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)

Project Information	
Project Name	LEHMAN TPM
Project Address	3600 Linda Vista Drive, Fallbrook, CA 92028
Assessor's Parcel # (APN)	123-261-14
Permit # / Record ID	PDS2020-TPM-21278, PDS2020-ER-02-002

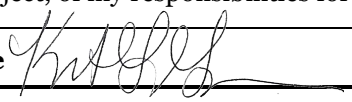
Project Applicant / Project Proponent		
Name	Tad Lehman	
Address	1494 Meredith Road, Fallbrook, CA 92028	
Phone	(760) 525-7000	**Email:** mirkwoodconstruction2@gmail.com

SWQMP Preparer		
Name	Kristin L. Greene	
Company (if applicable)	dk Greene Consulting, Inc.	
Address	P.O. Box 143, Bonsall, CA 92003	
Phone	(760) 310-9408	**Email:** kristin@dkgreene.com
PE Number (if applicable)	C57860	

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  **Date** May 28, 2022

COUNTY ACCEPTED

SWQMP Approved By: *Approval Date*:

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

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	3/4/2020	Initial Submittal
2	1/15/2021	Second Submittal
3	10/18/2021	Third Submittal
4	5/25/22	Fourth Submittal
No.	Date	Summary of Change
Final Design		
1	Date	Initial Submittal
2	Date	Summary of Change
3	Date	Summary of Change
4	Date	Summary of Change
No.	Date	Summary of Change
Plan Changes		
1	Date	Initial Submittal
2	Date	Summary of Change
3	Date	Summary of Change
4	Date	Summary of Change
No.	Date	Summary of Change

PDP SWQMP Submittal Checklist

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

☒ Table 1: Scope of SWQMP Submittal ..... Page 2

☒ Table 2: Baseline BMPs for Existing Natural Features and Proposed Features (Groups 1, 2, and 3) ..... Page 3

☒ Table 3: Baseline BMPs for Pollutant-generating Sources (Group 4) ..... Page 4

☒ Table 4: Infeasibility Justifications for Baseline BMPs ..... Page 5

☒ Table 5: DMA Structural Compliance Strategies and Documentation ..... Page 6

☒ Table 6: Critical Coarse Sediment Yield Area (CCSYA) Requirements ..... Page 7

☒ Table 7: Minimum Construction Stormwater BMPs ..... Page 8

☒ Table 8: Infeasibility Justifications for Construction BMPs ..... Page 9

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: Source Control BMP Worksheet

☒ 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: 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. Some attachments are presented out of order because they are shared between multiple SWQMP forms.

Table 1 – Scope of SWQMP Submittal

Select one option below 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***	Use the spaces below to identify the elements addressed in this submittal and in future submittals.

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

This 8-acre parcel (9.05-acre gross) is currently developed with a single-family residence. The owner indends to prepare a tentative parcel map to subdivide the parcel into four lots and sell separately. The project consists of grading three level pads to prepare the lots for the future development into single-family residences (Parcels 1, 2, and 3). The existing residence is on fourth lot (which will be designated as Parcel 4).

It was decided by the EOW and verified by Watershed Protection Program that the existing private road that serves the existing residence could not have water quality treatment as the existing site conditions make it infeasible. However, the runoff from the existing residence and driveway will have PCBMPs associated with it.

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

After the completion of the tentative parcel map, individual grading plans will be completed in order to create pads for the new residences. No road improvement plans are necessary for this development, as each lot will take access from Linda Vista Drive.

Table 2 – Baseline BMPs for Existing and Proposed Site Features

Site Features Select each feature that applies.		BMP Implementation Describe BMP implementation for each selected site feature.				
Group 1: Existing Natural Site Features [See BMPDM Sections 4.3.1 and 4.3.2]						
		Maintain & conserve natural features (SD-G)		**Establish buffers for waterbodies (SD-H)**		
		Full	Partial	Full	Partial	
☒	**Natural waterbodies**	☒	☐	☒	☐	
☒	**Natural storage reservoirs & drainage corridors**	☒	☐			
☒	**Natural areas, soils, & vegetation (incl. trees)**	☒	☐			
Group 2: Common Impervious Outdoor Site Features [See BMPDM Sections 4.3.3 and 4.3.5]						
		Disperse impervious areas (SD-B)		**Use permeable materials (SD-D)**		**Minimize impervious areas (SD-I)**
		Full	Partial	Full	Partial	
☒	**Streets and roads**	☒	☐	☐	☐	☒ Check here to confirm that impervious surfaces have been minimized where applicable and feasible for all outdoor impervious areas. If not, explain in Table 3.
☐	**Sidewalks & walkways**	☐	☐	☐	☐	
☐	**Parking areas & lots**	☐	☐	☐	☐	
☒	**Driveways**	☒	☐	☐	☐	
☐	**Patios, decks, & courtyards**	☐	☐	☐	☐	
☐	**Hardcourt recreation areas**	☐	☐	☐	☐	
☐	Add impervious feature	☐	☐	☐	☐	
☐	Add impervious feature	☐	☐	☐	☐	
☐	Add impervious feature	☐	☐	☐	☐	
Group 3: Other Outdoor Site Features [See BMPDM Sections 4.2.6, 4.3.4, 4.3.5, 4.3.7, and 4.3.8]						
☒	**Rooftop areas**	**Disperse rooftop runoff (SD-B)**		**Install green roofs (optional; SD-C)**		**Use rain barrels to capture runoff (optional; SD-E)**
		Full	Partial	Full	Partial	Full / Partial
		☒	☐	☐	☐	☐ / ☐
☒	**Landscaped areas**	**Use water-efficient landscaping (SD-J)**		**Install efficient irrigation systems (SD-K)**		**Minimize erosion of slopes and surfaces (SD-L)**
		Full	Partial	Full	Partial	Full / Partial
		☒	☐	☐	☐	☒ / ☐
☐	**Water features (pools, spas, etc.)**	**Provide a designated washing area (SC-A)**		**Drain feature to the sanitary sewer (if allowed) (SC-B)**		**Drain feature to a pervious area (SC-C)**
		Full	Partial	Full	Partial	Full / Partial
		☐	☐	☐	☐	☐ / ☐

Note: Justification is required in Table 4 for any feature not selecting at least one BMP (either full or partial implementation). For Group 2 features this means not selecting either SD-B or SD-D. Additional justifications may be required on request by County staff. Also use Table 4 to describe sources or BMPs other than those listed.

Table 3 –Baseline BMPs for Pollutant-generating Sources (Group 4)

A. Requirements for Documentation Select either or both as applicable.	Completion of Part B is not required because: ☒ This is a Small Residential Project, OR ☐ None of these sources or features is proposed.	☒ ***Source Control BMP Requirements Worksheet E.1-1*** (SC in Appendix E of the BMP Design Manual) is included as **Attachment 3** (optional unless requested by County staff).

B. Sources and BMPs Select all proposed sources and features below. Then select the BMPs on the right to be implemented for each.	**SC-B** Plumb to sanitary sewer	**SC-C** Drain feature to a pervious area	**SC-D** Provide containment for spills and discharges	**SC-E** Prevent contact with rainfall	**SC-F** Isolate flows from adjacent areas	**SC-G** Prevent wind dispersal	**SC-H** Label with stencils or signs
Common Source Areas							
☐ **Trash & Refuse Storage**	☐	---	☐	☐	☐	☐	---
☐ **Materials & Equipment Storage**	☐	---	☐	☐	☐	☐	---
☐ **Loading & Unloading**	☐	---	☐	☐	☐	---	---
☐ **Fueling**	☐	---	☐	☐	☐	---	---
☐ **Maintenance & Repair**	☐	---	☐	☐	☐	---	---
☐ **Vehicle & Equipment Cleaning**	☐	---	☐	☐	☐	---	---
☐ **Food Preparation or Service**	☐	---	☐	☐	☐	---	---
Distributed Features							
☐ **Storm drain inlets & catch basins**	---	---	---	---	---	---	☐
☐ **Interior floor drains and sumps**	☐	---	---	---	---	---	---
☐ **Drain lines (air conditioning, etc.)**	☐	☐	☐	---	---	---	---
☐ **Fire test sprinkler discharges**	☐	☐	☐	---	---	---	---

Provide the following in Table 4: (1) justification of any source area or feature with NO BMPs selected, (2) justification of individual unselected BMPs *if requested by County staff*, and (3) identification of any proposed pollutant-generating sources and BMPs not listed here.

Note: Pollutant-generating sources and features may not discharge directly to the MS4. Discharging to any of the stormwater BMPs identified in Table 5 Part B is also discouraged. If doing so, however, the source or feature area must be included in applicable DCV calculations.

Table 4 – Explanations and Justifications for Table 2 and 3 Baseline BMPs

☒ **Check here if no explanations or justifications for Table 2 or 3 BMPs are required.**		
• **Required Justifications**: If NO BMPs are selected for a source or feature, justify why <u>all</u> BMPs are either not applicable or are infeasible. For Group 2 features NO BMPs means not selecting either SD-B or SD-D. • **If Requested**: Justify why individual BMPs will not be implemented or will only be partially implemented. • **Additional Explanation**: Describe any proposed features and/or BMPs not listed in Tables 2 or 3.		
BMP-Feature Combination		**Explanation**
Feature	Existing Private Road	Providing water quality treatment for the existing Private Road that serves the existing Parcel 4 was found to be infeasible due to the existing physical constraints including the existing cut slope and existing natural drainage channel that are adjacent to the road. However, the existing house and private driveway runoff will be treated via a proposed bioretention basin.
BMP	No Treatment	
Feature	Feature	Explanation
BMP	BMP	
Feature	Feature	Explanation
BMP	BMP	
Feature	Feature	Explanation
BMP	BMP	
Feature	Feature	Explanation
BMP	BMP	
Feature	Feature	Explanation
BMP	BMP	
Feature	Feature	Explanation
BMP	BMP	

Table 5: 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 ☒	Source Control BMP Worksheet (see Page 3) ☒	Previous SWQMP Submittals (see Page 1) ☒	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 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 BMPs (BMPDM Chapter 6)			☒	☒	☒	☒	
☐Alternative Compliance Project (BMPDM Section 1.8)				☐	☐	☐	☐

☒ **Please check this box after you complete this list. Corresponding attachments will be automatically selected on the right.**

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

Table 6: 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**[2]

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**

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

Table 7 –Minimum Construction Stormwater BMPs

Minimum Required BMPs by Activity Type Select all applicable activities and at least one BMP for each	References Caltrans[3]	 County of San Diego	
☒ **Erosion Control for Disturbed Slopes** (choose at least 1 per season)			
☐ Vegetation Stabilization Planting[4] (Summer)	SS-2, SS-4		
☒ Hydraulic Stabilization Hydroseeding[9] (Summer)	SS-4		
☒ Bonded Fiber Matrix or Stabilized Fiber Matrix[5] (Winter)	SS-3		
☐ Physical Stabilization Erosion Control Blanket[7] (Winter)	SS-7		
☒ **Erosion control for disturbed flat areas (slope < 5%)**			
☒ County Standard Lot Perimeter Protection Detail	SC-2	PDS 659[6]	
☐ 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[7]	
☒ 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[8]	
☒ **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[9]**			
☒ Waste Management Concrete Waste Management	WM-8		
☒ Solid Waste Management	WM-5		
☒ Sanitary Waste Management	WM-9		
☒ Hazardous Waste Management	WM-6		

[3] See Caltrans 2017 Storm Water Quality Handbooks, Construction Site BMP Manual, available at: (http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm)
[4] 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.
[5] All slopes over three feet must have established vegetative cover prior to final permit approval.
[6] County PDS 659. Standard Lot Perimeter Protection Design System (Bldg. Division)
[7] County PDS 660. County Standard Desilting Basin for Disturbed Areas of 1 Acre or Less Bldg. Division
[8] Regional Standard Drawing D-40 – Rip Rap Energy Dissipater (also acceptable for velocity reduction)
[9] Applicants are responsible to apply appropriate BMPs for specific wastes (e.g., BMP WM-8 for concrete).

Table 8 – Explanations and Justifications for Construction Phase BMPs

☒ **Check here if no explanations or justifications for Table 7 BMPs are required.**		
Justifications for Table 7 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 7.		
Activity Type / BMP		**Explanation**
Activity Type	Activity Type	Explanation
BMP	BMP	
Activity Type	Activity Type	Explanation
BMP	BMP	
Activity Type	Activity Type	Explanation
BMP	BMP	
Activity Type	Activity Type	Explanation
BMP	BMP	
Activity Type	Activity Type	Explanation
BMP	BMP	
Activity Type	Activity Type	Explanation
BMP	BMP	
Activity Type	Activity Type	Explanation
BMP	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:	LEHMAN TPM
Record ID (Permit) No(s):	PDS2020-TPM-21278, PDS2020-ER-02-002
Assessor's Parcel No(s):	123-261-14
Street Address (or Intersection):	3600 Linda Vista Drive
City, State, Zip:	Fallbrook, CA 92028

Part 2. Applicant / Project Proponent Information	
Name:	Tad Lehman
Company:	
Street Address:	1494 Meredith Road
City, State, Zip:	Fallbrook, CA 92028
Phone Number	(760) 525-7000
Email:	mirkwoodconstruction2@gmail.com

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)**
	Parcels 1, 2, 3: 0 sq. ft. Parcel 4: 19,933 sq. ft.	Parcels 1, 2, 3: 34,831 sq. ft. Parcel 4: 0 sq. ft.	Parcels 1, 2, 3: 85,737 sq. ft Parcel 4: 0 sq. ft.

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

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

Ⓐ *If your project is the following … (select one)*	Ⓑ *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: Date:

- ***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

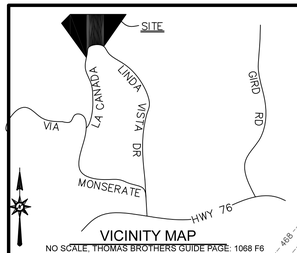
2.1 DMA Exhibits

- 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 Site Design & Source Control Exhibit, Sheet 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.

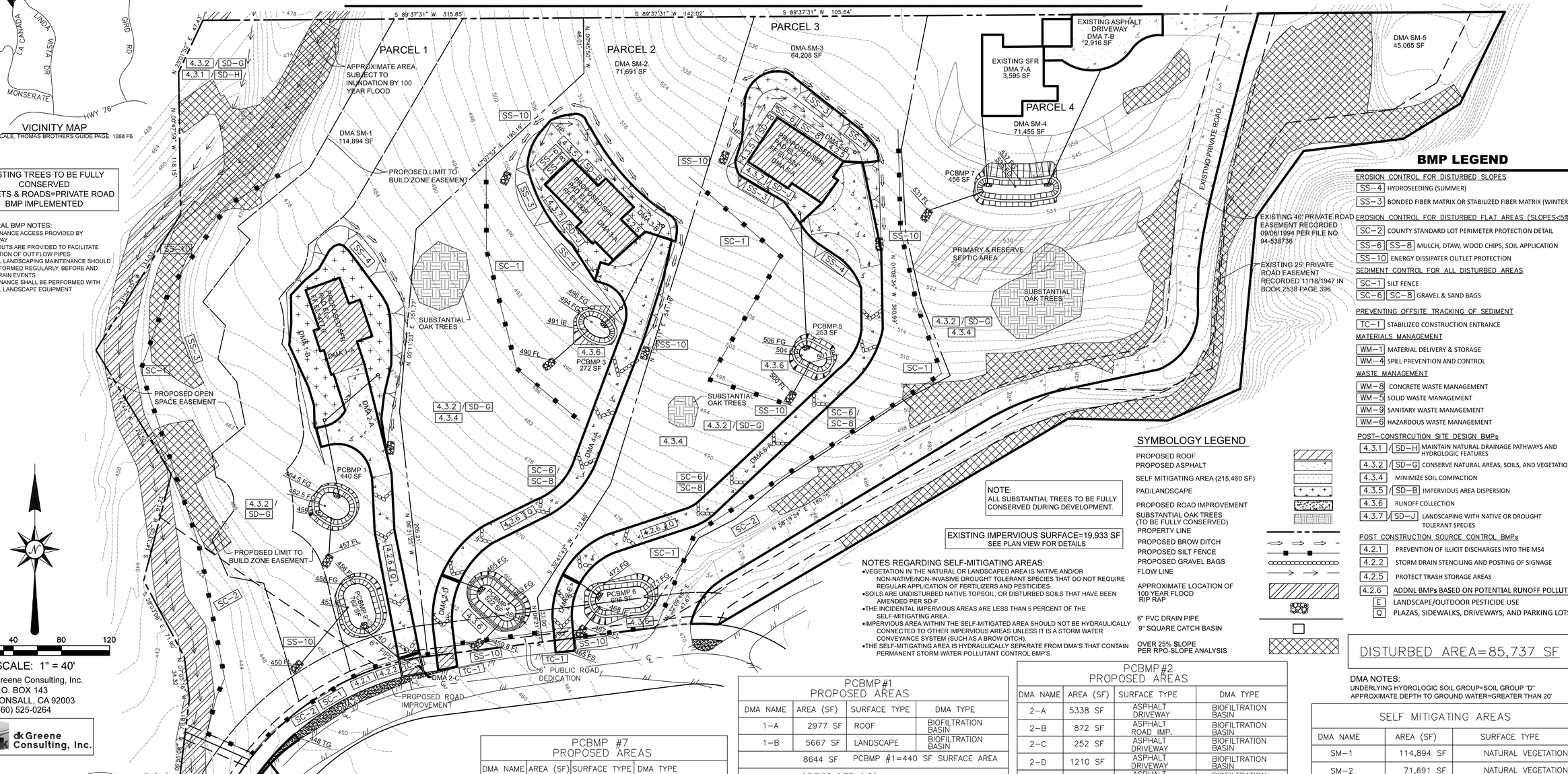
DMA SITE DESIGN & SOURCE CONTROL EXHIBIT



VICINITY MAP
NO SCALE, THOMAS BROTHERS GUIDE PAGE: 1068 F6

EXISTING TREES TO BE FULLY CONSERVED
STREETS & ROADS=PRIVATE ROAD
BMP IMPLEMENTED

STRUCTURAL BMP NOTES:
- MAINTENANCE ACCESS PROVIDED BY DRIVEWAY
- CLEANOUTS ARE PROVIDED TO FACILITATE INSPECTION OF OUT FLOW PIPES
- NORMAL LANDSCAPING MAINTENANCE SHOULD BE PERFORMED REGULARLY, BEFORE AND AFTER RAIN EVENTS
- MAINTENANCE SHALL BE PERFORMED WITH TYPICAL LANDSCAPE EQUIPMENT



0 40 80 120

SCALE: 1" = 40'

dk Greene Consulting, Inc.
P.O. BOX 143
BONSALL, CA 92003
(760) 525-0264

Registered Professional Engineer (Civil) CERTIFICATE NO. C57860 KRISTIN LIPSKA GREENE EXPIRES 6/30/24 CALIFORNIA

KRISTIN L. GREENE — MAY 10, 2022
KRISTIN L. GREENE — DATE

BMP LEGEND

EROSION CONTROL FOR DISTURBED SLOPES
- SS-4 HYDROSEEDING (SUMMER)
- SS-3 BONDED FIBER MATRIX OR STABILIZED FIBER MATRIX (WINTER)

EROSION CONTROL FOR DISTURBED FLAT AREAS (SLOPES<5%)
- SC-2 COUNTY STANDARD LOT PERIMETER PROTECTION DETAIL
- SS-6 SS-8 MULCH, DTAW, WOOD CHIPS, SOIL APPLICATION
- SS-10 ENERGY DISSIPATER OUTLET PROTECTION

SEDIMENT CONTROL FOR ALL DISTURBED AREAS
- SC-1 SILT FENCE
- SC-6 SC-8 GRAVEL & SAND BAGS

PREVENTING OFFSITE TRACKING OF SEDIMENT
- TC-1 STABILIZED CONSTRUCTION ENTRANCE

MATERIALS MANAGEMENT
- WM-1 MATERIAL DELIVERY & STORAGE
- WM-4 SPILL PREVENTION AND CONTROL

WASTE MANAGEMENT
- WM-8 CONCRETE WASTE MANAGEMENT
- WM-5 SOLID WASTE MANAGEMENT
- WM-9 SANITARY WASTE MANAGEMENT
- WM-6 HAZARDOUS WASTE MANAGEMENT

POST-CONSTRCUTION SITE DESIGN BMPs
- 4.3.1 / SD-H MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES
- 4.3.2 / SD-G CONSERVE NATURAL AREAS, SOILS, AND VEGETATION
- 4.3.4 MINIMIZE SOIL COMPACTION
- 4.3.5 / SD-B IMPERVIOUS AREA DISPERSION
- 4.3.6 RUNOFF COLLECTION
- 4.3.7 / SD-J LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES

POST CONSTRUCTION SOURCE CONTROL BMPs
- 4.2.1 PREVENTION OF ILLICIT DISCHARGES INTO THE MS4
- 4.2.2 STORM DRAIN STENCILING AND POSTING OF SIGNAGE
- 4.2.5 PROTECT TRASH STORAGE AREAS
- 4.2.6 ADDNL BMPs BASED ON POTENTIAL RUNOFF POLLUTANTS:
  - E LANDSCAPE/OUTDOOR PESTICIDE USE
  - Q PLAZAS, SIDEWALKS, DRIVEWAYS, AND PARKING LOTS

SYMBOLOGY LEGEND

PROPOSED ROOF
PROPOSED ASPHALT
SELF MITIGATING AREA (215,460 SF)
PAD/LANDSCAPE
PROPOSED ROAD IMPROVEMENT
SUBSTANTIAL OAK TREES (TO BE FULLY CONSERVED)
PROPERTY LINE
PROPOSED BROW DITCH
PROPOSED SILT FENCE
PROPOSED GRAVEL BAGS
FLOW LINE
APPROXIMATE LOCATION OF 100 YEAR FLOOD RIP RAP
6" PVC DRAIN PIPE
9" SQUARE CATCH BASIN
OVER 25% SLOPE PER RPO-SLOPE ANALYSIS

NOTE:
ALL SUBSTANTIAL TREES TO BE FULLY CONSERVED DURING DEVELOPMENT.

EXISTING IMPERVIOUS SURFACE=19,933 SF
SEE PLAN VIEW FOR DETAILS

NOTES REGARDING SELF-MITIGATING AREAS:
- VEGETATION IN THE NATURAL OR LANDSCAPED AREA IS NATIVE AND/OR NON-NATIVE/NON-INVASIVE DROUGHT TOLERANT SPECIES THAT DO NOT REQUIRE REGULAR APPLICATION OF FERTILIZERS AND PESTICIDES.
- SOILS ARE UNDISTURBED NATIVE TOPSOIL, OR DISTURBED SOILS THAT HAVE BEEN AMENDED PER SD-F.
- THE INCIDENTAL IMPERVIOUS AREAS ARE LESS THAN 5 PERCENT OF THE SELF-MITIGATING AREA.
- IMPERVIOUS AREA WITHIN THE SELF-MITIGATED AREA SHOULD NOT BE HYDRAULICALLY CONNECTED TO OTHER IMPERVIOUS AREAS UNLESS IT IS A STORM WATER CONVEYANCE SYSTEM (SUCH AS A BROW DITCH).
- THE SELF-MITIGATING AREA IS HYDRAULICALLY SEPARATE FROM DMA'S THAT CONTAIN PERMANENT STORM WATER POLLUTANT CONTROL BMP'S.

DISTURBED AREA=85,737 SF

DMA NOTES:
UNDERLYING HYDROLOGIC SOIL GROUP=SOIL GROUP "D"
APPROXIMATE DEPTH TO GROUND WATER=GREATER THAN 20'

SELF MITIGATING AREAS

DMA NAME	AREA (SF)	SURFACE TYPE
SM-1	114,894 SF	NATURAL VEGETATION
SM-2	71,691 SF	NATURAL VEGETATION
SM-3	64,208 SF	NATURAL VEGETATION
SM-4	71,455 SF	NATURAL VEGETATION
SM-5	45,065 SF	NATURAL VEGETATION
TOTAL	367,313 SF	

PCBMP #1 PROPOSED AREAS

DMA NAME	AREA (SF)	SURFACE TYPE	DMA TYPE
1-A	2977 SF	ROOF	BIOFILTRATION BASIN
1-B	5667 SF	LANDSCAPE	BIOFILTRATION BASIN
	8644 SF	PCBMP #1=440 SF SURFACE AREA	
	ORIFICE SIZE=0.59		

PCBMP #2 PROPOSED AREAS

DMA NAME	AREA (SF)	SURFACE TYPE	DMA TYPE
2-A	5338 SF	ASPHALT DRIVEWAY	BIOFILTRATION BASIN
2-B	872 SF	ASPHALT ROAD IMP.	BIOFILTRATION BASIN
2-C	252 SF	ASPHALT DRIVEWAY	BIOFILTRATION BASIN
2-D	1210 SF	ASPHALT DRIVEWAY	BIOFILTRATION BASIN
2-E	979 SF	ASPHALT DRIVEWAY	BIOFILTRATION BASIN
	8,651 SF	PCBMP #2=762 SF SURFACE AREA	
	ORIFICE SIZE=0.46		

PCBMP #3 PROPOSED AREAS

DMA NAME	AREA (SF)	SURFACE TYPE	DMA TYPE
3-A	2977 SF	ROOF	BIOFILTRATION BASIN
3-B	4789 SF	LANDSCAPE	BIOFILTRATION BASIN
	7766 SF	PCBMP #3=272 SF SURFACE AREA	
	ORIFICE SIZE=0.43		

PCBMP #4 PROPOSED AREAS

DMA NAME	AREA (SF)	SURFACE TYPE	DMA TYPE
4-A	7393 SF	ASPHALT	BIOFILTRATION BASIN
	7393 SF	PCBMP #4=522 SF SURFACE AREA	
	ORIFICE SIZE=0.42		

PCBMP #5 PROPOSED AREAS

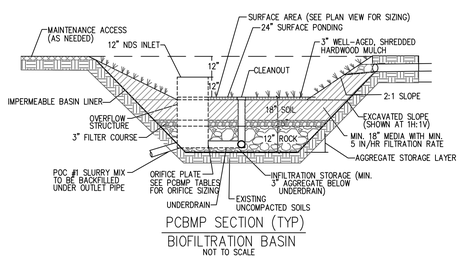
DMA NAME	AREA (SF)	SURFACE TYPE	DMA TYPE
5-A	2882 SF	ROOF	BIOFILTRATION BASIN
5-B	3672 SF	LANDSCAPE	BIOFILTRATION BASIN
	6554 SF	PCBMP #5=253 SF SURFACE AREA	
	ORIFICE SIZE=0.40		

PCBMP #6 PROPOSED AREAS

DMA NAME	AREA (SF)	SURFACE TYPE	DMA TYPE
6-A	9951	ASPHALT	BIOFILTRATION BASIN
	9951 SF	PCBMP #6=697 SF SURFACE AREA	
	ORIFICE SIZE=0.49		

PCBMP #7 PROPOSED AREAS

DMA NAME	AREA (SF)	SURFACE TYPE	DMA TYPE
7-A	3,595	CONCRETE DW	BIOFILTRATION BASIN
7-B	2,916	ROOF	BIOFILTRATION BASIN
	6,511 SF	PCBMP #7=456 SF SURFACE AREA	
	ORIFICE SIZE=0.39		



PCBMP SECTION (TYP)
BIOFILTRATION BASIN
NOT TO SCALE

PRIVATE CONTRACT

Sheet 1	COUNTY OF SAN DIEGO DEPARTMENT OF PUBLIC WORKS	1 Sheets

DMA SITE DESIGN AND SOURCE CONTROL EXHIBIT FOR:

LEHMAN TPM
3600 LINDA VISTA DRIVE

Approved:
For County Engineer

ENGINEER OF WORK:
KRISTIN L. GREENE — 57860 PE

PROPERTY OWNER INFORMATION

NAME: TAD LEHMAN
ADDRESS: 1494 MEREDITH RD.
FALLBROOK, CA 92028

TELEPHONE NUMBER: (24 HOUR CONTACT NUMBER)
SITE A.P.N. NUMBER: 123-261-14
SITE ADDRESS: 3600 LINDA VISTA DR FALLBROOK CA

JOB NO. 19-107

ENGINEER'S NAME: dk Greene Consulting, Inc. PHONE NO.: (760) 310-9408

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	**Construction plans will be provided at the construction phase of this project.**
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.	
☐ **N/A** When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management.	
☐ **N/A** Include landscaping plan sheets (if available) showing vegetation requirements for vegetated structural BMP(s).	
☐ All BMPs must be fully dimensioned on the plans.	
☐ **N/A** 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

3.0 Cover Sheet and General Requirements

- Standard SWQMP Form Table 2 and PDP SWQMP Form Table 3 require the identification of pollutant-generating sources and associated BMPs for development projects.

- In some cases, County staff may request additional, more detailed documentation of source control BMP design details. If requested, applicants must submit a completed copy of this Source Control BMP Worksheet. This requirement can be satisfied either by submitting a copy of BMPDM Attachment E.1 (Source Control BMP Requirements) or equivalent documentation at the County's discretion.

- Submit this documentation using this cover sheet.

- Sources and BMPs must also be shown as applicable on DMA exhibits and construction plans (see Attachment 2).

Sub-attachment 3.0

For Source Control BMP Information, see:
Sub-attachment 2.1 DMA, Source Control and Site Design Exhibit, Sheet 6.

Source Control BMP Requirements Worksheet E.1-1
(SC in Appendix E of the BMP Design Manual)
is attached on the following pages.

If These Sources Will Be on the Project Site …	… Then Your SWQMP Must Consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **A.** Onsite storm drain inlets ☐ Not Applicable	☒ Locations of inlets.	☐ Mark all inlets with the words "No Dumping! Flows to Bay" or similar. See stencil template provided in Appendix I-4	☐ Maintain and periodically repaint or replace inlet markings. ☐ Provide storm water pollution prevention information to new site owners, lessees, or operators. ☐ See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks ☐ Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on Drawings**	3 **Permanent Controls—List in Table and Narrative**	4 **Operational BMPs—Include in Table and Narrative**
❑ **B.** Interior floor drains and elevator shaft sump pumps ❑ Not Applicable		❑ State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	❑ Inspect and maintain drains to prevent blockages and overflow.
❑ **C.** Interior parking garages ❑ Not Applicable		❑ State that parking garage floor drains will be plumbed to the sanitary sewer.	❑ Inspect and maintain drains to prevent blockages and overflow.
❑ **D1.** Need for future indoor & structural pest control ❑ Not Applicable		❑ Note building design features that discourage entry of pests.	❑ Provide Integrated Pest Management information to owners, lessees, and operators.

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
☒ **D2.** Landscape/ Outdoor Pesticide Use ☐ Not Applicable	☐ Show locations of existing trees or areas of shrubs and ground cover to be undisturbed and retained. ☒ Show self-retaining landscape areas, if any. ☐ Show storm water treatment facilities.	State that final landscape plans will accomplish all of the following. ☐ Preserve existing drought tolerant trees, shrubs, and ground cover to the maximum extent possible. ☐ Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to storm water pollution. ☐ Where landscaped areas are used to retain or detain storm water, specify plants that are tolerant of periodic saturated soil conditions. ☐ Consider using pest-resistant plants, especially adjacent to hardscape. ☐ To ensure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use,	☐ Maintain landscaping using minimum or no pesticides. ☐ See applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks ☐ Provide IPM information to new owners, lessees and operators.

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on Drawings**	3 **Permanent Controls—List in Table and Narrative**	4 **Operational BMPs—Include in Table and Narrative**
❑ **E.** Pools, spas, ponds, decorative fountains, and other water features. ❑ Not Applicable	❑ Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet.	❑ If the local municipality requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	❑ See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks
❑ **F.** Food service ❑ Not Applicable	❑ For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. ❑ On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	❑ Describe the location and features of the designated cleaning area. ❑ Describe the items to be cleaned in this facility and how it has been sized to ensure that the largest items can be accommodated.	

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of**	2 **Permanent Controls—Show on Drawings**	3 **Permanent Controls—List in Table and Narrative**	4 **Operational BMPs—Include in Table and Narrative**
☒ **G.** Refuse areas ☐ Not Applicable	☒ Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas. ☐ If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area. Also show how the designated area will be protected from wind dispersal. ☐ Any drains from dumpsters, compactors, and tallow bin areas must be connected to a grease removal device before discharge to sanitary sewer.	☐ State how site refuse will be handled and provide supporting detail to what is shown on plans. ☐ State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	☐ State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on- site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative Table and Narrative**
❑ **H.** Industrial processes. ❑ Not Applicable	❑ Show process area.	❑ If industrial processes are to be located onsite, state: "All process activities to be performed indoors. No processes to drain to exterior or to storm drain system."	❑ See Fact Sheet SC-10, "Non-Storm Water Discharges" in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks
❑ **I.** Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.) ❑ Not Applicable	❑ Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or runoff from area and protected from wind dispersal. ❑ Storage of non-hazardous liquids must be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. ❑ Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	❑ Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of local Hazardous Materials Programs for: ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release Prevention Program ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank	❑ See the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC-33, "Outdoor Storage of Raw Materials" in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on Drawings**	3 **Permanent Controls—List in Table and Narrative**	4 **Operational BMPs—Include in Table and Narrative**
❑ **J.** Vehicle and Equipment Cleaning ❑ Not Applicable	❑ Show on drawings as appropriate: (1) Commercial/industrial facilities having vehicle /equipment cleaning needs must either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses. (2) Multi-dwelling complexes must have a paved, bermed, and covered car wash area (unless car washing is prohibited onsite and hoses are provided with an automatic shut- off to discourage such use). (3) Washing areas for cars, vehicles, and equipment must be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer. (4) Commercial car wash facilities must be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility must discharge to the sanitary sewer, or a wastewater reclamation system must be installed.	❑ If a car wash area is not provided, describe measures taken to discourage onsite car washing and explain how these will be enforced.	Describe operational measures to implement the following (if applicable): ❑ Washwater from vehicle and equipment washing operations must not be discharged to the storm drain system. ❑ Car dealerships and similar may rinse cars with water only. ❑ See Fact Sheet SC-21, "Vehicle and Equipment Cleaning," in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
❑ **K.** Vehicle/Equipment Repair and Maintenance ❑ Not Applicable	❑ Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to protect from rainfall, run-on runoff, and wind dispersal. ❑ Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains must not be installed within the secondary containment areas. ❑ Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.	❑ State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. ❑ State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. ❑ State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	In the report, note that all of the following restrictions apply to use the site: ❑ No person must dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains. ❑ No vehicle fluid removal must be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids must be contained or drained from the vehicle immediately. ❑ No person must leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
❑ **L.** Fuel Dispensing Areas ❑ Not Applicable	❑ Fueling areas[2] must have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are (1) graded at the minimum slope necessary to prevent ponding; and (2) separated from the rest of the site by a grade break that prevents run-on of storm water to the MEP. ❑ Fueling areas must be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area1.] The canopy [or cover] must not drain onto the fueling area.		❑ The property owner must dry sweep the fueling area routinely. ❑ See the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks

[2] The fueling area must be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
M. Loading Docks ❑ Not Applicable	❑ Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks must be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts must be positioned to direct storm water away from the loading area. Water from loading dock areas should be drained to the sanitary sewer where feasible. Direct connections to storm drains from depressed loading docks are prohibited. ❑ Loading dock areas draining directly to the sanitary sewer must be equipped with a spill control valve or equivalent device, which must be kept closed during periods of operation. ❑ Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		❑ Move loaded and unloaded items indoors as soon as possible. ❑ See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on Drawings**	**3** **Permanent Controls—List in Table and Narrative**	**4** **Operational BMPs—Include in Table and Narrative**
❑ **N.** Fire Sprinkler Test Water ❑ Not Applicable		❑ Provide a means to drain fire sprinkler test water to the sanitary sewer.	❑ See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Storm Water Quality Handbooks at https://www.casqa.org/resources/bmp-handbooks
O. Miscellaneous Drain or Wash Water ❑ Boiler drain lines ❑ Condensate drain lines ❑ Rooftop equipment ❑ Drainage sumps ❑ Roofing, gutters, and trim ❑ Not Applicable		❑ Boiler drain lines must be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. ❑ Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. ❑ Rooftop mounted equipment with potential to produce pollutants must be roofed and/or have secondary containment. ❑ Any drainage sumps onsite must feature a sediment sump to reduce the quantity of sediment in pumped water. ❑ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.	

If These Sources Will Be on the Project Site …	… Then Your SWQMP must consider These Source Control BMPs		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on Drawings**	3 **Permanent Controls—List in Table and Narrative**	4 **Operational BMPs—Include in Table and Narrative**
❑ **P.** Plazas, sidewalks, and parking lots. ❑ Not Applicable			❑ Plazas, sidewalks, and parking lots must be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing must be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser must be collected and discharged to the sanitary sewer and not discharged to a storm drain.

4.0 Cover Sheet

- If this SWQMP implements any requirements of an earlier master SWQMP submittal, a copy of that previous submittal must be attached under cover of this sheet.

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: CEQA LEVEL DRAINAGE STUDY

    Prepared By: dk Greene Consulting, Inc.

    Date: October 18, 2021

  - 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.

CEQA LEVEL
DRAINAGE STUDY

PROJECT:

LEHMAN TPM
PDS2020-TPM-21278
PDS2020-ER-02-002
4-lot Subdivision
3600 Linda Vista Drive
Fallbrook, CA 92028
APN 123-261-14

PREPARED FOR:

Tad Lehman
1494 Meredith Road
Fallbrook, CA 92028

PREPARED BY:

Kristin L. Greene, P.E.
dk GREENE CONSULTING, INC.
P.O. Box 143
Bonsall, CA 92003
J.N. 19-107

I hereby declare that I am the engineer of work for this project, that I have exercised responsible charge over the design of the project as defined in Section 6703 of the Business and Professions code, and that the design is consistent with current standards.

EXPIRES: JUNE 30, 2024

dk Greene Consulting, Inc.

Kristin L. Greene, P.E. C57860

May 31, 2022
Date

Hydrology Calculation Spreadsheet

PRE-DEVELOPMENT CONDITION SUMMARY - 100 yr.

SYSTEM	AREA (ac.)	C	U/S ELEV. (ft.)	D/S ELEV. (ft.)	LENGTH (ft.)	SLOPE (%)	P_6 (in.)	Figure 3-2	Tc(min.) Fig. 3-4	T(i)+T(t) (min)	I (in./hr.)	Q (cfs)
BASIN A1	2.77	0.35	500.0	446.0	432	12.5	3.4	6.9	1.4	8.3	6.5	6.28
BASIN B1	2.03	0.35	539.0	459.0	596	13.4	3.4	6.9	1.9	8.8	6.2	4.43
BASIN C1	1.98	0.35	547.0	466.0	502	16.1	3.4	6.9	1.5	8.4	6.4	4.45
BASIN D1	0.48	0.47	554.0	552.0	252	0.8	3.4	10.0	2.0	12.0	5.1	1.16
BASIN D2	2.06	0.47	550.0	470.0	629	12.7	3.4	6.9	2.5	9.4	6.0	5.79
TOTAL	9.32								TOTAL OUTFALL 1			22.10

POST-DEVELOPMENT CONDITION SUMMARY - 100 yr.

SYSTEM	AREA (ac.)	C	U/S ELEV. (ft.)	D/S ELEV. (ft.)	LENGTH (ft.)	SLOPE (%)	P_6 (in.)	Figure 3-2	*Tc(min) Fig. 3-4	T(i)+T(t) (min)	I (in./hr.)	Q_{100} (cfs)	Q_{100} Mitigated	**V_{100} (cfs)
BASIN A1	0.84	0.35	516.0	458.0	560	10.4	3.4	6.9	1.9	8.8	6.2	1.82	1.82	4.22
BASIN A21	0.37	0.52	477.0	457.0	340	5.9	3.4	10.0	1.4	11.4	5.3	1.01	0.59	3.03
BASIN A22	0.12	0.85	470.5	458.0	368	3.4	3.4	6.4	1.9	8.3	6.5	0.66	0.59	3.03
BASIN A3	1.44	0.35	462.0	443.0	136	14.0	3.4	6.9	0.2	7.1	7.2	3.61	2.76	4.5
BASIN B1	0.65	0.35	539.0	461.0	590	13.2	3.4	6.9	1.9	8.8	6.2	1.42	1.42	3.83
BASIN B21	0.07	0.52	508.0	504.0	220	1.8	3.4	10.0	1.2	11.2	5.3	0.19	0.19	0.99
BASIN B22	0.32	0.85	508.0	461.0	389	12.1	3.4	6.4	1.2	7.6	6.8	1.85	0.59	3.03
BASIN B3	0.99	0.35	497.0	458.0	351	11.1	3.4	6.9	1.1	8.0	6.6	2.29	2.29	4.37
BASIN C1	0.54	0.35	548.0	470.0	632	12.3	3.4	6.9	2.1	9.0	6.2	1.16	1.16	3.59
BASIN C21	0.25	0.52	523.5	522.0	315	0.5	3.4	10.0	3.7	13.7	4.7	0.61	0.59	3.03
BASIN C22	0.25	0.85	524.0	471.0	454	11.7	3.4	6.4	1.5	7.9	6.7	1.42	0.59	3.03
BASIN C3	0.94	0.35	519.0	465.0	422	12.8	3.4	6.9	1.3	8.2	6.5	2.14	2.14	4.25
BASIN D1	0.48	0.47	554.0	552.0	252	0.8	3.4	10.0	2.0	12.0	5.1	1.16	0.59	3.03
BASIN D2	2.06	0.47	550.0	470.0	629	12.7	3.4	6.9	2.5	9.4	6.0	5.79	5.79	5.33
TOTAL	9.32								TOTAL OUTFALL 1			25.13	21.11	

*Lm has been subtracted from calc of Tc.

**All velocities are under 6 fps so no riprap is required.

PRE VS. POST SUMMARY

Node	Pre-Development Discharge (cfs)	Post-Dev. Discharge (cfs)	Post-Dev w/ Mitig.	Difference
OUTFALL 1 -100 yr.	22.10	25.13	21.11	-0.99

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)***	
SM-1	114,894 ft^2	0	0%	PDS2020-TPM-21278 DMA, Site Design, and Source Control Exhibit, Sheet 1
SM-2	71,691 ft^2	0	0%	Same as above.
SM-3	63,268 ft^2	0	0%	Same as above.
SM-4	72,484 ft^2	0	0%	Same as above.
SM-5	45,065 ft^2	0	0%	Same as above.

- "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 #***
De Minimis	250 ft^2	PDS2020-TPM-21278 DMA, Site Design, and Source Control Exhibit, Sheet 1

- "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)**	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
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		☐	☐	
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		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	
		☐	☐	

Copy and Paste table here for additional DMAs

- "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 fully satisfy all design requirements and restrictions described in BMPDM Section 5.2.3, applicable BMPDM Appendix E Fact Sheets, and any other guidance or instruction identified by the County.

[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.

6.3.1 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.

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.

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 #:			DMA Area (ft²):
Required Retention Volume (RRV)			
a. Design Capture Volume (DCV; ft³):			
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			
c. Required Retention Volume (ft³) [DCV * DCV Multiplier]			

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		**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)**	
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.	

7.0 General Requirements

- Submit this cover page and all required Sub-attachments for all structural BMPs proposed for the project.
- See the BMPDM sections and appendices listed under "BMPDM Design Resources" in the table below 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.
- PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management. Completion of SWQMP Attachment 8 is also required for these BMPs.
- 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.
- Structural BMP Certification. All structural BMPs documented this attachment and in Attachment 8 must be certified by a registered engineer in Sub-attachment 7.1.
- Structural BMP Verification. Structural BMP installation must be verified by the County at the completion of construction. Applicants must complete an Installation Verification Form (Attachment 10).

Sub-attachments (check all that are completed)	**Requirement**	**BMPDM Design Resources**
☒ **7.1: Preparer's Certification**	Required	• N/A
☒ **7.2: Structural BMP Strategy**	Required	• BMPDM Sections 5.1., 5.3, 5.4, and Chapter 6 • BMPDM Appendix E (pages E-78 through E-210)
☒ **7.3: Structural BMP Checklist(s)**	Required	
☒ **7.4: Stormwater Pollutant Control Worksheet Calculations**	Required	• BMPDM Appendix B
☐ **7.5: Identification and Narrative of Receiving Water and Pollutants of Concern**	Required if flow-thru BMPs are proposed	• N/A

7.1 Engineer of Work Certification for Structural BMPs

Project Name LEHMAN TPM
Permit Application Number PDS2020-TPM-21278, PDS2020-ER-02-002

CERTIFICATION

I hereby declare that I am the Engineer in Responsible Charge of design of structural storm water best management practices (BMPs) for this project, and that I have exercised responsible charge over the design of the BMPs as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the PDP requirements of the County of San Diego BMP Design Manual, which 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 R9-2015-0001 and R9-2015-0100) requirements for storm water management. I have read and 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 BMP Design Manual.

I certify that this PDP SWQMP 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 PDP SWQMP by County staff is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of structural storm water BMPs for this project, of my responsibilities for their design.

☒ In addition to the structural pollutant control BMPs described in this attachment, this certification applies to the Structural Hydromodification Management BMPs described in Attachment 8 (check if applicable).

C57860 Exp. 6/30/24
Engineer of Work's Signature, PE Number & Expiration Date

Kristin L. Greene, P.E.
Print Name

dk Greene Consulting, Inc.
Company

May 25, 2022
Date

Engineer's Seal:

EXPIRES: JUNE 30, 2024

7.2 Structural BMP Strategy

7.2.1 Narrative Strategy (Continue description on subsequent pages as necessary)

Describe the general strategy for structural BMP implementation at the project site. For pollutant control BMPs, your description must address the key points outlined in Section 5.1 of the BMP Design Manual, and the type of BMPs selected. For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate.

This project has been classified as a Priority Development Project with hydromodification requirements, and therefore requires that there be further analysis regarding the pre-development vs. post-development runoff. In addition to flow control restrictions, there will also be pollutant control requirements. To provide compliance for these flow control and pollutant control requirements, this project has been divided into Drainage Management Areas (DMAs). Each DMA will drain to an appropriately-sized BMP.

Infiltration is assumed to be infeasible due to the Soil Type (C&D). Soil Type D will be used for all calculations, as it is the most conservative.

Because hydromodification is used in this project, the Design Capture Volume (DCV) is calculated in Spreadsheet B.3 (V2.0). However, calculations for hydromodification exceed the capacity of DCV calculations, and therefore design of the structural BMPs are sized to comply with hydromodification requirements via the BMP Calculation Spreadsheet with biofiltration.

The BMPs were designed using biofiltration. BMP sizing requirements for all biofiltration BMPs were computed using the BMP Sizing Spreadsheet (V3.0) to create compliance for water quality treatment and hydromodification compliance for this Priority Development Project.

The project proposes subdividing the parcel into four lots so they may be sold separately at a future date. There is one existing residence that will receive treatment from a new biofiltration basin. Treatment will not be provided for the existing private road as this was deemed infeasible due to site constraints. Three new pads will be created for future residences. Each pad will drain to a biofiltration basin on the south of each pad. Each proposed driveway will be designed to include a trench drain that will convey runoff to the biofiltration basin. Each of the basins will outlet in the historical drainage pattern, and eventually to the existing creek along the westerly border of the site. A setback of at least 50 feet from the creek to the development site will be implemented, as recommended in the BMP Design Manual Section 4.3.1.

The landscape will be self-mitigating and drain via sheet flow, then outlet to Linda Vista Drive,

Brow ditches will be used sparingly to prevent comingling of natural flows in the biofiltration basins.

A green roof was cost prohibitive when compared to the reduction in overall flow volume. Instead, nutrient sensitive media design (BF-2) will be used in the biofiltration boxes to provide sufficient nutrient removal for nitrogen and phosphorus in the Buena Vista Creek receiving water.

7.2.2 Structural BMP Summary Table (Complete for all proposed structural BMPs)

- List and provide the information requested below for all pollutant control and hydromodification management BMPs proposed for the project.
- For each BMP listed, complete the Structural BMP Checklist on the next page. Copy the Checklist as many times as needed.

			Structural BMP Type							
BMP ID #	**DMA #**	**DMA Area (ft^2)**	Harvest and Use	Infiltration	Unlined Biofiltration	Lined Biofiltration	Flow-thru treatment	Hydromodification Management [1]	Other	**Permit # and Sheet #**
PCBMP #1	1	14,334 ft^2	☐	☐	☐	☒	☐	☐	☐	PDS2020-TPM-21278, PDS2020-ER-02-002, Sheet 1
PCBMP #2	2	8,651ft^2	☐	☐	☐	☒	☐	☐	☐	Same as above.
PCBMP #3	3	7,766 ft^2	☐	☐	☐	☒	☐	☐	☐	Same as above.
PCBMP #4	4	7,393 ft^2	☐	☐	☐	☒	☐	☐	☐	Same as above.
PCBMP #5	5	6,554 ft^2	☐	☐	☐	☒	☐	☐	☐	Same as above.
PCBMP #6	6	9,951 ft^2	☐	☐	☐	☒	☐	☐	☐	Same as above.
PCBMP #7	7	6,511 sf	☐	☐	☐	☒	☐	☐	☐	Same as above.
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	
			☐	☐	☐	☐	☐	☐	☐	

Copy and Paste table here for additional BMPs

[1] Hydromodification Management BMPs must be accompanied by BMPs that provide pollutant control.

7.3 Structural BMP Checklist (Complete once for each proposed structural BMP)

Structural BMP ID #	PCBMP #1	**Permit # and Sheet #**	PDS2020-TPM-21278, PDS2020-ER-02-002, Sheet 1

BMP Type

Infiltration

☐ Infiltration basin (INF-1)
☐ Bioretention (INF-2)
☐ Permeable pavement (INF-3)

Unlined Biofiltration

☐ Biofiltration with partial retention (PR-1)

Lined Biofiltration

☒ Biofiltration (BF-1)
☒ Nutrient Sensitive Media Design (BF-2)
☐ Proprietary Biofiltration (BF-3)

Harvest and Use

☐ Cistern (HU-1)

Flow-thru Treatment (describe below)

☐ With prior lawful approval to meet earlier PDP requirements
☐ Pre-treatment/forebay for an onsite retention or biofiltration BMP[2]
☐ With alternative compliance

Hydromodification Management[3]

☐ Detention pond or vault

☐ **Other** (describe below)

BMP Purpose

☐ Pollutant control only
☐ Hydromodification control only
☒ Combined pollutant control and hydromodification
☐ Pre-treatment/forebay for another BMP
☐ Other (describe below)

BMP Verification (See BMPDM Section 8.3)

Provide name and contact information for the party responsible to sign BMP verification forms	Kristin L. Greene, P.E. P.O. Box 143 Bonsall, CA 92003 (760) 310-9408

BMP Ownership and Maintenance (See BMPDM Section 7.3 and Attachment 11)

BMP Maintenance Category	Cat. 1 ☒	Cat. 2 ☐	Cat. 3 ☐	Cat. 4 ☐
Final owner of BMP	☐ HOA	☒ Property Owner	☐ County	☐ Other (describe):
Maintenance of BMP into perpetuity	☐ HOA	☒ Property Owner	☐ County	☐ Other (describe):

Discussion (As needed; Continue on subsequent pages as necessary)

[2] Indicate which onsite retention or biofiltration BMP the pre-treatment/forebay serves.
[3] Hydromodification Management BMPs must be accompanied by BMPs that provide pollutant control.

Structural BMP ID #	PCBMP #2	**Permit # and Sheet #**	PDS2020-TPM-21278, PDS2020-ER-02-002, Sheet 1

BMP Type

Infiltration

☐ Infiltration basin (INF-1)
☐ Bioretention (INF-2)
☐ Permeable pavement (INF-3)

Unlined Biofiltration

☐ Biofiltration with partial retention (PR-1)

Lined Biofiltration

☒ Biofiltration (BF-1)
☒ Nutrient Sensitive Media Design (BF-2)
☐ Proprietary Biofiltration (BF-3)

Harvest and Use

☐ Cistern (HU-1)

Flow-thru Treatment (describe below)

☐ With prior lawful approval to meet earlier PDP requirements
☐ Pre-treatment/forebay for an onsite retention or biofiltration BMP[2]
☐ With alternative compliance

Hydromodification Management[3]

☐ Detention pond or vault

☐ **Other** (describe below)

BMP Purpose

☐ Pollutant control only
☐ Hydromodification control only
☒ Combined pollutant control and hydromodification
☐ Pre-treatment/forebay for another BMP
☐ Other (describe below)

BMP Verification (See BMPDM Section 8.3)

Provide name and contact information for the party responsible to sign BMP verification forms	Kristin L. Greene, P.E. P.O. Box 143 Bonsall, CA 92003 (760) 310-9408

BMP Ownership and Maintenance (See BMPDM Section 7.3 and Attachment 11)

BMP Maintenance Category	Cat. 1 ☒	Cat. 2 ☐	Cat. 3 ☐	Cat. 4 ☐
Final owner of BMP	☐ HOA	☒ Property Owner	☐ County	☐ Other (describe):
Maintenance of BMP into perpetuity	☐ HOA	☒ Property Owner	☐ County	☐ Other (describe):

Discussion (As needed; Continue on subsequent pages as necessary)

[2] Indicate which onsite retention or biofiltration BMP the pre-treatment/forebay serves.
[3] Hydromodification Management BMPs must be accompanied by BMPs that provide pollutant control.

Structural BMP ID #	PCBMP #3	**Permit # and Sheet #**	PDS2020-TPM-21278, PDS2020-ER-02-002, Sheet 1

BMP Type

Infiltration
- ☐ Infiltration basin (INF-1)
- ☐ Bioretention (INF-2)
- ☐ Permeable pavement (INF-3)

Unlined Biofiltration
- ☐ Biofiltration with partial retention (PR-1)

Lined Biofiltration
- ☒ Biofiltration (BF-1)
- ☒ Nutrient Sensitive Media Design (BF-2)
- ☐ Proprietary Biofiltration (BF-3)

Harvest and Use
- ☐ Cistern (HU-1)

Flow-thru Treatment (describe below)
- ☐ With prior lawful approval to meet earlier PDP requirements
- ☐ Pre-treatment/forebay for an onsite retention or biofiltration BMP[2]
- ☐ With alternative compliance

Hydromodification Management[3]
- ☐ Detention pond or vault
- ☐ **Other** (describe below)

BMP Purpose
- ☐ Pollutant control only
- ☐ Hydromodification control only
- ☒ Combined pollutant control and hydromodification
- ☐ Pre-treatment/forebay for another BMP
- ☐ Other (describe below)

BMP Verification (See BMPDM Section 8.3)

Provide name and contact information for the party responsible to sign BMP verification forms	Kristin L. Greene, P.E. P.O. Box 143 Bonsall, CA 92003 (760) 310-9408

BMP Ownership and Maintenance (See BMPDM Section 7.3 and Attachment 11)

BMP Maintenance Category	Cat. 1 ☒	Cat. 2 ☐	Cat. 3 ☐	Cat. 4 ☐
Final owner of BMP	☐ HOA	☒ Property Owner	☐ County	☐ Other (describe):
Maintenance of BMP into perpetuity	☐ HOA	☒ Property Owner	☐ County	☐ Other (describe):

Discussion (As needed; Continue on subsequent pages as necessary)

[2] Indicate which onsite retention or biofiltration BMP the pre-treatment/forebay serves.
[3] Hydromodification Management BMPs must be accompanied by BMPs that provide pollutant control.

Structural BMP ID #	PCBMP #4	**Permit # and Sheet #**	PDS2020-TPM-21278, PDS2020-ER-02-002, Sheet 1

BMP Type

Infiltration

☐ Infiltration basin (INF-1)
☐ Bioretention (INF-2)
☐ Permeable pavement (INF-3)

Unlined Biofiltration

☐ Biofiltration with partial retention (PR-1)

Lined Biofiltration

☒ Biofiltration (BF-1)
☒ Nutrient Sensitive Media Design (BF-2)
☐ Proprietary Biofiltration (BF-3)

Harvest and Use

☐ Cistern (HU-1)

Flow-thru Treatment (describe below)

☐ With prior lawful approval to meet earlier PDP requirements
☐ Pre-treatment/forebay for an onsite retention or biofiltration BMP[2]
☐ With alternative compliance

Hydromodification Management[3]

☐ Detention pond or vault

☐ **Other** (describe below)

BMP Purpose

☐ Pollutant control only
☐ Hydromodification control only
☒ Combined pollutant control and hydromodification
☐ Pre-treatment/forebay for another BMP
☐ Other (describe below)

BMP Verification (See BMPDM Section 8.3)

Provide name and contact information for the party responsible to sign BMP verification forms	Kristin L. Greene, P.E. P.O. Box 143 Bonsall, CA 92003 (760) 310-9408

BMP Ownership and Maintenance (See BMPDM Section 7.3 and Attachment 11)

BMP Maintenance Category	Cat. 1	Cat. 2	Cat. 3	Cat. 4
	☒	☐	☐	☐

Final owner of BMP	☐ HOA	☒ Property Owner	☐ County
	☐ Other (describe):		
Maintenance of BMP into perpetuity	☐ HOA	☒ Property Owner	☐ County
	☐ Other (describe):		

Discussion (As needed; Continue on subsequent pages as necessary)

[2] Indicate which onsite retention or biofiltration BMP the pre-treatment/forebay serves.
[3] Hydromodification Management BMPs must be accompanied by BMPs that provide pollutant control.

Structural BMP ID #	PCBMP #5	**Permit # and Sheet #**	PDS2020-TPM-21278, PDS2020-ER-02-002, Sheet 1

BMP Type

Infiltration

☐ Infiltration basin (INF-1)
☐ Bioretention (INF-2)
☐ Permeable pavement (INF-3)

Unlined Biofiltration

☐ Biofiltration with partial retention (PR-1)

Lined Biofiltration

☒ Biofiltration (BF-1)
☒ Nutrient Sensitive Media Design (BF-2)
☐ Proprietary Biofiltration (BF-3)

Harvest and Use

☐ Cistern (HU-1)

Flow-thru Treatment (describe below)

☐ With prior lawful approval to meet earlier PDP requirements
☐ Pre-treatment/forebay for an onsite retention or biofiltration BMP[2]
☐ With alternative compliance

Hydromodification Management[3]

☐ Detention pond or vault

☐ **Other** (describe below)

BMP Purpose

☐ Pollutant control only
☐ Hydromodification control only
☒ Combined pollutant control and hydromodification
☐ Pre-treatment/forebay for another BMP
☐ Other (describe below)

BMP Verification (See BMPDM Section 8.3)

Provide name and contact information for the party responsible to sign BMP verification forms	Kristin L. Greene, P.E. P.O. Box 143 Bonsall, CA 92003 (760) 310-9408

BMP Ownership and Maintenance (See BMPDM Section 7.3 and Attachment 11)

BMP Maintenance Category	Cat. 1	Cat. 2	Cat. 3	Cat. 4
	☒	☐	☐	☐

Final owner of BMP	☐ HOA	☒ Property Owner	☐ County
	☐ Other (describe):		
Maintenance of BMP into perpetuity	☐ HOA	☒ Property Owner	☐ County
	☐ Other (describe):		

Discussion (As needed; Continue on subsequent pages as necessary)

[2] Indicate which onsite retention or biofiltration BMP the pre-treatment/forebay serves.
[3] Hydromodification Management BMPs must be accompanied by BMPs that provide pollutant control.

Structural BMP ID #	PCBMP #6	**Permit # and Sheet #**	PDS2020-TPM-21278, PDS2020-ER-02-002, Sheet 1

BMP Type

Infiltration

- ☐ Infiltration basin (INF-1)
- ☐ Bioretention (INF-2)
- ☐ Permeable pavement (INF-3)

Unlined Biofiltration

- ☐ Biofiltration with partial retention (PR-1)

Lined Biofiltration

- ☒ Biofiltration (BF-1)
- ☒ Nutrient Sensitive Media Design (BF-2)
- ☐ Proprietary Biofiltration (BF-3)

Harvest and Use

- ☐ Cistern (HU-1)

Flow-thru Treatment (describe below)

- ☐ With prior lawful approval to meet earlier PDP requirements
- ☐ Pre-treatment/forebay for an onsite retention or biofiltration BMP[2]
- ☐ With alternative compliance

Hydromodification Management[3]

- ☐ Detention pond or vault
- ☐ **Other** (describe below)

BMP Purpose

- ☐ Pollutant control only
- ☐ Hydromodification control only
- ☒ Combined pollutant control and hydromodification
- ☐ Pre-treatment/forebay for another BMP
- ☐ Other (describe below)

BMP Verification (See BMPDM Section 8.3)

Provide name and contact information for the party responsible to sign BMP verification forms	Kristin L. Greene, P.E. P.O. Box 143 Bonsall, CA 92003 (760) 310-9408

BMP Ownership and Maintenance (See BMPDM Section 7.3 and Attachment 11)

BMP Maintenance Category	Cat. 1 ☒	Cat. 2 ☐	Cat. 3 ☐	Cat. 4 ☐
Final owner of BMP	☐ HOA	☒ Property Owner	☐ County	☐ Other (describe):
Maintenance of BMP into perpetuity	☐ HOA	☒ Property Owner	☐ County	☐ Other (describe):

Discussion (As needed; Continue on subsequent pages as necessary)

[2] Indicate which onsite retention or biofiltration BMP the pre-treatment/forebay serves.
[3] Hydromodification Management BMPs must be accompanied by BMPs that provide pollutant control.

7.4 Storm Water Pollutant Control Worksheet Calculations

- Use this page as a cover sheet for the submittal of any required worksheets below.
- Complete the checklist to identify which BMPDM Appendix B (Storm Water Pollutant Control Hydrologic Calculations and Sizing Methods) worksheets are included with this attachment.
- See BMPDM Appendix B for an explanation of the applicability of individual worksheets and detailed guidance on their completion.

Worksheet	Requirement
☒ Worksheet B.1 Calculation of Design Capture Volume (DCV)	Required
☒ Worksheet B.2 Retention Requirements	Required
☒ Worksheet B.3 BMP Performance	Required
☐ Worksheet B.4 Major Maintenance Intervals for Reduced-sized BMPs	If applicable
☐ Other worksheets	As required

Automated Worksheet B.1: Calculation of Design Capture Volume (V2.0)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	*vii*	*viii*	*ix*	*x*	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	PCBMP 1	PCBMP 2	PCBMP 3	PCBMP 4	PCBMP 5	PCBMP 6	PCBMP 7				unitless
	2	85th Percentile 24-hr Storm Depth	0.85	0.85	0.85	0.85	0.85	0.85	0.85				inches
	3	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	2,977	8,651	2,977	7,393	2,882	9,951	6,511				sq-ft
	4	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)											sq-ft
	5	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)											sq-ft
	6	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)											sq-ft
	7	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)											sq-ft
	8	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)											sq-ft
	9	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)	11,357	0	4,789	0	3,672	0	0				sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	No	No	No	No	No	No	No	No	No	No	yes/no
	11	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)											sq-ft
	12	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)											sq-ft
	13	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)											sq-ft
	14	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)											sq-ft
	15	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)											sq-ft
	16	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)											sq-ft
	17	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)											sq-ft
	18	Number of Tree Wells Proposed per SD-A											#
	19	Average Mature Tree Canopy Diameter											ft
	20	Number of Rain Barrels Proposed per SD-E											#
	21	Average Rain Barrel Size											gal
Initial Runoff Factor Calculation	22	Total Tributary Area	14,334	8,651	7,766	7,393	6,554	9,951	6,511	0	0	0	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.42	0.90	0.53	0.90	0.56	0.90	0.90	0.00	0.00	0.00	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	25	Initial Weighted Runoff Factor	0.42	0.90	0.53	0.90	0.56	0.90	0.90	0.00	0.00	0.00	unitless
	26	Initial Design Capture Volume	426	552	292	471	260	634	415	0	0	0	cubic-feet
Dispersion Area Adjustments	27	Total Impervious Area Dispersed to Pervious Surface	0	0	0	0	0	0	0	0	0	0	sq-ft
	28	Total Pervious Dispersion Area	0	0	0	0	0	0	0	0	0	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	n/a	n/a	n/a	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	1.00	1.00	1.00	1.00	ratio
	31	Runoff Factor After Dispersion Techniques	0.42	0.90	0.53	0.90	0.56	0.90	0.90	n/a	n/a	n/a	unitless
	32	Design Capture Volume After Dispersion Techniques	426	552	292	471	260	634	415	0	0	0	cubic-feet
Tree & Barrel Adjustments	33	Total Tree Well Volume Reduction	0	0	0	0	0	0	0	0	0	0	cubic-feet
	34	Total Rain Barrel Volume Reduction	0	0	0	0	0	0	0	0	0	0	cubic-feet
Results	35	Final Adjusted Runoff Factor	0.42	0.90	0.53	0.90	0.56	0.90	0.90	0.00	0.00	0.00	unitless
	36	Final Effective Tributary Area	6,020	7,786	4,116	6,654	3,670	8,956	5,860	0	0	0	sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements	0	0	0	0	0	0	0	0	0	0	cubic-feet
	38	Final Design Capture Volume Tributary to BMP	426	552	292	471	260	634	415	0	0	0	cubic-feet

No Warning Messages

Automated Worksheet B.2: Retention Requirements (V2.0)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	*vii*	*viii*	*ix*	*x*	Units
Basic Analysis	1	Drainage Basin ID or Name	PCBMP 1	PCBMP 2	PCBMP 3	PCBMP 4	PCBMP 5	PCBMP 6	PCBMP 7	-	-	-	unitless
	2	85th Percentile Rainfall Depth	0.85	0.85	0.85	0.85	0.85	0.85	0.85	-	-	-	inches
	3	Predominant NRCS Soil Type Within BMP Location	D	D	D	D	D	D	D				unitless
	4	Is proposed BMP location Restricted or Unrestricted for Infiltration Activities?	Restricted	Restricted	Restricted	Restricted	Restricted	Restricted	Restricted				unitless
	5	Nature of Restriction	Soil Type	Soil Type	Soil Type	Soil Type	Soil Type	Soil Type	Soil Type				unitless
	6	Do Minimum Retention Requirements Apply to this Project?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	yes/no
	7	Are Habitable Structures Greater than 9 Stories Proposed?	No	No	No	No	No	No	No				yes/no
Advanced Analysis	8	Has Geotechnical Engineer Performed an Infiltration Analysis?	No	No	No	No	No	No	No				yes/no
	9	Design Infiltration Rate Recommended by Geotechnical Engineer	~~0.000~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.000~~	~~0.000~~					in/hr
Result	10	Design Infiltration Rate Used To Determine Retention Requirements	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	in/hr
	11	Percent of Average Annual Runoff that Must be Retained within DMA	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	-	-	-	percentage
	12	Fraction of DCV Requiring Retention	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-	-	ratio
	13	Required Retention Volume	4	6	3	5	3	6	4	-	-	-	cubic-feet

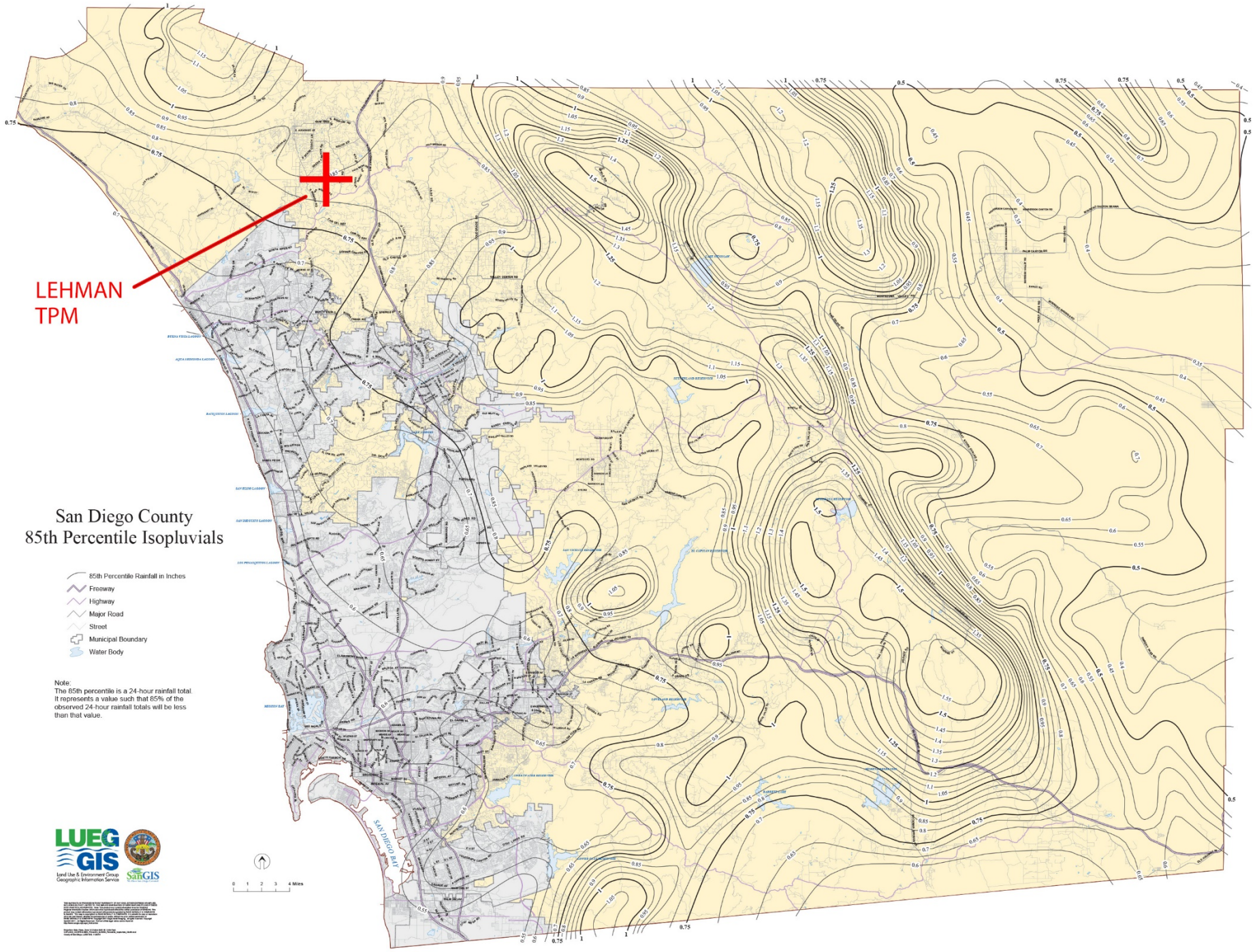
No Warning Messages

Automated Worksheet B.3: BMP Performance (V2.0)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	*vii*	*viii*	*ix*	*x*	Units
BMP Inputs	1	Drainage Basin ID or Name	PCBMP 1	PCBMP 2	PCBMP 3	PCBMP 4	PCBMP 5	PCBMP 6	PCBMP 7	-	-	-	sq-ft
	2	Design Infiltration Rate Recommended	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	in/hr
	3	Design Capture Volume Tributary to BMP	426	552	292	471	260	634	415	-	-	-	cubic-feet
	4	Is BMP Vegetated or Unvegetated?	Vegetated	Vegetated	Vegetated	Vegetated	Vegetated	Vegetated	Vegetated				unitless
	5	Is BMP Impermeably Lined or Unlined?	Lined	Lined	Lined	Lined	Lined	Lined	Lined				unitless
	6	Does BMP Have an Underdrain?	Underdrain	Underdrain	Underdrain	Underdrain	Underdrain	Underdrain	Underdrain				unitless
	7	Does BMP Utilize Standard or Specialized Media?	Specialized	Specialized	Specialized	Specialized	Specialized	Specialized	Specialized				unitless
	8	Provided Surface Area	288	606	272	522	253	697	456				sq-ft
	9	Provided Surface Ponding Depth	12	12	12	12	12	12	12				inches
	10	Provided Soil Media Thickness	18	18	18	18	18	18	18				inches
	11	Provided Gravel Thickness (Total Thickness)	18	18	18	18	18	18	18				inches
	12	Underdrain Offset	3	3	3	3	3	3	3				inches
	13	Diameter of Underdrain or Hydromod Orifice (Select Smallest)	0.59	0.46	0.43	0.42	0.40	0.49	0.39				inches
	14	Specialized Soil Media Filtration Rate											in/hr
	15	Specialized Soil Media Pore Space for Retention											unitless
	16	Specialized Soil Media Pore Space for Biofiltration											unitless
	17	Specialized Gravel Media Pore Space											unitless
Retention Calculations	18	Volume Infiltrated Over 6 Hour Storm	0	0	0	0	0	0	0	0	0	0	cubic-feet
	19	Ponding Pore Space Available for Retention	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	unitless
	20	Soil Media Pore Space Available for Retention	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	unitless
	21	Gravel Pore Space Available for Retention (Above Underdrain)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.40	unitless
	22	Gravel Pore Space Available for Retention (Below Underdrain)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	unitless
	23	Effective Retention Depth	2.10	2.10	2.10	2.10	2.10	2.10	2.10	0.00	0.00	0.00	inches
	24	Fraction of DCV Retained (Independent of Drawdown Time)	0.12	0.19	0.16	0.19	0.17	0.19	0.19	0.00	0.00	0.00	ratio
	25	Calculated Retention Storage Drawdown Time	120	120	120	120	120	120	120	0	0	0	hours
	26	Efficacy of Retention Processes	0.14	0.21	0.18	0.21	0.19	0.21	0.21	0.00	0.00	0.00	ratio
	27	Volume Retained by BMP (Considering Drawdown Time)	60	116	53	99	50	134	88	0	0	0	cubic-feet
	28	Design Capture Volume Remaining for Biofiltration	366	436	239	372	210	500	327	0	0	0	cubic-feet
Biofiltration Calculations	29	Max Hydromod Flow Rate through Underdrain	0.0176	0.0107	0.0094	0.0089	0.0081	0.0122	0.0077	0.0000	0.0000	0.0000	cfs
	30	Max Soil Filtration Rate Allowed by Underdrain Orifice	2.65	0.77	1.49	0.74	1.39	0.75	0.73	0.00	0.00	0.00	in/hr
	31	Soil Media Filtration Rate per Specifications	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	in/hr
	32	Soil Media Filtration Rate to be used for Sizing	2.65	0.77	1.49	0.74	1.39	0.75	0.73	0.00	0.00	0.00	in/hr
	33	Depth Biofiltered Over 6 Hour Storm	15.88	4.59	8.94	4.44	8.32	4.53	4.39	0.00	0.00	0.00	inches
	34	Ponding Pore Space Available for Biofiltration	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	unitless
	35	Soil Media Pore Space Available for Biofiltration	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	unitless
	36	Gravel Pore Space Available for Biofiltration (Above Underdrain)	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	unitless
	37	Effective Depth of Biofiltration Storage	21.60	21.60	21.60	21.60	21.60	21.60	21.60	0.00	0.00	0.00	inches
	38	Drawdown Time for Surface Ponding	5	16	8	16	9	16	16	0	0	0	hours
	39	Drawdown Time for Effective Biofiltration Depth	8	28	14	29	16	29	30	0	0	0	hours
	40	Total Depth Biofiltered	37.48	26.19	30.54	26.04	29.92	26.13	25.99	0.00	0.00	0.00	inches
	41	Option 1 - Biofilter 1.50 DCV: Target Volume	549	653	359	557	316	750	491	0	0	0	cubic-feet
	42	Option 1 - Provided Biofiltration Volume	549	653	359	557	316	750	491	0	0	0	cubic-feet
	43	Option 2 - Store 0.75 DCV: Target Volume	274	327	179	279	158	375	246	0	0	0	cubic-feet
	44	Option 2 - Provided Storage Volume	274	327	179	279	158	375	246	0	0	0	cubic-feet
	45	Portion of Biofiltration Performance Standard Satisfied	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	ratio
Result	46	Do Site Design Elements and BMPs Satisfy Annual Retention Requirements?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	yes/no
	47	Overall Portion of Performance Standard Satisfied (BMP Efficacy Factor)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	ratio
	48	**Deficit of Effectively Treated Stormwater**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**n/a**	**n/a**	**n/a**	cubic-feet

Attention!

-Use of specialized or proprietary media requires submittal of supplemental information outlined in Appendix F of the BMPDM.


LEHMAN
TPM
San Diego County
85th Percentile Isopluvials
85th Percentile Rainfall in Inches
Freeway
Highway
Major Road
Street
Municipal Boundary
Water Body
Note:
The 85th percentile is a 24-hour rainfall total. It represents a value such that 85% of the observed 24-hour rainfall totals will be less than that value.
LUEG GIS
Land Use & Environment Group Geographic Information Service
SanGIS
SAN DIEGO BAY
0 1 2 3 4 Miles

7.5 Identification and Narrative of Receiving Water and Pollutants of Concern

- Complete this sub-attachment *only if flow-thru treatment BMPs are implemented onsite* in lieu of retention or biofiltration BMPs. Unless excepted because of a Prior Lawful Approval[4], PDPs must also participate in an alternative compliance program[5].

A. General Description

Describe flow path of storm water from the project site discharge location(s), through urban storm conveyance systems as applicable, to receiving creeks, rivers, and lagoons as applicable, and ultimate discharge to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable).

B. Water Body Impairments and Priorities

List any 303(d) impaired water bodies[6] within the path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs and/or Highest Priority Pollutants from the WQIP for the impaired water bodies:

303(d) Impaired Water Body	Pollutant(s)/Stressor(s)	TMDLs / WQIP Highest Priority Pollutant

C. Identification of Project Site Pollutants

Identify pollutants expected from the project site based on all proposed use(s) of the site (see BMP Design Manual Appendix B.6.

Pollutant	Not Applicable to the Project Site	Anticipated from the Project Site	Also a Receiving Water Pollutant of Concern
Sediment	☐	☐	☐
Nutrients	☐	☐	☐
Heavy Metals	☐	☐	☐
Organic Compounds	☐	☐	☐
Trash & Debris	☐	☐	☐
Oxygen Demanding Substances	☐	☐	☐
Oil & Grease	☐	☐	☐
Bacteria & Viruses	☐	☐	☐
Pesticides	☐	☐	☐

[4] See BMPDM Appendix L: Prior Lawful Approval Requirements and Guidance.
[5] See SWQMP Attachment 12 (Alternative Compliance Projects) and BMPDM Appendix J (Offsite Alternative Compliance Requirements and Guidance).
[6] The current list of Section 303(d) impaired water bodies can be found at:
https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

8.0 General Requirements

- Completion of this attachment is required for all PDPs subject to hydromodification management requirements (see PDP SWQMP Form Table 5). Do not submit this attachment if exempt from Hydromodification Management requirements. Document the PDP exemption in Attachment 9.
- Submit this cover page and all required Sub-attachments for all structural hydromodification management BMPs proposed for the project.
- Constructed features must fully satisfy the requirements described in applicable BMPDM sections and appendices, 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.
- Structural BMP Certification. All structural hydromodification management BMPs documented this attachment must be certified by a registered engineer in Attachment 7, Sub-attachment 7.1.
- Structural BMP Verification. BMP installation must be verified by the County at the completion of construction. Applicants must complete an Installation Verification Form (Attachment 10).

Sub-attachments (check all that are completed)
☒ **8.1: Flow Control Facility Design** (required)[1] Submit using ☐ the Sub-attachment 8.1 cover sheet provided, or ☒ as a separate stand-alone document labeled Sub-attachment 8.1.
☒ **8.2: Hydromodification Management Points of Compliance** (required) Complete the table provided in Sub-attachment 8.2.
8.3: Geomorphic Assessment of Receiving Channels 1. Has a geomorphic assessment been performed for the receiving channel(s)? ☐ No, the low flow threshold is 0.1Q2 (default low flow threshold)
☐ Yes (provide the information below): Low flow threshold: ☐ 0.1Q2 ☐ 0.3Q2 ☐ 0.5Q2
Title: Date: Preparer:
Submit using ☐ the Sub-attachment 8.3 cover sheet provided, or ☐ as a separate stand-alone document labeled Sub-attachment 8.3.
8.4: Vector Control Plan (required if BMPs will not drain in less than 96 hours) ☐ Included with this attachment ☐ Not required

[1] Including Structural BMP Drawdown Calculations and Overflow Design Summary. See BMPDM Chapter 6 and Appendix G for additional design guidance.

8.1 Flow Control Facility Design

Insert Flow Control Facility Design behind this cover page or submit as a separate stand-alone document labeled Sub-attachment 8.1.

Submitted on the following page, sub-attachment 8.1.

BMP Sizing Spreadsheet V3.0

Project Name:	LEHMAN TPM
Project Applicant:	Tad Lehman
Jurisdiction:	County of San Diego
Parcel (APN):	123-261-14
Hydrologic Unit:	San Luis Rey
Rain Gauge:	Oceanside
Total Project Area (sf):	295,000
Channel Susceptibility:	High

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name:	PCBMP #1	BMP Type:	Biofiltration
BMP Native Soil Type:	N/A - Impervious Liner	BMP Infiltration Rate (in/hr):	N/A

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1)[1]	Surface Area	Surface Area (SF)
1-A	2,977	D	Moderate	Roofs	1.0	0.07	208
1-B	11,357	D	Moderate	Landscape	0.1	0.07	79
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	14,334					Minimum BMP Size	288
						Proposed BMP Size*	288

Surface Ponding Depth	12.00	in
Bioretention Soil Media Depth	18.00	in
Filter Coarse	6.00	in
Gravel Storage Layer Depth	12	in
Underdrain Offset	3.0	in

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual,

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

BMP's must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head.
Designated Staff have final review and approval authority over the project design.

This BMP Sizing Spreadsheet has been updated in conformance with the San Diego Region Model BMP Design Manual, April 2018. For questions or concerns please contact the jurisdiction in which your project is located.

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name	PCBMP #1	BMP Type:	Biofiltration

DMA Name	Rain Gauge	Pre-developed Condition		Unit Runoff Ratio (cfs/ac)	DMA Area (ac)	Orifice Flow - $\%Q_2$ (cfs)	Orifice Area (in^2)
		Soil Type	Slope				
1-A	Oceanside	D	Moderate	0.575	0.068	0.004	**0.06**
1-B	Oceanside	D	Moderate	0.575	0.261	0.015	**0.21**

3.75	**0.019**	**0.27**	**0.59**
Max Orifice Head (feet)	**Max Tot. Allowable Orifice Flow (cfs)**	**Max Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.018	**0.019**	**0.27**	**0.590**
Average outflow during surface drawdown (cfs)	Max Orifice Outflow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	4.5

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name:	PCBMP #2	BMP Type:	Biofiltration
BMP Native Soil Type:	N/A - Impervious Liner	BMP Infiltration Rate (in/hr):	N/A

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1)[1]	Surface Area	Surface Area (SF)
DMA 2-A	5,338	D	Steep	Concrete	1.0	0.07	374
DMA 2-B	872	D	Steep	Concrete	1.0	0.07	61
DMA 2-C	252	D	Steep	Concrete	1.0	0.07	18
DMA 2-D	1,210	D	Steep	Concrete	1.0	0.07	85
DMA 2-E	979	D	Steep	Concrete	1.0	0.07	69
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	8,651					Minimum BMP Size	606
						Proposed BMP Size*	606

Surface Ponding Depth	12.00	in
Bioretention Soil Media Depth	18.00	in
Filter Coarse	6.00	in
Gravel Storage Layer Depth	12	in
Underdrain Offset	3.0	in

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual,

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

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BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name	PCBMP #2	BMP Type:	Biofiltration

DMA Name	Rain Gauge	Pre-developed Condition		Unit Runoff Ratio	DMA Area (ac)	Orifice Flow - $\%Q_2$	Orifice Area
		Soil Type	Slope	(cfs/ac)		(cfs)	(in^2)
DMA 2-A	Oceanside	D	Steep	0.576	0.123	0.007	**0.10**
DMA 2-B	Oceanside	D	Steep	0.576	0.020	0.001	**0.02**
DMA 2-C	Oceanside	D	Steep	0.576	0.006	0.000	**0.00**
DMA 2-D	Oceanside	D	Steep	0.576	0.028	0.002	**0.02**
DMA 2-E	Oceanside	D	Steep	0.576	0.022	0.001	**0.02**

3.75	**0.011**	**0.16**	**0.46**
Max Orifice Head (feet)	**Max Tot. Allowable Orifice Flow (cfs)**	**Max Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.011	**0.012**	**0.17**	**0.460**
Average outflow during surface drawdown (cfs)	Max Orifice Outflow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	15.5

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name:	PCBMP #3	BMP Type:	Biofiltration
BMP Native Soil Type:	N/A - Impervious Liner	BMP Infiltration Rate (in/hr):	N/A

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1)[1]	Surface Area	Surface Area (SF)
DMA 3-A	2,977	D	Steep	Roofs	1.0	0.07	208
DMA 3-B	4,789	D	Steep	Landscape	0.1	0.07	34
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	7,766					Minimum BMP Size	242
						Proposed BMP Size*	272

Surface Ponding Depth	12.00	in
Bioretention Soil Media Depth	18.00	in
Filter Coarse	6.00	in
Gravel Storage Layer Depth	12	in
Underdrain Offset	3.0	in

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual,

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BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name	PCBMP #3	BMP Type:	Biofiltration

DMA Name	Rain Gauge	Pre-developed Condition		Unit Runoff Ratio (cfs/ac)	DMA Area (ac)	Orifice Flow - $\%Q_2$ (cfs)	Orifice Area (in^2)
		Soil Type	Slope				
DMA 3-A	Oceanside	D	Steep	0.576	0.068	0.004	**0.06**
DMA 3-B	Oceanside	D	Steep	0.576	0.110	0.006	**0.09**

3.75	**0.010**	**0.15**	**0.43**
Max Orifice Head (feet)	**Max Tot. Allowable Orifice Flow (cfs)**	**Max Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.009	**0.010**	**0.15**	**0.430**
Average outflow during surface drawdown (cfs)	Max Orifice Outflow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	8.0

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name:	PCBMP #4	BMP Type:	Biofiltration
BMP Native Soil Type:	N/A - Impervious Liner	BMP Infiltration Rate (in/hr):	N/A

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1)[1]	Surface Area	Surface Area (SF)
DMA 4-A	7,393	D	Moderate	Concrete	1.0	0.07	518
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	7,393					Minimum BMP Size	518
						Proposed BMP Size*	522

Surface Ponding Depth	12.00	in
Bioretention Soil Media Depth	18.00	in
Filter Coarse	6.00	in
Gravel Storage Layer Depth	12	in
Underdrain Offset	3.0	in

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual,

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

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BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name	PCBMP #4	BMP Type:	Biofiltration

DMA Name	Rain Gauge	Pre-developed Condition		Unit Runoff Ratio (cfs/ac)	DMA Area (ac)	Orifice Flow - $\%Q_2$ (cfs)	Orifice Area (in^2)
		Soil Type	Slope				
DMA 4-A	Oceanside	D	Moderate	0.575	0.170	0.010	**0.14**

3.75	**0.010**	**0.14**	**0.42**
Max Orifice Head (feet)	**Max Tot. Allowable Orifice Flow (cfs)**	**Max Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.009	**0.010**	**0.14**	**0.420**
Average outflow during surface drawdown (cfs)	Max Orifice Outflow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	16.0

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name:	PCBMP #5	BMP Type:	Biofiltration
BMP Native Soil Type:	N/A - Impervious Liner	BMP Infiltration Rate (in/hr):	N/A

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1)[1]	Surface Area	Surface Area (SF)
5-A	2,882	D	Moderate	Roofs	1.0	0.07	202
5-B	3,672	D	Moderate	Landscape	0.1	0.07	26
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	6,554					Minimum BMP Size	227
						Proposed BMP Size*	253

Surface Ponding Depth	12.00	in
Bioretention Soil Media Depth	18.00	in
Filter Coarse	6.00	in
Gravel Storage Layer Depth	12	in
Underdrain Offset	3.0	in

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual,

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

BMP's must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head.
Designated Staff have final review and approval authority over the project design.

This BMP Sizing Spreadsheet has been updated in conformance with the San Diego Region Model BMP Design Manual, April 2018. For questions or concerns please contact the jurisdiction in which your project is located.

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name	PCBMP #5	BMP Type:	Biofiltration

DMA Name	Rain Gauge	Pre-developed Condition		Unit Runoff Ratio (cfs/ac)	DMA Area (ac)	Orifice Flow - $\%Q_2$ (cfs)	Orifice Area (in^2)
		Soil Type	Slope				
5-A	Oceanside	D	Moderate	0.575	0.066	0.004	**0.05**
5-B	Oceanside	D	Moderate	0.575	0.084	0.005	**0.07**

3.75	**0.009**	**0.12**	**0.40**
Max Orifice Head (feet)	**Max Tot. Allowable Orifice Flow (cfs)**	**Max Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.008	**0.009**	**0.13**	**0.400**
Average outflow during surface drawdown (cfs)	Max Orifice Outflow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	8.6

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name:	PCBMP #6	BMP Type:	Biofiltration
BMP Native Soil Type:	N/A - Impervious Liner	BMP Infiltration Rate (in/hr):	N/A

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1)[1]	Surface Area	Surface Area (SF)
6-A	9,951	D	Moderate	Concrete	1.0	0.07	697
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	9,951					Minimum BMP Size	697
						Proposed BMP Size*	697

Surface Ponding Depth	12.00	in
Bioretention Soil Media Depth	18.00	in
Filter Coarse	6.00	in
Gravel Storage Layer Depth	12	in
Underdrain Offset	3.0	in

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual,

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

BMP's must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head.
Designated Staff have final review and approval authority over the project design.

This BMP Sizing Spreadsheet has been updated in conformance with the San Diego Region Model BMP Design Manual, April 2018. For questions or concerns please contact the jurisdiction in which your project is located.

BMP Sizing Spreadsheet V3.0			
Project Name:	LEHMAN TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name	PCBMP #6	BMP Type:	Biofiltration

DMA Name	Rain Gauge	Pre-developed Condition		Unit Runoff Ratio (cfs/ac)	DMA Area (ac)	Orifice Flow - $\%Q_2$ (cfs)	Orifice Area (in^2)
		Soil Type	Slope				
6-A	Oceanside	D	Moderate	0.575	0.228	0.013	**0.19**

3.75	**0.013**	**0.19**	**0.49**
Max Orifice Head (feet)	**Max Tot. Allowable Orifice Flow (cfs)**	**Max Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.012	**0.013**	**0.19**	**0.490**
Average outflow during surface drawdown (cfs)	Max Orifice Outflow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	15.7

BMP Sizing Spreadsheet V3.0			
Project Name:	Lehman TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name:	PCBMP #7	BMP Type:	Biofiltration
BMP Native Soil Type:	N/A - Impervious Liner	BMP Infiltration Rate (in/hr):	N/A

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1)[1]	Surface Area	Surface Area (SF)
7-A	3,595	D	Moderate	Roofs	1.0	0.07	252
7-B	2,916	D	Moderate	Concrete	1.0	0.07	204
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	6,511					Minimum BMP Size	456
						Proposed BMP Size*	456

* Assumes standard configuration

Surface Ponding Depth	12.00	in
Bioretention Soil Media Depth	18.00	in
Filter Coarse	6.00	in
Gravel Storage Layer Depth	12	in
Underdrain Offset	3.0	in

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual,

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

BMP's must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head.
Designated Staff have final review and approval authority over the project design.

This BMP Sizing Spreadsheet has been updated in conformance with the San Diego Region Model BMP Design Manual, April 2018. For questions or concerns please contact the jurisdiction in which your project is located.

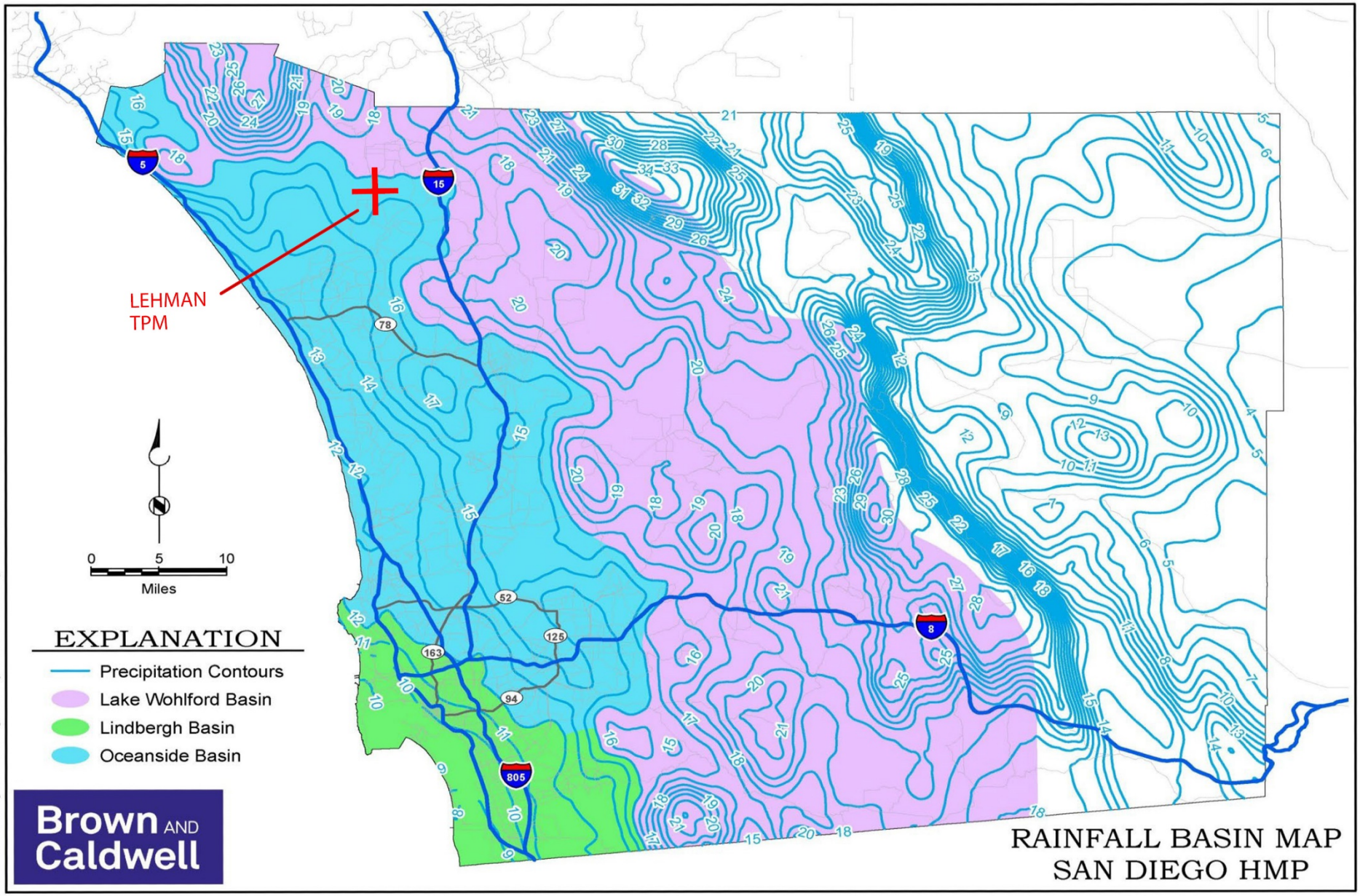
BMP Sizing Spreadsheet V3.0			
Project Name:	Lehman TPM	Hydrologic Unit:	San Luis Rey
Project Applicant:	Tad Lehman	Rain Gauge:	Oceanside
Jurisdiction:	County of San Diego	Total Project Area:	295,000
Parcel (APN):	123-261-14	Low Flow Threshold:	0.1Q2
BMP Name	PCBMP #7	BMP Type:	Biofiltration

DMA Name	Rain Gauge	Pre-developed Condition		Unit Runoff Ratio (cfs/ac)	DMA Area (ac)	Orifice Flow - $\%Q_2$ (cfs)	Orifice Area (in^2)
		Soil Type	Slope				
7-A	Oceanside	D	Moderate	0.575	0.083	0.005	**0.07**
7-B	Oceanside	D	Moderate	0.575	0.067	0.004	**0.05**

3.75	**0.009**	**0.12**	**0.39**
Max Orifice Head (feet)	**Max Tot. Allowable Orifice Flow (cfs)**	**Max Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.008	**0.008**	**0.12**	**0.390**
Average outflow during surface drawdown (cfs)	Max Orifice Outflow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	16.2


LEHMAN
TPM
0
5
10
Miles
EXPLANATION
Precipitation Contours
Lake Wohlford Basin
Lindbergh Basin
Oceanside Basin
Brown AND Caldwell
RAINFALL BASIN MAP
SAN DIEGO HMP
File Name: P:\Projects\San Diego County\139942 - HMP Implementation Assistance\GIS\HMF GIS\Basins.mxd

8.2 Hydromodification Management Points of Compliance

- List and describe all points of compliance (POCs) for flow control for hydromodification management.
- For each POC, provide a POC identification name or number, and a receiving channel identification name or number correlating to the project's HMP Exhibit (see Attachment 2).

POC name or #	Channel name or #	POC Description
POC #1	Unnamed	The point of compliance is at the outlet point of the property as the runoff enters the creek.

8.3 Geomorphic Assessment of Receiving Water Channels

Insert Geomorphic Assessment behind this cover page or submit as a separate stand-alone document labeled Sub-attachment 8.3.

Not applicable.

8.4 Vector Control Plan

Insert Vector Control Plan behind this cover page or submit as a separate stand-alone document labeled Sub-attachment 8.4.

Not applicable.

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.

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.

As part of the TPM CEQA review and RPO, a slope analysis has been performed. This slope analysis evaluated areas of steep slope. The slope analysis revealed the entire parcel is less than 24.5% slope.

Please see Sub-attachment 9.3, Slope Map.

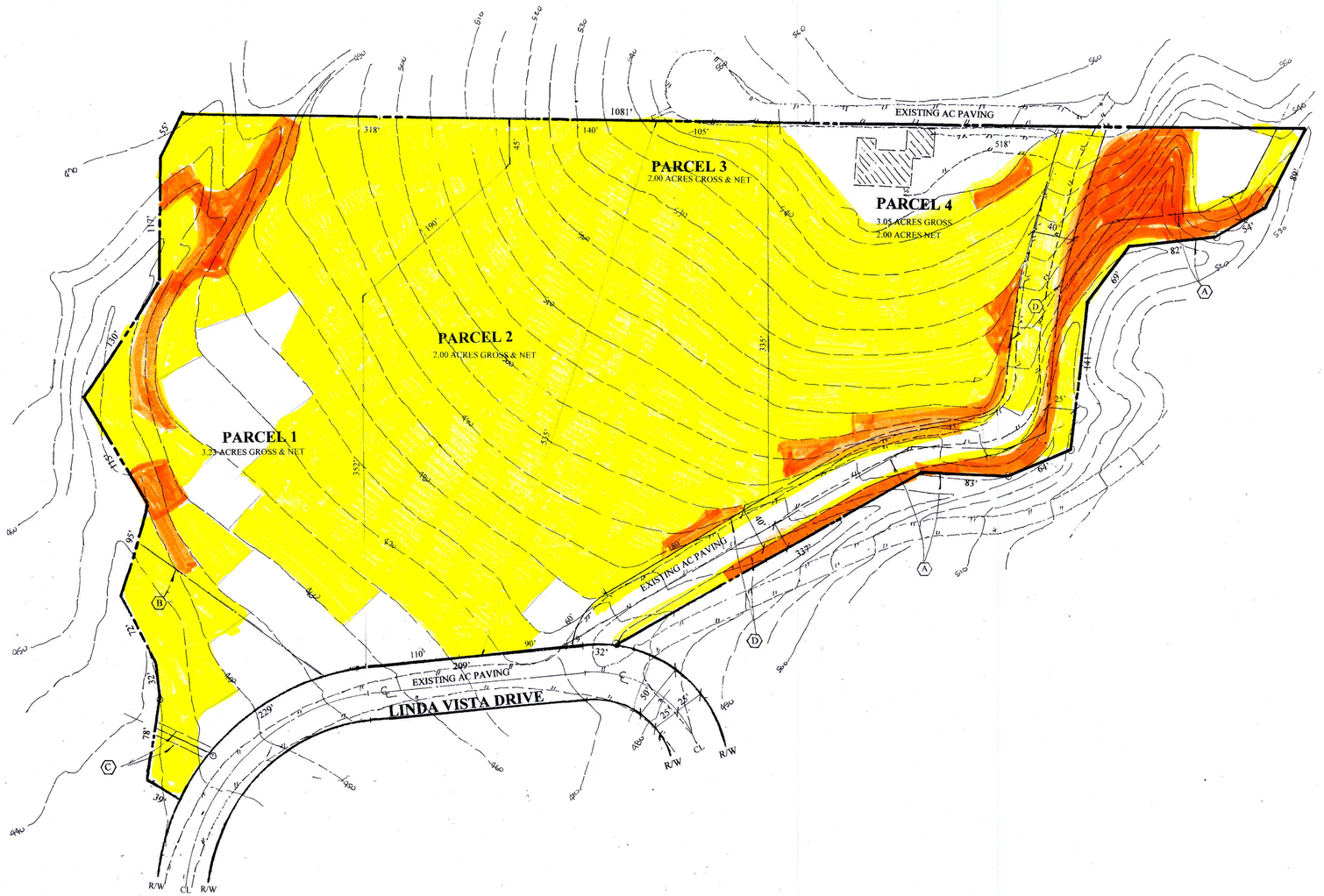
[5] RPO applicability is normally confirmed during discretionary review. Check with your project manager if you're not sure of your status.
[6] Does not include PDPs utilizing exemption(s) via RPO Section 86.604(e)(2)(cc) or 86.604(e)(3).
[7] This scenario does not impose requirements for onsite CCSYAs.

SLOPE MAP

TENTATIVE PARCEL MAP NO.

EASEMENTS:

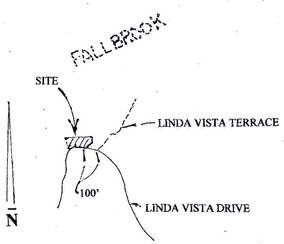
Ⓐ INDICATES EXISTING 25' PRIVATE ROAD EASEMENT PER DOC. REC. 11-18-1947 IN BOOK 2538, PAGE 396
Ⓑ INDICATES EXISTING UTILITY EASEMENT TO SDGE PER DOC. REC. 2-02-1949 IN BOOK 3101, PAGE 129 (NO WIDTH GIVEN)
Ⓒ INDICATES EXISTING 12' UTILITY EASEMENT TO SDGE PER DOC. REC. 7-15-1975 AS FILE NO. 75-182495
Ⓓ INDICATES EXISTING 40' PRIVATE TOAD & UTILITY EASEMENT PER DOC. REC. 9-06-1994 AS FILE. NO. 94-538736



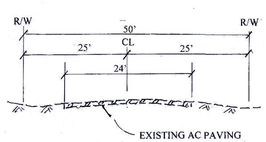
ENGINEER OF WORK:
PATRICK W. HARRISON, RCE
12090 CREST ROAD
POWAY, CA. 92064
858-679-8868
E-MAIL: HARRISONRCE@SBCGLOBAL.NET

PATRICK W. HARRISON, RCE 29241 — DATE 6/20/2019
MY CURRENT REGISTRATION EXPIRES 3-31-2021

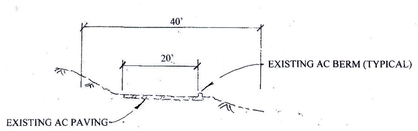
N
SCALE 1" = 60'



VICINITY MAP
NO SCALE



TYPICAL SECTION-LINDA VISTA DRIVE
NO SCALE



TYPICAL SECTION-40' WIDE UNNAMED PRIVATE ROAD EASEMENT
NO SCALE

LAND DIVISION STATEMENT OWNER'S CERTIFICATE

ZONING DIVISION

I hereby certify that I am the record owner, as shown on the latest equalized County assessment, of the property shown on the Tentative Parcel Map. All of my contiguous ownership within and beyond the boundaries of the Tentative Parcel Map are shown. The basis of creation of the lots in my ownership (e.g., Parcel Map, Final Map, Certificate of Compliance, Recorded Deed before 2/1/72) is indicated on the Tentative Parcel Map. I understand that property is considered as contiguous even if it is separated by roads, streets, utility easements or railroad right-of-way. "Freeway" as defined in Section 23.5 of the Streets and Highway Code, shall not be considered as roads or streets.

I further certify that I will not, by this application, create or cause to be created, or will not have participated in the creation of more than four parcels on contiguous property unless such contiguous parcels were created by major subdivision. For purposes of this certification, *the* term "participated" means having cooperated with or acted in a planning, coordinating or decision-making capacity in any formal or informal association or partnership for the purpose of dividing real property.

I certify under penalty of perjury that the foregoing is true and correct.

Executed this 6TH day of JUNE, 2019 at FALLBROOK, California.

ALL OWNERS MUST SIGN

	Signature	Signature
Name:	LEHMAN FAMILY TRUST DATED JULY 1,	Name:
Address:	1494 MEREDITH ROAD, FALLBROOK, CA. 92028	Address:
Phone:	760-525-7000	Phone:

1. Complete Tax Assessor's number is: 123-261-14
2. Abbreviated legal description of the land shown on the Tentative Parcel Map: PORTION OF LOT 26, MAP 2323
3. General Plan Regional Category: SEMI-RURAL RESIDENTIAL (SR-2)
4. Community/Subregional Plan Area: FALLBROOK
5. Land Use Designation(s): LIMITED AGRICULTURAL
6. Associated Permits: NONE
7. Location and status of existing legal access to subject property from a publicly maintained road *(i.e., recorded or unrecorded easement – identify and specify width)*: FRONTAGE ON PUBLIC ROAD (LINDA VISTA DRIVE)
8. Water source/Water District: RAINBOW MUNICIPAL WATER DISTRICT
9. Septic/Sewer District: INDIVIDUAL SEPTIC SYSTEMS
10. Fire District: NORTH COUNTY FIRE PROTECTION DISTRICT
11. School District(s): FALLBROOK UNION HIGH SCHOOL & FALLBROOK ELEMENTARY SCHOOL DISTRICT
12. Existing Zoning:

USE REGULATIONS		A70
ANIMAL REGULATIONS		L
DEVELOPMENT REGULATIONS	Density	0.50
	Lot Size	2 AC
	Building Type	C
	Maximum Floor Area	N/A
	Floor Area Ratio	N/A
	Height	G
	Lot Coverage	N/A
	Setback	C
	Open Space	N/A
SPECIAL AREA REGULATIONS		C

SLOPE TABLE

PARCEL 1 13 %
PARCEL 2 14 %
PARCEL 3 14 %
PARCEL 4 19 %

% OF SLOPE OVER 25% SLOPE IS: 5 %
AVERAGE SLOPOE OF PROPERTY IS: 15 %
AREA OVER 25% SLOPE IS: 0.53 ACRES
SLOPES OVER 25% SHOWN THUS:

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.

Not applicable**.**

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	Lehman TPM
Record ID (e.g. grading/improvement plan number, building permit)	PDS2020-TPM-21278, PDS2020-ER-02-002
Project Address	3600 Linda Vista Drive, Fallbrook, CA 92028
Assessor's Parcel Number(s) APN(s)	123-261-14
Project Watershed (complete Hydrologic Unit, Area, and Subarea Name with Numeric Identifier)	San Luis Rey WMA – Lower San Luis Rey River 903.12
B. Owner Information	
Name	Tad Lehman
Address	1494 Meredith Road, Fallbrook, CA 92028
Email Address	mirkwoodconstruction2@gmail.com
Phone Number	(760) 525-7000

****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

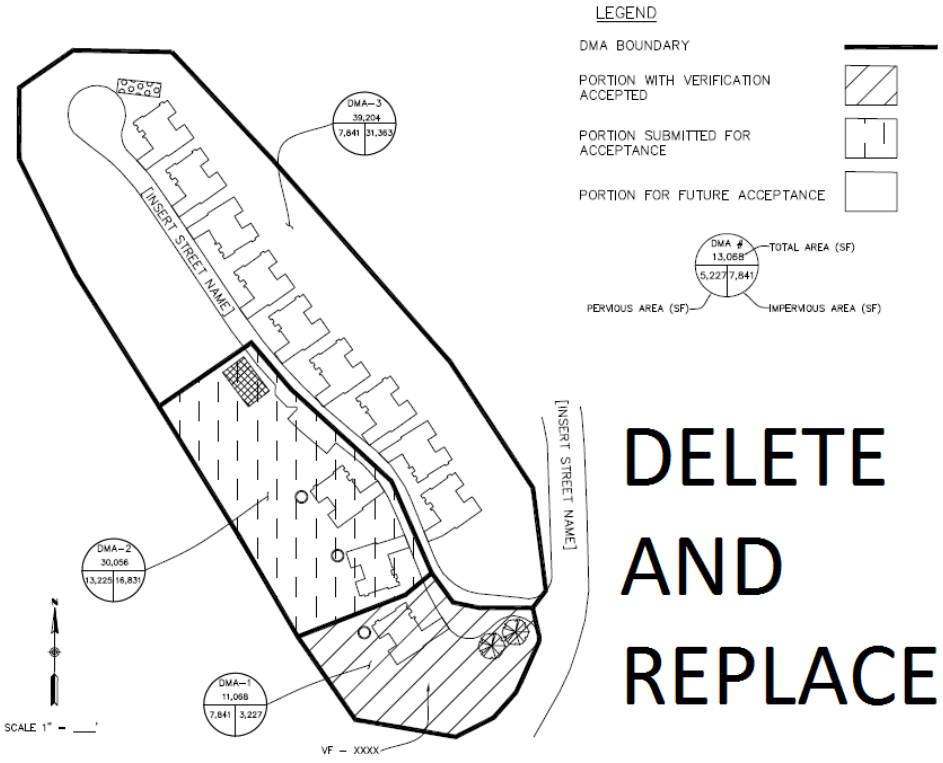
A: DMA and BMP Information

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)								
1	1	Biofiltration Basin	PCBMP #1	1		Sheet 1		
2	1	Biofiltration Basin	PCBMP #2	1		Sheet 1		
3	1	Biofiltration Basin	PCBMP #3	1		Sheet 1		
4	1	Biofiltration Basin	PCBMP #4	1		Sheet 1		
5	1	Biofiltration Basin	PCBMP #5	1		Sheet 1		
6	1	Biofiltration Basin	PCBMP #6	1		Sheet 1		
Part B Significant Site Design BMPs (SSD-BMPs)								
		Choose an item.		---	---			
		Choose an item.		---	---			
		Choose an item.		---	---			

Add rows as needed

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: _____

11.0 Cover Sheet and General Requirements

- All Structural BMPs must have a plan and mechanism to ensure on-going maintenance. Use the table below to document the types of agreements to be submitted for the PDP and submit them under cover of this sheet.
- See BMPDM Section 7.3 for a description of maintenance categories and responsibilities. Note that since Category 3 and 4 BMPs are County-maintained, they do not require maintenance agreements.

a. Applicability of Maintenance Agreements

Check the boxes below to indicate which types of agreements are included with this attachment.

☒ Maintenance Notification (Category 1 BMPs)

- Exhibit A: Project Site Vicinity; Project Site Map; and a map for each BMP and its Drainage Management Area
- Exhibit B: BMP Maintenance Plan (see below)

☐ Stormwater Maintenance Agreement (Category 2 BMPs)

- Exhibit A: Legal Description of Property
- Exhibit B: BMP Maintenance Plan (see below)
- Exhibit C: Project Site Vicinity Map

Maintenance agreement templates and instructions are provided on the County's website:

www.sandiegocounty.gov/stormwater under the Development Resources tab.

PDP applicants contact County staff to ensure they have the most current forms.

b. Maintenance Plan Requirements

Use this checklist to confirm that each maintenance plan includes the following that as applicable.

☒ Specific **maintenance indicators and actions** for proposed structural BMP(s). These must be based on based on maintenance indicators presented in BMP Design Fact Sheets in Appendix E and enhanced to reflect actual proposed components of the structural BMP(s).

☒ **Access** to inspect and perform maintenance on the structural BMP(s).

☒ Features 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).

☐ Manufacturer and part number for **proprietary parts** of structural BMP(s) when applicable.

☒ **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.

PLACEHOLDER:

The following pages are a placeholder for the **Maintenance Notification Agreement**, which will be notarized later in the approval process.

RECORDING REQUESTED BY:

WHEN RECORDED MAIL TO:

(property owner)

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAINTENANCE NOTIFICATION AGREEMENT FOR CATEGORY 1 STORMWATER STRUCTURAL BMPs

☐ **This Maintenance Notification Agreement rescinds and replaces Doc#_____**

THIS AGREEMENT is made on the _____ day of _____, 20_____.

Tad Lehman, the Owner(s) of the hereinafter described real property:

Address 1494 Meredith Road, Fallbrook, CA Post Office Box _____ Zip Code 92028.

Assessor Parcel No.(s) 123-261-14

List each Structural Best Management Practice (BMP) for the property as follows: BMP ID, Type, Permit #, Sheet #.

PCBMP #1-#6, Biofiltration Basins, PDS2020-TMP-21278, PDS2020-ER-02-002,

DMA & Hydromodification Management Plan, Sheet 1 *Attach BMP sheets and details as Exhibit A.*

Owner(s) of the above property acknowledge the existence of the stormwater Structural BMP(s) on the said property. Perpetual maintenance of the Structural BMP(s) is the requirement of the State NPDES Permit, Order No. R9-2013-0001 and subsequent amendments, Section E.3.e. and the County of San Diego Watershed Protection Ordinance (WPO) Ordinance No. 10410 Section 67.812 through Section 67.814, and County BMP Design Manual Chapters 7 & 8. In consideration of the requirement to construct and maintain Structural BMP(s), as conditioned by Discretionary Permit, Grading Permit, and/or Building Permit (as may be applicable), I/we hereby covenant and agree that:

1. I/We are the owner(s) of the existing (or to be constructed concurrently) premises located on the above described property.
2. I/We shall take the responsibility for the perpetual maintenance of the Structural BMP(s) as listed above in accordance with the maintenance plan(s) attached in *Exhibit B* and in compliance with County's self-inspection reporting and verification for as long as I/we have ownership of said property(ies).
3. I/We shall cooperate with and allow the County staff to come onto said property(ies) and perform inspection duties as prescribed by local and state regulators.
4. I/We shall inform future buyer(s) or successors of said property(ies) of the existence and perpetual maintenance requirement responsibilities for Structural BMP(s) as listed above and to ensure that such responsibility shall transfer to the future owner(s).
5. I/We will abide by all the requirements and standards of Section 67.812 through Section 67.814 of the WPO (or renumbering thereof) as it exists on the date of this Agreement, and which hereby is incorporated herein by reference.

This Agreement shall run with the land. If the subject property is conveyed to any other person, firm, or corporation, the instrument that conveys title or any interest in or to said property, or any portion thereof, shall contain a provision transferring maintenance responsibility for Structural BMP(s) to the successive owner according to the terms of this Agreement. Any violation of this Agreement is grounds for the County to impose penalties upon the property owner as prescribed in County Code of Regulatory Ordinances, Title 1, Division 8, Chapter 1 Administrative Citations §§18.101-18.116.

_____ _____

Owner Signature(s)

Tad Lehman, Owner _____

Print Owner Name(s) and Title

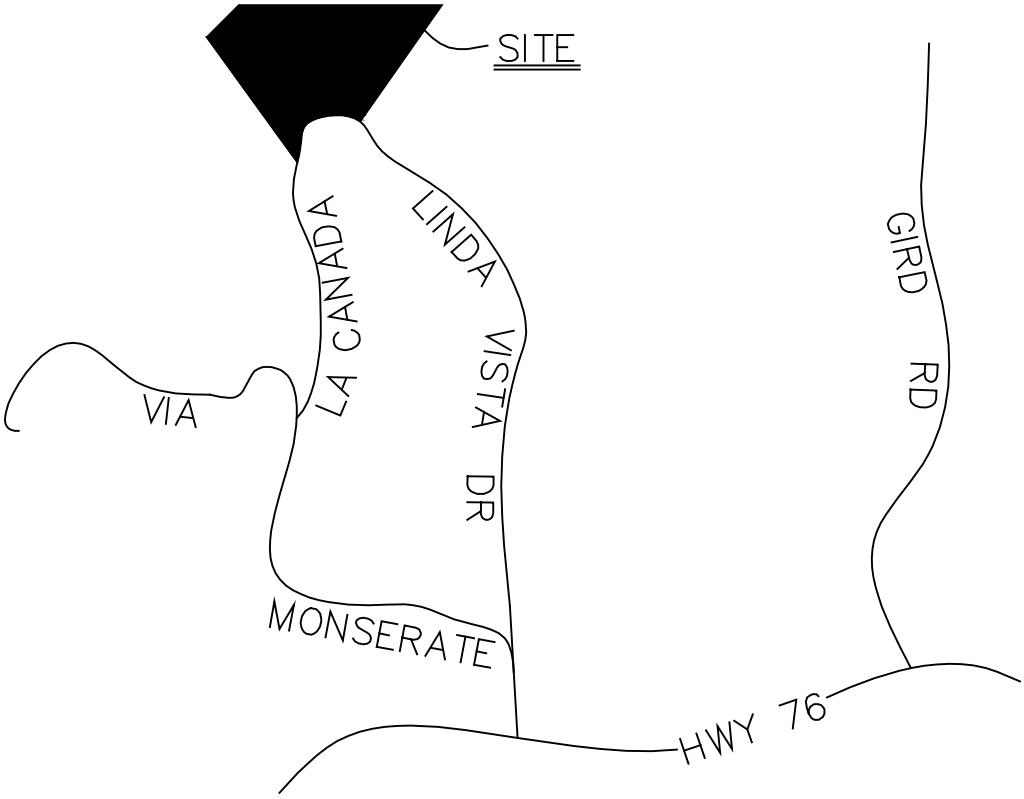
Prior to notarizing the Maintenance Notification Agreement please attach the following Exhibits using 8.5x11 sheets:

- Exhibit A: Create and attach an "Exhibit A" which shows the Project Site Vicinity; the Project Site Map; and a map for each BMP and its Drainage Management Area. Samples of each of these map types are shown in Figure I.11-1 through Figure I.11-4.

- Exhibit B: Attach the maintenance plan for each BMP type as "Exhibit B".

EXHIBIT A

Project Site Vicinity Map
Project Site Map
Map for Each BMP and its Drainage Map Area



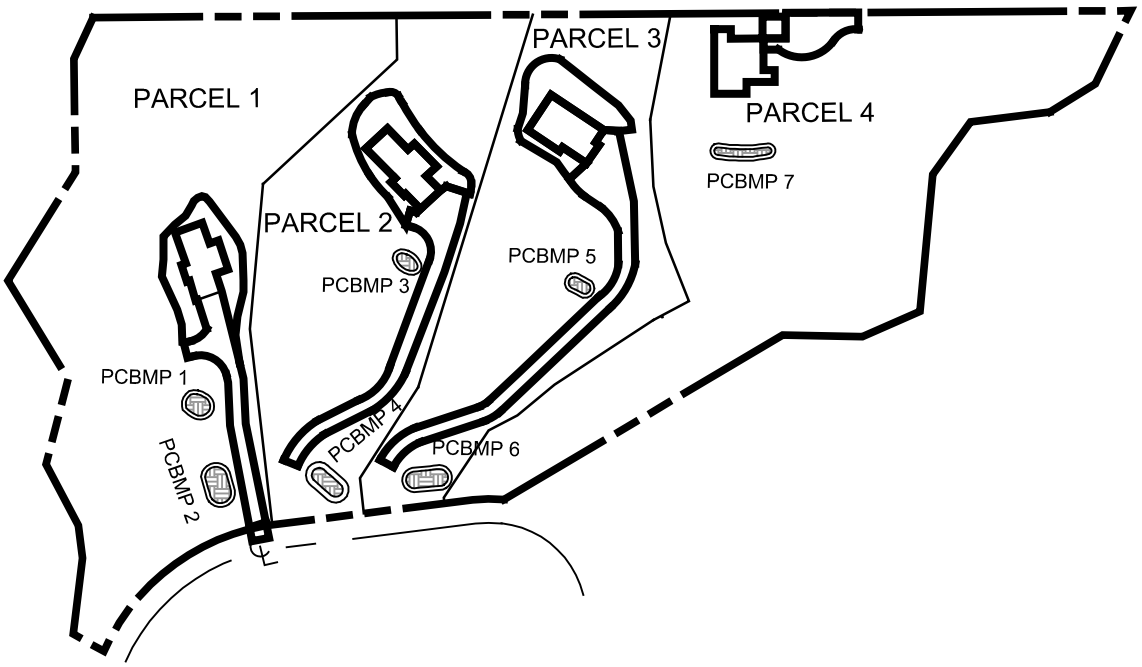
VICINITY MAP

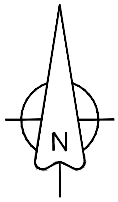
NO SCALE

N

01/19/21

EXHIBIT - 1
APN 123-261-14
STORMWATER MAINTENANCE EXHIBIT





SCALE: 1" = 200'

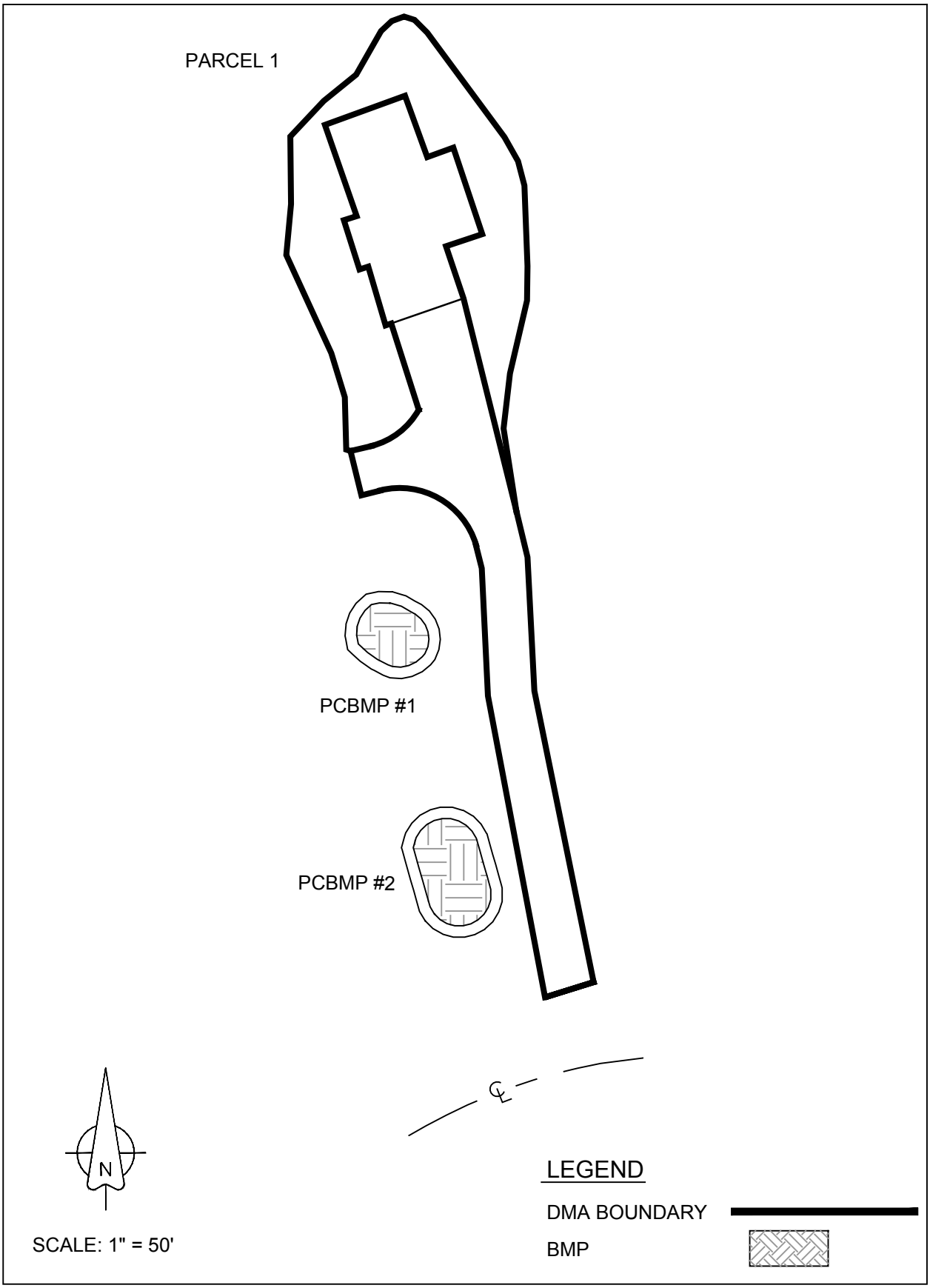
LEGEND

SITE BOUNDARY

BMP

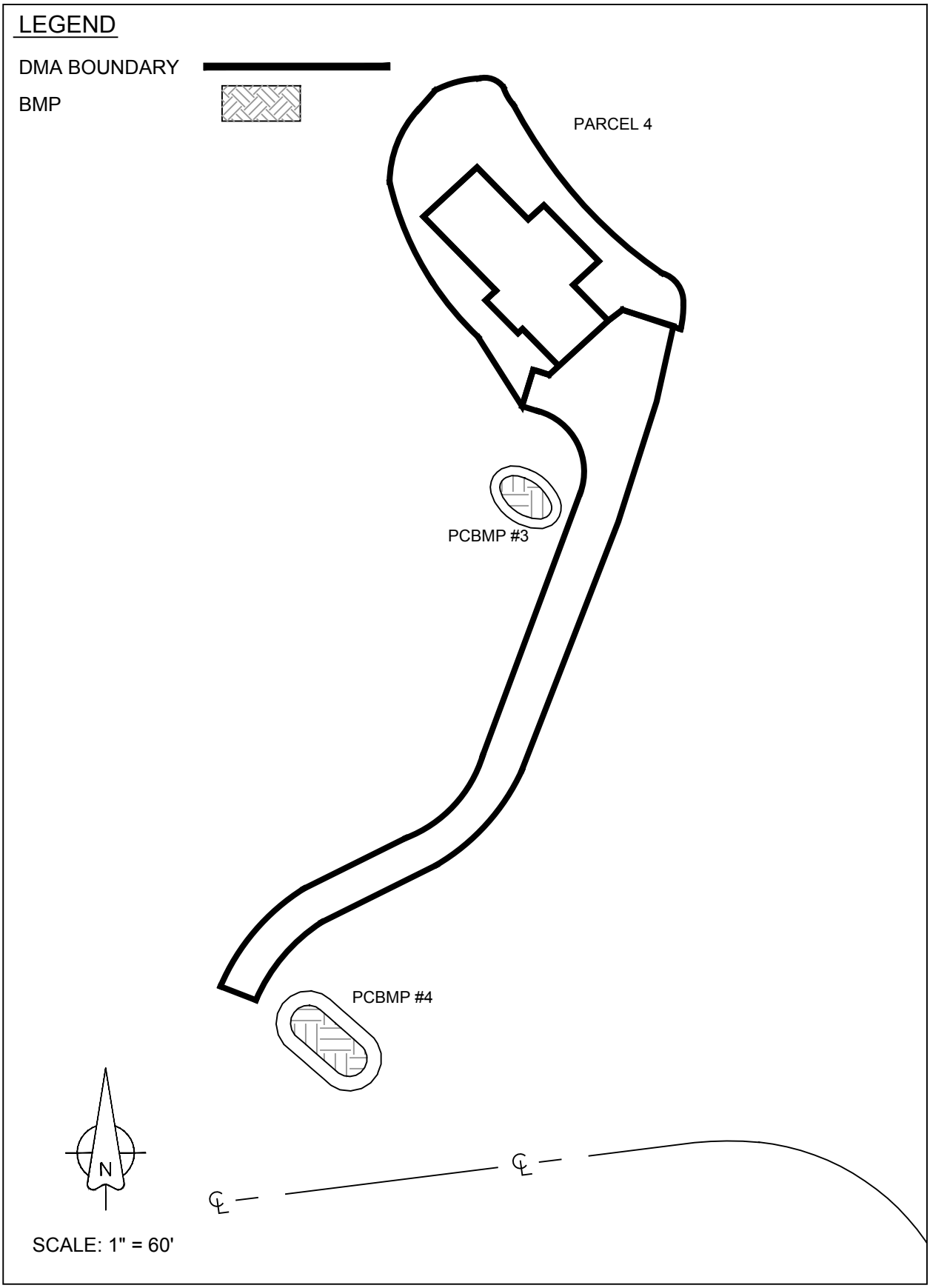
06/06/22

SITE MAP - EXHIBIT 2
APN 123-261-14
STORMWATER MAINTENANCE EXHIBIT



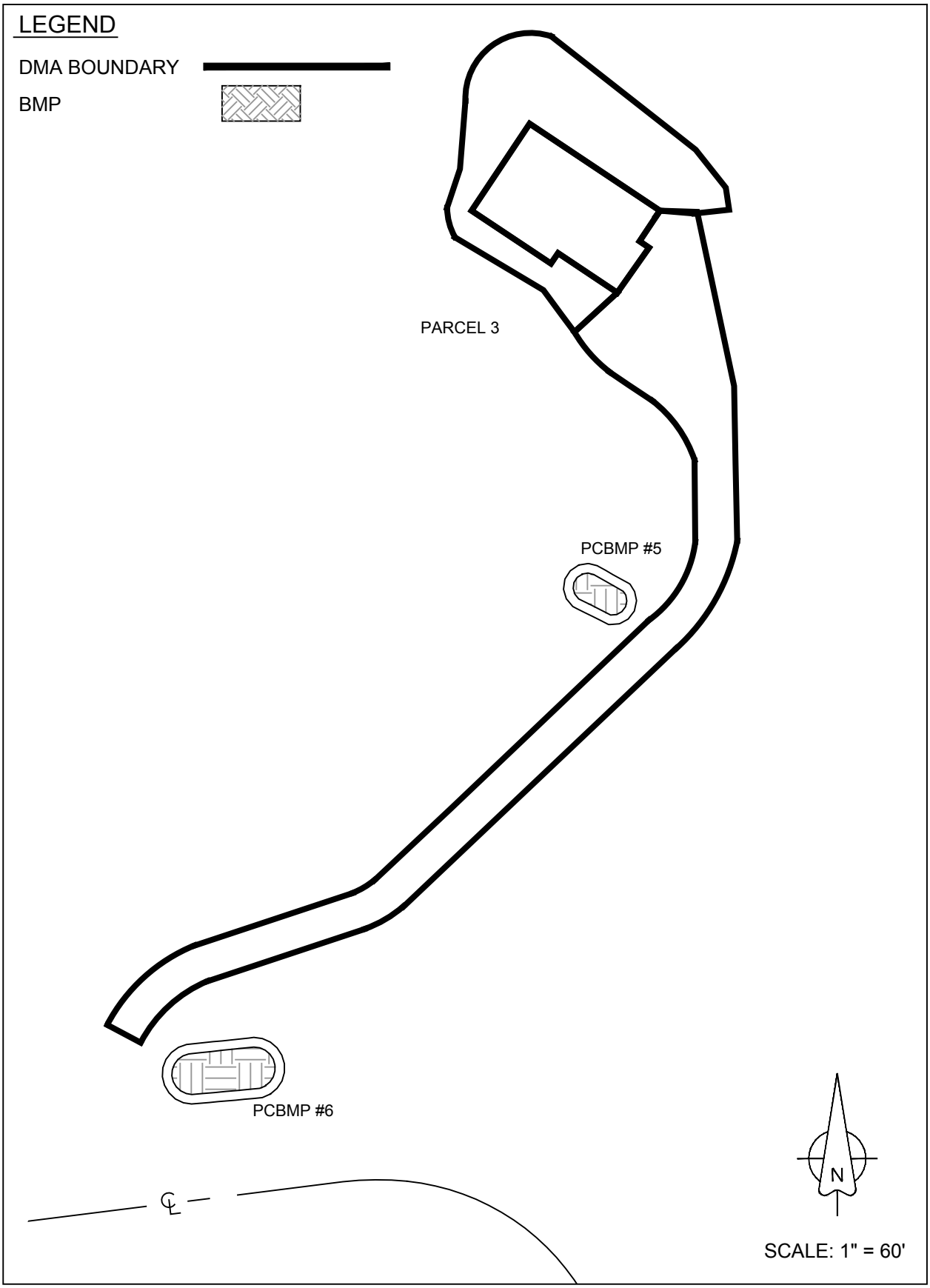
06/06/22

BMP MAP 1- EXHIBIT 3
APN 123-261-14
STORMWATER MAINTENANCE EXHIBIT



06/06/22

BMP MAP 1- EXHIBIT 4
APN 123-261-14
STORMWATER MAINTENANCE EXHIBIT



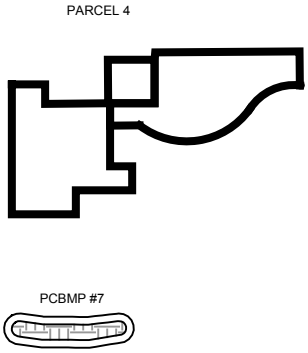
06/06/22

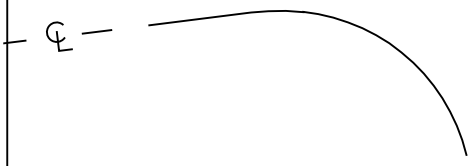
BMP MAP 1- EXHIBIT 5
APN 123-261-14
STORMWATER MAINTENANCE EXHIBIT

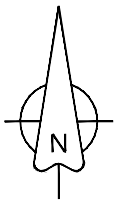
LEGEND

DMA BOUNDARY

BMP







SCALE: 1" = 100'

06/06/22

BMP MAP 1- EXHIBIT 6
APN 123-261-14
STORMWATER MAINTENANCE EXHIBIT

EXHIBIT B

Maintenance Plan for
Biofiltration Basins

BF-1
Biofiltration

BMP MAINTENANCE FACT SHEET
FOR
STRUCTURAL BMP BF-1 BIOFILTRATION

Biofiltration facilities are vegetated surface water systems that filter water through vegetation, and soil or engineered media prior to discharge via underdrain or overflow to the downstream conveyance system. Biofiltration facilities have limited or no infiltration. They are typically designed to provide enough hydraulic head to move flows through the underdrain connection to the storm drain system. Typical biofiltration components include:

- Inflow distribution mechanisms (e.g., perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Shallow surface ponding for captured flows
- Side slope and basin bottom vegetation selected based on climate and ponding depth
- Non-floating mulch layer
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter course layer consisting of aggregate to prevent the migration of fines into uncompacted native soils or the aggregate storage layer
- Aggregate storage layer with underdrain(s)
- Impermeable liner or uncompacted native soils at the bottom of the facility
- Overflow structure

Normal Expected Maintenance

Biofiltration requires routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; maintain infiltration capacity of the media layer; replenish mulch; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected.
- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials. Pretreatment components, especially for sediment, will extend the life of components that are more expensive to replace such as media, filter course, and aggregate layers.
- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations

Biofiltration is a vegetated structural BMP. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, **routine maintenance is key to preventing this scenario**.

BF-1
Biofiltration

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR BF-1 BIOFILTRATION		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation or compaction of the media layer.	• Inspect monthly. If the BMP is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable	• Inspect annually. • Maintenance when needed.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintenance when needed.
2/3 of mulch has decomposed, or mulch has been removed	Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches.	• Inspect monthly. • Replenish mulch annually, or more frequently when needed based on inspection.

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR BF-1 BIOFILTRATION (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintenance when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
Standing water in BMP for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains, or repairing/replacing clogged or compacted soils.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Underdrain clogged	Clear blockage.	• Inspect if standing water is observed for longer than 24-96 hours following a storm event. • Maintenance when needed.

References

American Mosquito Control Association.
http://www.mosquito.org/
California Storm Water Quality Association (CASQA). 2003. Municipal BMP Handbook.
https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook
County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html
San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet BF-1.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

BF-1
Biofiltration

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 1 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Accumulation of sediment, litter, or debris Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose of accumulated materials, without damage to the vegetation ☐ If sediment, litter, or debris accumulation exceeds 25% of the surface ponding volume within one month (25% full*), add a forebay or other pre-treatment measures within the tributary area draining to the BMP to intercept the materials. ☐ Other / Comments:		
Poor vegetation establishment Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

BF-1
Biofiltration

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 2 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Dead or diseased vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Overgrown vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Mow or trim as appropriate ☐ Other / Comments:		
2/3 of mulch has decomposed, or mulch has been removed Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches ☐ Other / Comments:		

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 3 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Erosion due to concentrated irrigation flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas and adjust the irrigation system ☐ Other / Comments:		
Erosion due to concentrated storm water runoff flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan ☐ If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction ☐ Other / Comments:		

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 4 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Obstructed inlet or outlet structure Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Underdrain clogged (inspect underdrain if standing water is observed for longer than 24-96 hours following a storm event) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Damage to structural components such as weirs, inlet or outlet structures Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair or replace as applicable ☐ Other / Comments:		

BF-1
Biofiltration

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 5 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Standing water in BMP for longer than 24-96 hours following a storm event* Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains, or repairing/replacing clogged or compacted soils ☐ Other / Comments:		
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Apply corrective measures to remove standing water in BMP when standing water occurs for longer than 24-96 hours following a storm event.** ☐ Other / Comments:		

*Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected.

**If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.