional explanation of design requirements. Constructed features must fully satisfy the requirements described in these resources, and any other guidance identified by the County.
- DMA Exhibits and Construction Plans: CCSYAs and applicable BMPs identified and described in this attachment must be shown on DMA Exhibits and all applicable construction plans submitted for the project. See Attachment 2 for additional instruction on exhibits and plans.

Sub-attachments	BMPDM Design Resources
☐ **9.1: Documentation of Hydromodification Management Exemption**[1]	Section 1.6
☐ **9.2: Watershed Management Area Analysis (WMAA) Mapping**[1]	Appendix H.1.1.2
☒ **9.3: Resource Protection Ordinance (RPO) Methods**	Appendix H.1.1.1
☐ **9.4: No Net Impact Analysis**	Appendix H.4

[1] The San Diego County Regional comprehensive WMAA mapping data can be found on the Project Clean Water website here: http://www.projectcleanwater.org/download/wmaa_attc_data/

9.1 Documentation of Hydromodification Management Exemption (BMPDM Section 1.6)

- If the PDP is exempt from hydromodification management requirements (see Table 4 Part A.1 of the PDP SWQMP), use this Sub-attachment to document the exemption.
- Select the type of exemption below that applies and provide an explanation of the selection, including maps or other applicable documentation. Additional documentation may be requested by County staff.

Exemption Type per BMPDM Figure 1-2 (select one)
☐ a. The proposed project will discharge runoff directly to existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.
☐ b. The proposed project will discharge runoff directly to conveyance channels whose bed and bank are concrete lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean.
☐ c. The proposed project will discharge runoff directly to an area identified by the County as appropriate for an exemption by the WMAA for the watershed in which the project resides[2].
Explanation (add or attach pages as necessary)

[2] This option must include an analysis of the project using the methodology presented in Attachment E of the Regional Watershed Management Area Analysis.

9.2 Watershed Management Area Analysis (WMAA) Mapping (BMPDM Appendix H.1.1.2)

Watershed Management Area Analysis (WMAA) mapping is a simple way to screen projects to determine the presence of onsite or offsite upstream Potential Critical Coarse Sediment Yield Areas (PCCSYAs). The San Diego County Regional WMAA mapping data can be found on the Project Clean Water website here: http://www.projectcleanwater.org/download/wmaa_attc_data/ .[3]

- Based on the WMAA map and the proposed project design, demonstrate below that both of the following conditions apply to the PDP:

  (a) Less than 5% of PCCSYAs will be impacted (built on or obstructed) by the PDP, and

  (b) All upstream offsite PCCYSAs will be bypassed (see BMPDM Appendix H.3).

A. Mapping Results -- At a minimum, show: (1) the project footprint, (2) areas of proposed development, (3) impacted onsite PCCSYAs, (4) offsite tributary areas[4], and (5) bypass of upstream offsite PCCSYAs.

[3] Applicants may refine initial mapping results using options identified in BMPDM Appendix H.1.2.
[4] Tributary areas must be shown to demonstrate that upstream offsite PCCSYAs do not exist. If bypassing these areas, only the bypass should be shown.

B. Explanation -- Provide documentation as needed to demonstrate that (1) impacts to PCCSYAs are below 5%, and (2) upstream offsite PCCYSAs are effectively bypassed. Add pages as necessary.

There are no CCSYAs on-site. See attachment.

9.3 Resource Protection Ordinance (RPO) Methods (BMPDM Appendix H.1.1.1)

- Either of two Resource Protection Ordinance (RPO) methods may also be used to demonstrate compliance with CCSYA requirements. Select either option and document the selection below:

  ☒ **RPO Scenario 1: PDP is subject to and in compliance with RPO requirements**[5]

  - **Select** if the project requires one or more discretionary permits;
  - **Demonstrate** that onsite AND upstream offsite CCSYAs will be avoided and/or bypassed.

  ☐ **RPO Scenario 2: PDP is entirely exempt/not subject to RPO requirements**[6]

  - **Select** if the project does not require discretionary permits;
  - **Demonstrate** that all upstream offsite CCSYAs will be bypassed[7].

A. Mapping Results -- At a minimum, show as applicable: (1) the project footprint, (2) areas of proposed development, (3) locations of onsite and upstream offsite CCSYAs, and (4) bypass of all identified CCSYAs.

[5] RPO applicability is normally confirmed during discretionary review. Check with your project manager if you're not sure of your status.
[6] Does not include PDPs utilizing exemption(s) via RPO Section 86.604(e)(2)(cc) or 86.604(e)(3).
[7] This scenario does not impose requirements for onsite CCSYAs.

B. Explanation -- Provide documentation as needed to demonstrate that (1) onsite CCSYAs are avoided and bypassed [if applicable], and (2) upstream offsite CCYSAs are effectively bypassed. Add pages as necessary.

CCSY MAP


My Places
Sightseeing Tour
Make sure 3D Buildings layer is checked
Temporary Places
Region 9 Potential Critical Coarse Sediment
WMAA Data
Layers
Primary Database
Announcements
Borders and Labels
Places
Photos
Roads
3D Buildings
Weather
Gallery
More
Terrain
PROJECT SITE.
NO CCSY ON SITE
© 2020 Google
© 2020 INEGI
Google Earth
1985
32°43'17.76" N 116°59'49.49" W elev 640 ft eye alt 3297 ft

9.4 No Net Impact Analysis (BMPDM Appendix H.4)

- When impacts to CCSYAs cannot be avoided or effectively bypassed, applicants must demonstrate that their project generates no net impact to the receiving water per the performance metrics identified in BMPDM Appendix H.4.
- Use the space below to document that the PDP will generate no net impact to any receiving water.

No Net Impact Analysis (add or attach pages as necessary)

This form must be accepted by the County prior to the release of construction permits or granting of occupancy for applicable portions of a Priority Development Project (PDP). Its purpose is to provide documentation of the final installation of permanent Best Management Practices (BMPs) used to satisfy Structural Performance Standards for the development project. Compliance with these standards reduces the discharge of pollutants and flows from the completed project site. Applicable standards may be satisfied using Structural BMPs (S-BMPs), Significant Site Design BMPs (SSD-BMPs), or both. Applicants are responsible for providing all requested information. Do not leave any fields blank; indicate *N/A* for any requested item that is not applicable.

PART 1 General Project and Applicant Information

Table 1: Project and Applicant Information

A. Project Summary Information	**ID No. IVF-20___-____ To be assigned by DPW-WPP**
Project Name	Spring Valley TM (TM 5636)
Record ID (e.g. grading/improvement plan number, building permit)	PDS2019-TM-5636
Project Address	(Vacant) Grand Avenue, Spring Valley, CA 91977
Assessor's Parcel Number(s) APN(s)	578-161-02
Project Watershed (complete Hydrologic Unit, Area, and Subarea Name with Numeric Identifier)	909.12 Sweetwater Hydrologic Unit, Lower Sweetwater HA, La Nacion HSA
B. Owner Information	
Name	Mark Khouoli
Address	1620 La Presa Avenue, Spring Valley, CA 91977
Email Address	markkhouoli@sbcglobal.net
Phone Number	(619) 300-6040

****THIS PAGE IS FOR PARTIAL RECORD PLAN VERIFICATIONS ONLY ****

If this is a partial Installation Verification Form submittal, list ALL DMAs and BMPs for the Priority Development Project in **Table 2**. Provide acceptance information where applicable.

Table 2: Information for Partial IVF Submittals

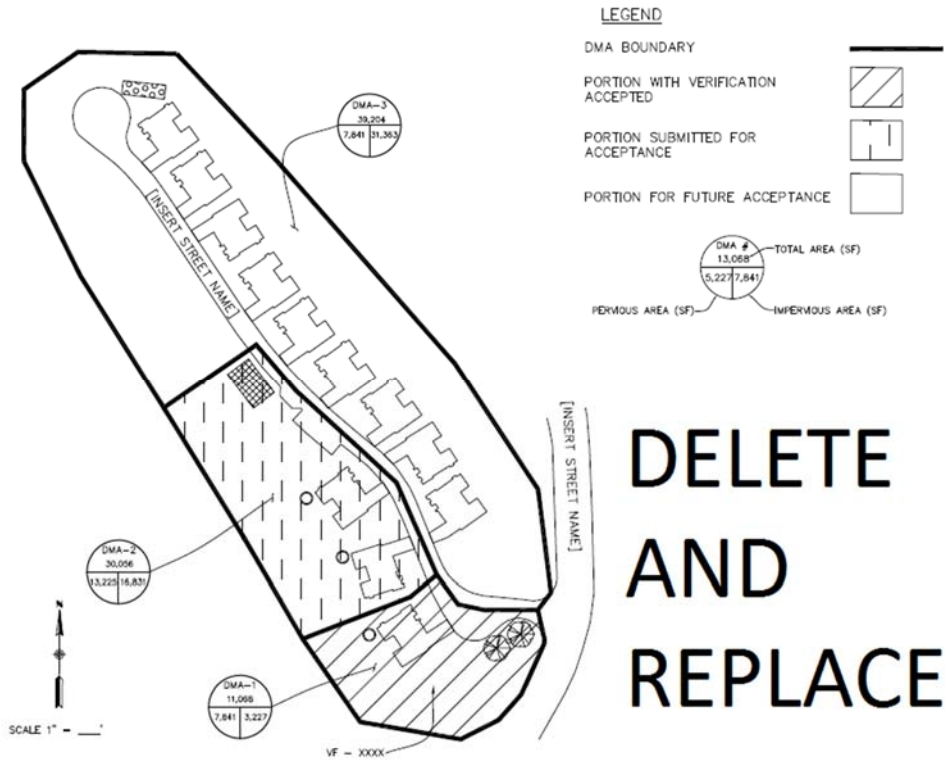
A: DMA and BMP Information

DMA #	Structural and Significant Site Design BMPs	WPP Acceptance Date	IVF ID No. (e.g. 2018-001)

B: DMA and BMP Map

Please attach a map showing (1) all DMAs for the project site, (2) the DMAs and/or lots accepted under previous Verification Forms, and (3) the locations of Structural BMPs and Significant Site Design BMPs previously accepted.

SAMPLE DMA MAP



PART 2 DMA and BMP Inventory Information

Use this table to document Structural BMPs (S-BMPs) and Significant Site Design BMPs (SSD-BMPs) for the PDP. All DMAs that are not self-mitigating or de minimis must have at least one Structural BMP or Significant Site Design BMP.

- In **Part A**, list all Structural BMPs (including both Pollutant Control and/or Hydromodification as applicable) by DMA.
- Complete **Part B** for all DMAs that contain only Significant Site Design BMPs. SSD-BMPs are Site Design BMPs (SD-BMPs) that are sized and constructed to satisfy Structural Performance Standards for a DMA.
- Documentation of SD-BMPs is not required in this table for any DMA that also contains S-BMPs.
- The information provided for each BMP in the table must match that provided in the Stormwater Quality Management Plan (SWQMP), construction plans, maintenance agreements, and other relevant project documentation.

Table 3: Required Information for Structural BMPs and Significant Site Design BMPs

DMA #	BMP Information			Maintenance Category	Maintenance Agreement or Maintenance Notification Recorded Doc. #	Construction Plan Sheet #	Landscape Plan # & Sheet # (For Vegetated BMPs Only)	FOR DPW-WPP USE ONLY *Reviewer concurs that the BMP(s) may be accepted into inventory (date and initial)*
	Quantity	Description/Type of Structural BMP	BMP ID #(s)					
Part A Structural BMPs (S-BMPs)								
Add rows as needed								
Part B Significant Site Design BMPs (SSD-BMPs)								
1	2	Tree Well	DMA #1	---	---	PGP		
2	1	Tree Well	DMA #2	---	---	PGP		
3	2	Tree Well	DMA #3	---	---	PGP		
4	2	Tree Well	DMA #4			PGP		
5	2	Tree Well	DMA #5			PGP		

6	4	Tree Well	DMA #6	PGP

PART 3 Required Attachments for All BMPs Listed in Table 3

For ALL projects, submit the following to the County inspector (check all that are attached):

☐ Photographs: Labeled photographs illustrating proper construction of each S-BMP or SSD-BMP.

☐ Maintenance Agreements: Copies of all approved and recorded Storm Water Maintenance Agreements (SWMAs) or Maintenance Notifications (MNs) for all S-BMPs.

Note: All BMPs proposed for County ownership will remain the responsibility of the owner listed on **Page 1** until a signed Letter of Acceptance of Completion is received by the DPW Watershed Protection Program.

For Grading and Improvement projects only, ALSO submit:

☐ Construction Plans: An 11" X 17" copy of the most current applicable approved Construction Plan sheets:

- ☐ Grading Plans, AND/OR
- ☐ Improvement Plans, AND/OR
- ☐ Precise Grading Plan(s) (only for residential subdivisions with tract homes), AND/OR
- ☐ Other (Please specify) Click here to enter text.

Note: For each Construction Plan, the sheets submitted must incorporate all of the following:

- ☐ A BMP Table, AND
- ☐ A plan/cross-section of each verified as-built BMP, AND
- ☐ The location of each verified as-built BMP

☐ Landscape Plans: An 11" X 17" copy of the most current applicable Landscape Plan sheets where the BMPs are required to be vegetated, including:

- ☐ The Certification of Completion (Form 407), AND
- ☐ The Certificate of Approval from PDS Landscape Architect

Note: For each Landscape Plan, the sheets submitted must show the location of each verified as-built BMP.

Required only for Verifications for Partial Record Plans

☐ If this is a partial record plan verification, please include the following:

- ☐ A list of previously submitted Verification Forms (**Table 2, A**)
- ☐ A map of DMAs and BMPs (**Table 2, B**)

PART 4 Preparer's Certification

By signing below, I certify that the BMP(s) listed in Table 3 of this Verification Form have been constructed and all are in substantial conformance with the approved plans and applicable regulations. I understand the County reserves the right to inspect the above BMPs to verify compliance with the approved plans and Watershed Protection Ordinance (WPO). Should it be determined that the BMPs were not constructed to plan or code, corrective actions may be necessary before permits can be closed.

Note: Structural BMPs (Table 3, Part A) must be certified by a licensed professional engineer.

Please sign and, if applicable, provide your seal below.

[SEAL]

Preparer's Printed Name:

____Click here to enter text._____

Email: _Click here to enter text._____

Phone Number: _Click here to enter text._____

Preparer's Signed Name:

_____

Date: _Click here to enter text._____

COUNTY - OFFICIAL USE ONLY:

For County Inspectors

County Department: _____

Date verification received from EOW: _____

By signing below, County Inspector concurs that every noted BMP has been installed per plan.

Inspector Name: _____

Inspector's Signature: _____ Date: _____

For Building Division Only

Inspection Supervisor Name: _____

Inspector Supervisor's Signature: _____ Date: _____

PDCI & Building, along with the rest of this package, please provide to DPW WPP:

☐ A copy of the final accepted SWQMP and any accepted addendum

For Watershed Protection Program Only

Date Received: _____

WPP Reviewer: _____

WPP Reviewer concurs that the BMPs accepted in **Part 2** above may be entered into inventory.

WPP Reviewer's Signature: _____ Date: _____