

Major Stormwater Management Plan (Major SWMP)

For

San Diego Freedom Ranch Major Use Permit (MPA 10-018)

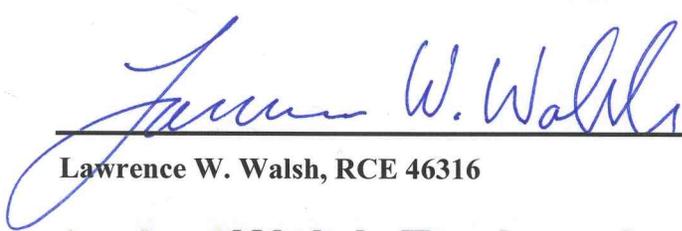
Project No.: PDS2012-3301-74-011-07

Environmental Log No.: PDS2012-3910-122-1002

San Diego Freedom Ranch
1777 Buckman Springs Road
Campo, Ca 91906
(619)478-5696

Prepared By:




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1-16-14

Date



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The selection, sizing, and preliminary design of stormwater treatment and other control measures in this plan have been prepared under the direction of the above-stated Registered Civil Engineer and meet the requirements of Regional Water Quality Control Board Order R9-2007-0001 and subsequent amendments.

The Major Stormwater Management Plan (Major SWMP) must be completed in its entirety and accompany applications to the County for a permit or approval associated with certain types of development projects. To determine whether your project is required to submit a Major or Minor SWMP, please reference the County's Stormwater Intake Form for Development Projects.

Project Name:	San Diego Freedom Ranch
Project Location:	1777 Buckman Springs Road
Permit Number (Land Development Projects):	
Work Authorization Number (CIP only):	
Applicant:	San Diego Freedom Ranch
Applicant's Address:	1777 Buckman Springs Road, Campo Ca
Plan Prepared By (<i>Leave blank if same as applicant</i>):	Walsh Engineering & Surveying, Inc.
Preparer's Address:	607 Aldwych Road, El Cajon, Ca 92020
Date:	January 16, 2014

The County of San Diego Watershed Protection, Storm Water Management, and Discharge Control Ordinance (WPO) (Ordinance No. 9926) requires all applications for a permit or approval associated with a Land Disturbance Activity to be accompanied by a Storm Water Management Plan (SWMP) (section 67.806.b). The purpose of the SWMP is to describe how the project will minimize the short and long-term impacts on receiving water quality. Projects that meet the criteria for a priority development project are required to prepare a Major SWMP.

Since the SWMP is a living document, revisions may be necessary during various stages of approval by the County. Please provide the approval information requested below.

Project Stages	Does the SWMP need revisions?		If YES, Provide Revision Date	County Reviewer
	YES	NO		

Instructions for a Major SWMP can be downloaded at <http://www.sdcounty.ca.gov/dpw/watersheds/susmp/susmp.html>

Completion of the following checklists and attachments will fulfill the requirements of a Major SWMP for the project listed above.

STEP 1

PRIORITY DEVELOPMENT PROJECT DETERMINATION

TABLE 1: IS THE PROJECT IN ANY OF THESE CATEGORIES?

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	A	Housing subdivisions of 10 or more dwelling units. Examples: single-family homes, multi-family homes, condominiums, and apartments.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	B	Commercial—greater than one acre. Any development other than heavy industry or residential. Examples: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	C	Heavy industry—greater than one acre. Examples: manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	D	Automotive repair shops. A facility categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	E	Restaurants. Any facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirements and hydromodification requirements.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	F	Hillside development greater than 5,000 square feet. Any development that creates 5,000 square feet of impervious surface and is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	G	Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. “Directly adjacent” means situated within 200 feet of the ESA. “Discharging directly to” means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	H	Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	I	Street, roads, highways, and freeways. Any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	J	Retail Gasoline Outlets (RGOs) that are: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

To use the table, review each definition A through K. If any of the definitions match, the project is a Priority Development Project. Note some thresholds are defined by square footage of impervious area created; others by the total area of the development. Please see special requirements for previously developed sites and project exemptions on page 6 of the County SUSMP.

STEP 2

PROJECT STORMWATER QUALITY DETERMINATION

Total Project Site Area 112.6 (Acres or ft²)

Estimated amount of disturbed area: 6 (Acres or ft²)

(If >1 acre, you must also provide a WDID number from the SWRCB) WDID: _____

Complete A through C and the calculations below to determine the amount of impervious surface on your project before and after construction.

A. Total size of project site: 112.6 (Acres or ft²)

B. Total impervious area (including roof tops) before construction 0.6 (Acres or ft²)

C. Total impervious area (including roof tops) after construction 2.2 (Acres or ft²)

Calculate percent impervious before construction: $B/A = \frac{0.6}{112.6} = 0.5\%$

Calculate percent impervious after construction: $C/A = \frac{2.2}{112.6} = 1.9\%$

Please provide detailed descriptions regarding the following questions:

TABLE 2: PROJECT SPECIFIC STORMWATER ANALYSIS

1.	Please provide a brief description of the project.
This project is a Major Use Modification that proposes to build new dorm buildings and a new dining / meeting hall.	
2.	Describe the current and proposed zoning and land use designation.
The project is zoned S92 in the existing and proposed condition.	
3.	Describe the pre-project and post-project topography of the project. (Show on Plan)
The project site generally slopes to the south. Topography was flown and surveyed and is shown on the plans.	
4.	Describe the soil classification, permeability, erodibility, and depth to groundwater for LID and Treatment BMP consideration. (Show on Plan) If infiltration BMPs are proposed, a Geotechnical Engineer must certify infiltration BMPs in Attachment E.
It has been determined from the Soils Hydrologic Group Map that the project site contains Soil Types "A and B".	
5.	Describe if contaminated or hazardous soils are within the project area. (Show on Plan)
N/A	
6.	Describe the existing site drainage and natural hydrologic features. (Show on Plan).
There is a natural swale that flows to the south and through the property.	
7.	Describe site features and conditions that constrain, or provide opportunities for stormwater control, such as LID features.
The site is large and has been designed to use the least amount of impervious surface possible. There is only one access driveway that provides access to the new buildings.	
8.	Is this project within the environmentally sensitive areas as defined on the maps in Appendix A of the <i>County of San Diego Standard Urban Storm Water Mitigation Plan for Land Development and Public Improvement Projects</i> ?
Yes	
No	
9.	Is this an emergency project? If yes, please provide a description below.
Yes	
No	

CHANNELS & DRAINAGES

Complete the following checklist to determine if the project includes work in channels.

TABLE 3: CHANNEL & DRAINAGE ANALYSIS

No.	CRITERIA	YES	NO	N/A	COMMENTS
1.	Will the project include work in channels?				If YES go to 2 If NO go to 13.
2.	Will the project increase velocity or volume of downstream flow?				If YES go to 6.
3.	Will the project discharge to unlined channels?				If YES go to 6.
4.	Will the project increase potential sediment load of downstream flow?				If YES go to 6.
5.	Will the project encroach, cross, realign, or cause other hydraulic changes to a stream that may affect downstream channel stability?				If YES go to 8.
6.	Review channel lining materials and design for stream bank erosion.				Continue to 7.
7.	Consider channel erosion control measures within the project limits as well as downstream. Consider scour velocity.				Continue to 8.
8.	Include, where appropriate, energy dissipation devices at culverts.				Continue to 9.
9.	Ensure all transitions between culvert outlets/headwalls/wingwalls and channels are smooth to reduce turbulence and scour.				Continue to 10.
10.	Include, if appropriate, detention facilities to reduce peak discharges.				Continue to 11.
11.	“Hardening“ natural downstream areas to prevent erosion is not an acceptable technique for protecting channel slopes, unless pre-development conditions are determined to be so erosive that hardening would be required even in the absence of the proposed development.				Continue to 12.
12.	Provide other design principles that are comparable and equally effective.				Continue to 13.
13.	End				

TEMPORARY CONSTRUCTION BMPS

Please check the construction BMPs that may be implemented during construction of the project. The applicant will be responsible for the placement and maintenance of the BMPs incorporated into the final project design.

- Silt Fence
- Fiber Rolls
- Street Sweeping and Vacuuming
- Storm Drain Inlet Protection
- Stockpile Management
- Solid Waste Management
- Stabilized Construction Entrance/Exit
- Dewatering Operations
- Vehicle and Equipment Maintenance
- Any minor slopes created incidental to construction and not subject to a major or minor grading permit shall be protected by covering with plastic or tarp prior to a rain event, and shall have vegetative cover reestablished within 180 days of completion of the slope and prior to final building approval.
- Desilting Basin
- Gravel Bag Berm
- Sandbag Barrier
- Material Delivery and Storage
- Spill Prevention and Control
- Concrete Waste Management
- Water Conservation Practices
- Paving and Grinding Operations

EXCEPTIONAL THREAT TO WATER QUALITY DETERMINATION

Complete the checklist below to determine if a proposed project will pose an “exceptional threat to water quality,” and therefore require Advanced Treatment Best Management Practices during the construction phase.

TABLE 4: EXCEPTIONAL THREAT TO WATER QUALITY DETERMINATION

No.	CRITERIA	YES	NO	INFORMATION
1.	Is all or part of the proposed project site within 200 feet of waters named on the Clean Water Act (CWA) Section 303(d) list of Water Quality Limited Segments as impaired for sedimentation and/or turbidity? Current 303d list may be obtained from the following site: http://www.swrcb.ca.gov/tmdl/docs/303dlists2006/approved/r9_06_303d_req_tmdls.pdf			If YES, continue to 2. If NO, go to 5.
2.	Will the project disturb more than 5 acres, including all phases of the development?			If YES, continue to 3. If NO, go to 5.
3.	Will the project disturb slopes that are steeper than 4:1 (horizontal: vertical) with at least 10 feet of relief, and that drain toward the 303(d) listed receiving water for sedimentation and/or turbidity?			If YES, continue to 4. If NO, go to 5.
4.	Will the project disturb soils with a predominance of USDA-NRCS Erosion factors k_f greater than or equal to 0.4?			If YES, continue to 6. If NO, go to 5.
5.	Project is not required to use Advanced Treatment BMPs.			Document for Project Files by referencing this checklist.
6.	Project poses an “exceptional threat to water quality” and is required to use Advanced Treatment BMPs.			Advanced Treatment BMPs must be consistent with WPO section 67.811(b)(20)(D) performance criteria

Exemption potentially available for projects that require advanced treatment: Project proponent may perform a Revised Universal Soil Loss Equation, Version 2 (RUSLE 2), Modified Universal Soil Loss Equation (MUSLE), or similar analysis that demonstrates (to the County official’s satisfaction) that advanced treatment is not required.

STEP 3

HYDROMODIFICATION DETERMINATION

The following questions provide a guide to collecting information relevant to hydromodification management plan (HMP) issues. If the project is exempt from the HMP criteria, please provide the supporting documentation in Attachment H. Please reference the full descriptions of the HMP exemptions located in Figure 1-1 of the County SUSMP.

TABLE 5: HYDROMODIFICATION DETERMINATION

	QUESTIONS	YES	NO	Information
1.	Will the project reduce the pre-project impervious area and are the unmitigated post-project outflows (outflows without detention routing) to each outlet location less as compared to the pre-project condition?			If NO, continue to 2. If YES, go to 7.
2.	Would the project site discharge runoff directly to an exempt receiving water, such as the Pacific Ocean, San Diego Bay, an exempt reservoir, or a tidally-influenced area?			If NO, continue to 3. If YES, go to 7.
3.	Would the project site discharge to a stabilized conveyance system, which has the capacity for the ultimate Q_{10} , and extends to the Pacific Ocean, San Diego Bay, a tidally-influenced area, an exempt river reach or reservoir?			If NO, continue to 4. If YES, go to 7.
4.	Does the contributing watershed area to which the project discharges have an impervious area percentage greater than 70 percent?			If NO, continue to 5. If YES, go to 7.
5.	Is this an urban infill project which discharges to an existing hardened or rehabilitated conveyance system that extends beyond the “domain of analysis,” where the potential for cumulative impacts in the watershed are low, and the ultimate receiving channel has a “Low” susceptibility to erosion as defined in the SCCWRP channel assessment tool?			If NO, continue to 6. If YES, go to 7.
6.	Project is required to manage hydromodification impacts.			Reference Appendix G “Hydromodification Management Plan” of the County SUSMP.
7.	Project is not required to manage hydromodification impacts.			Hydromodification Exempt. Keep on file.

STEP 4

POLLUTANTS OF CONCERN DETERMINATION

WATERSHED

Please check the watershed(s) for the project.

<input type="checkbox"/> San Juan 901	<input type="checkbox"/> Santa Margarita 902	<input type="checkbox"/> San Luis Rey 903	<input type="checkbox"/> Carlsbad 904
<input type="checkbox"/> San Dieguito 905	<input type="checkbox"/> Penasquitos 906	<input type="checkbox"/> San Diego 907	<input type="checkbox"/> Sweetwater 909
<input type="checkbox"/> Otay 910	<input checked="" type="checkbox"/> Tijuana 911	<input type="checkbox"/> Whitewater 719*	<input type="checkbox"/> Clark 720*
<input type="checkbox"/> West Salton 721*	<input type="checkbox"/> Anza Borrego 722*	<input type="checkbox"/> Imperial 723*	

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

*Projects located fully within these watersheds require only a Minor SWMP.

HYDROLOGIC SUB-AREA NAME AND BASIN NUMBER(S)

Basin Number	Sub-Area Name
911.82	Canyon City HSA

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

SURFACE WATERS that each project discharge point proposes to discharge to.

SURFACE WATERS (river, creek, stream, etc.)	Hydrologic Unit Basin Number	Impairment(s) listed [303(d) listed waters or waters with established TMDLs]. List the impairments identified in Table 7 .	Distance to Project
N/A			

http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/r9_06_303d_reqtmdl_s.pdf

GROUND WATERS

Ground Waters	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	POW	REC1	REC2	BIOL	WARM	COLD	WILD	RARE	SPWN
Campo Creek	911.80	○	○	○												

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

+ Exceeded from Municipal

● Existing Beneficial Use

○ Potential Beneficial Use

PROJECT ANTICIPATED AND POTENTIAL POLLUTANTS

Using Table 6, identify pollutants that are anticipated to be generated from the proposed priority project categories. Pollutants associated with any hazardous material sites that have been remediated or are not threatened by the proposed project are not considered a pollutant of concern.

TABLE 6: ANTICIPATED AND POTENTIAL POLLUTANTS GENERATED BY LAND USE TYPE

<i>PDP Categories</i>	<i>General Pollutant Categories</i>								
	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P ⁽¹⁾	P ⁽²⁾	P	X
Commercial Development 1 acre or greater	P ⁽¹⁾	P ⁽¹⁾		P ⁽²⁾	X	P ⁽⁵⁾	X	P ⁽³⁾	P ⁽⁵⁾
Heavy industry /industrial development	X		X	X	X	X	X		
Automotive Repair Shops			X	X ^(4/5)	X		X		
Restaurants					X	X	X	X	
Hillside Development >5,000 sq ft	X	X			X	X	X		X
Parking Lots	P ⁽¹⁾	P ⁽¹⁾	X		X	P ⁽¹⁾	X		P ⁽¹⁾
Retail Gasoline Outlets			X	X	X	X	X		
Streets, Highways & Freeways	X	P ⁽¹⁾	X	X ⁽⁴⁾	X	P ⁽⁵⁾	X		

X = anticipated
P = potential
(1) A potential pollutant if landscaping exists on-site.
(2) A potential pollutant if the project includes uncovered parking areas.
(3) A potential pollutant if land use involves food or animal waste products.
(4) Including petroleum hydrocarbons.
(5) Including solvents.

PROJECT POLLUTANTS OF CONCERN SUMMARY TABLE

Please summarize the identified project pollutants-of-concern by checking the appropriate boxes in the table below and list any surface water impairments identified. Pollutants anticipated to be generated by the project, which are also causing impairment of receiving waters, shall be considered the primary pollutants of concern. For projects where no primary pollutants of concern exist, those pollutants identified as anticipated shall be considered secondary pollutants of concern.

TABLE 7: PROJECT POLLUTANTS OF CONCERN

Pollutant Category	Anticipated (X)	Potential (P)	Surface Water Impairments
Sediments	X		N/A
Nutrients	X		N/A
Heavy Metals	X		N/A
Organic Compounds			
Trash & Debris	X		N/A
Oxygen Demanding Substances	X		N/A
Oil & Grease	X		N/A
Bacteria & Viruses	X		N/A
Pesticides		P	N/A

STEP 5

LID AND SITE DESIGN STRATEGIES

Each numbered item below is a Low Impact Development (LID) requirement of the WPO. Please check the box(s) under each number that best describes the LID BMP(s) and Site Design Strategies selected for this project. LID BMPs selected on this table will be typically represented as a self-retaining area, self-treating area, pervious pavement and greenroof, which, should be delineated in the Drainage Management Area map in Attachment C.

TABLE 8: LID AND SITE DESIGN

1.	Conserve natural Areas, Soils, and Vegetation
	<input type="checkbox"/> Preserve well draining soils (Type A or B)
	<input checked="" type="checkbox"/> Preserve Significant Trees
	<input type="checkbox"/> Preserve critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions
	<input type="checkbox"/> Other. Description:
2.	Minimize Disturbance to Natural Drainages
	<input checked="" type="checkbox"/> Set-back development envelope from drainages
	<input type="checkbox"/> Restrict heavy construction equipment access to planned green/open space areas
	<input type="checkbox"/> Other. Description:
3.	Minimize and Disconnect Impervious Surfaces (see 5)
	<input type="checkbox"/> Clustered Lot Design
	<input checked="" type="checkbox"/> Items checked in 5
	<input type="checkbox"/> Other. Description: Development is designed to be clustered in one part of the site.
4.	Minimize Soil Compaction
	<input type="checkbox"/> Restrict heavy construction equipment access to planned green/open space areas
	<input type="checkbox"/> Re-till soils compacted by construction vehicles/equipment
	<input checked="" type="checkbox"/> Collect & re-use upper soil layers of development site containing organic materials
	<input type="checkbox"/> Other. Description:
5.	Drain Runoff from Impervious Surfaces to Pervious Areas
	<u>LID Street & Road Design</u> N/A, no "street" or "road" work
	<input type="checkbox"/> Curb-cuts to landscaping
	<input type="checkbox"/> Rural Swales
	<input type="checkbox"/> Concave Median
	<input type="checkbox"/> Cul-de-sac Landscaping Design
	<input type="checkbox"/> Other. Description:

<u>LID Parking Lot Design</u>	
<input type="checkbox"/>	Permeable Pavements
<input type="checkbox"/>	Curb-cuts to landscaping
<input checked="" type="checkbox"/>	Other. Description: Parking lot drainage will drain to Bioretention Areas
<u>LID Driveway, Sidewalk, Bike-path Design</u>	
<input type="checkbox"/>	Permeable Pavements
<input checked="" type="checkbox"/>	Pitch pavements toward landscaping
<input type="checkbox"/>	Other. Description:
<u>LID Building Design</u>	
<input type="checkbox"/>	Cisterns & Rain Barrels
<input type="checkbox"/>	Downspout to swale or landscaping
<input type="checkbox"/>	Vegetated Roofs
<input type="checkbox"/>	Other. Description:
<u>LID Landscaping Design</u>	
<input type="checkbox"/>	Soil Amendments
<input checked="" type="checkbox"/>	Reuse of Native Soils
<input type="checkbox"/>	Smart Irrigation Systems
<input type="checkbox"/>	Street Trees
<input type="checkbox"/>	Other. Description:
6.	Minimize erosion from slopes
<input type="checkbox"/>	Disturb existing slopes only when necessary
<input checked="" type="checkbox"/>	Minimize cut and fill areas to reduce slope lengths
<input type="checkbox"/>	Incorporate retaining walls to reduce steepness of slopes or to shorten slopes
<input type="checkbox"/>	Provide benches or terraces on high cut and fill slopes to reduce concentration of flows
<input type="checkbox"/>	Rounding and shaping slopes to reduce concentrated flow
<input type="checkbox"/>	Collect concentrated flows in stabilized drains and channels
<input type="checkbox"/>	Other. Description:

STEP 6

SOURCE CONTROL

Please complete the checklist on the following pages to determine Source Control BMPs. Below is instruction on how to use the checklist. (Also see instructions on page 60 of the *SUSMP*)

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies and list in Table 9.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your Source Control Exhibit in Attachment B.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs into Table 9.
4. Use the format in Table 9 below to summarize the project Source Control BMPs. Incorporate all identified Source Control BMPs in your Source Control Exhibit in Attachment B.

TABLE 9: PROJECT SOURCE CONTROL BMPS

<i>Potential source of runoff pollutants</i>	<i>Permanent source control BMPs</i>	<i>Operational source control BMPs</i>
Landscape / outdoor pesticide use	Preserving trees, Minimize irrigation runoff	Limit use of Pesticides, See CASQA fact sheet 41
Refuse Areas	Site refuse handling and proper signage	Adequate receptacles and signage
Parking Lot		Regular sweeping, Collect debris and wash.

Describe your specific Source Control BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting Source Control BMPs or substituting alternatives.

Landscape / Outdoor Pesticide Use - Existing natural vegetation will be preserved where possible. Most all of the trees on site will remain untouched. The irrigation system used will be monitored and maintained such that there is no excess watering. Pesticide use will be limited.

Refuse Areas - Will be maintained and signage will be posted to prohibit the disposal of hazardous materials. The trash area will be covered and paved to prevent any storm water from contacting the area.

Parking Lots - Will be maintained and cleaned regularly to prevent litter and debris from entering the surface storm water flow.

IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants – List in Table 9	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in Table 9 and Narrative	4 Operational BMPs—Include in Table 9 and Narrative
<input type="checkbox"/> A. On-site storm drain inlets <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">N/A</div>	<input type="checkbox"/> Locations of inlets.	<input type="checkbox"/> Mark all inlets with the words “No Dumping! Flows to Bay” or similar where feasible.	<input type="checkbox"/> Maintain and periodically repaint or replace inlet markings. <input type="checkbox"/> Provide stormwater pollution prevention information to new site owners, lessees, or operators. <input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-44, “Drainage System Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com <input type="checkbox"/> 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.”
<input type="checkbox"/> B. Interior floor drains and elevator shaft sump pumps	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">N/A</div>	<input type="checkbox"/> State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.
<input type="checkbox"/> C. Interior parking garages	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">N/A</div>	<input type="checkbox"/> State that parking garage floor drains will be plumbed to the sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.

IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants - List in Table 9	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in Table 9 and Narrative	4 Operational BMPs—Include in Table 9 and Narrative
<input type="checkbox"/> D1. Need for future indoor & structural pest control	<div style="border: 1px solid black; padding: 5px; display: inline-block;">N/A</div>	<input type="checkbox"/> Note building design features that discourage entry of pests.	<input type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.

IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants – List in Table 9	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in Table 9 and Narrative	4 Operational BMPs—Include in Table 9 and Narrative
<p> D2. Landscape/ Outdoor Pesticide Use</p> <p><u>Note: Should be consistent with project landscape plan (if applicable).</u></p>	<p> Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained.</p> <p> Show self-retaining landscape areas, if any.</p> <p> Show stormwater treatment facilities.</p>	<p>State that final landscape plans will accomplish all of the following:</p> <p> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.</p> <p> 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 stormwater pollution.</p> <p> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p> Consider using pest-resistant plants, especially adjacent to hardscape.</p> <p> To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p>	<p> Maintain landscaping using minimum or no pesticides.</p> <p> See applicable operational BMPs in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com</p> <p> Provide IPM information to new owners, lessees and operators.</p>

IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants – List in Table 9	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in Table 9 and Narrative	4 Operational BMPs—Include in Table 9 and Narrative
<input type="checkbox"/> E. Pools, spas, ponds, decorative fountains, and other water features. <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 100px;">N/A</div>	<input type="checkbox"/> Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet.	<input type="checkbox"/> 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.	<input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-72, “Fountain and Pool Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> F. Food service <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 100px;">N/A</div>	<input type="checkbox"/> 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. <input type="checkbox"/> On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	<input type="checkbox"/> Describe the location and features of the designated cleaning area. <input type="checkbox"/> Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	<input type="checkbox"/>

IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants – List in Table 9	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in Table 9 and Narrative	4 Operational BMPs—Include in Table 9 and Narrative
<input checked="" type="checkbox"/> G. Refuse areas	<input checked="" type="checkbox"/> 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. <input checked="" type="checkbox"/> 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. <input type="checkbox"/> Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	<input checked="" type="checkbox"/> State how site refuse will be handled and provide supporting detail to what is shown on plans. <input checked="" type="checkbox"/> State that signs will be posted on or near dumpsters with the words “Do not dump hazardous materials here” or similar.	<input checked="" type="checkbox"/> 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 Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> H. Industrial processes. <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">N/A</div>	<input type="checkbox"/> Show process area.	<input type="checkbox"/> If industrial processes are to be located on site, state: “All process activities to be performed indoors. No processes to drain to exterior or to storm drain system.”	<input type="checkbox"/> See Fact Sheet SC-10, “Non-Stormwater Discharges” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants – List in Table 9	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in Table 9 and Narrative	4 Operational BMPs—Include in Table 9 and Narrative
<input type="checkbox"/> I. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.) <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">N/A</div>	<input type="checkbox"/> Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area. <input type="checkbox"/> Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. <input type="checkbox"/> 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.	<input type="checkbox"/> 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: <ul style="list-style-type: none"> ▪ Hazardous Waste Generation ▪ Hazardous Materials Release Response and Inventory ▪ California Accidental Release (CalARP) ▪ Aboveground Storage Tank ▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991 ▪ Underground Storage Tank 	<input type="checkbox"/> See the Fact Sheets SC-31, “Outdoor Liquid Container Storage” and SC-33, “Outdoor Storage of Raw Materials ” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

<p><input type="checkbox"/> J. Vehicle and Equipment Cleaning</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin: 20px auto; text-align: center; line-height: 40px;">N/A</div>	<p><input type="checkbox"/> Show on drawings as appropriate:</p> <p>(1) Commercial/industrial facilities having vehicle /equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses.</p> <p>(2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use).</p> <p>(3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer.</p> <p>(4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.</p>	<p><input type="checkbox"/> If a car wash area is not provided, describe measures taken to discourage on-site car washing and explain how these will be enforced.</p>	<p>Describe operational measures to implement the following (if applicable):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system. <input type="checkbox"/> Car dealerships and similar may rinse cars with water only. <input type="checkbox"/> See Fact Sheet SC-21, "Vehicle and Equipment Cleaning," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
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<p><input type="checkbox"/> K. Vehicle/Equipment Repair and Maintenance</p> <div style="border: 1px solid black; width: 50px; height: 40px; margin: 20px auto; text-align: center; line-height: 40px;">N/A</div>	<ul style="list-style-type: none"> <input type="checkbox"/> Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. <input type="checkbox"/> 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 shall not be installed within the secondary containment areas. <input type="checkbox"/> 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. 	<ul style="list-style-type: none"> <input type="checkbox"/> State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. <input type="checkbox"/> 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. <input type="checkbox"/> 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. 	<p>In the SUSMP report, note that all of the following restrictions apply to use the site:</p> <ul style="list-style-type: none"> <input type="checkbox"/> No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains. <p>No vehicle fluid removal shall 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 shall be contained or drained from the vehicle immediately.</p> <ul style="list-style-type: none"> <input type="checkbox"/> No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.
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<p><input type="checkbox"/> L. Fuel Dispensing Areas</p> <div style="border: 1px solid black; width: 50px; height: 30px; margin: 20px auto; text-align: center; line-height: 30px;">N/A</div>	<p><input type="checkbox"/> Fueling areas¹ shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable.</p> <p><input type="checkbox"/> Fueling areas shall 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] shall not drain onto the fueling area.</p>		<p><input type="checkbox"/> The property owner shall dry sweep the fueling area routinely.</p> <p><input type="checkbox"/> See the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com</p>
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¹ The fueling area shall 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.

<input type="checkbox"/> M. Loading Docks <div style="border: 1px solid black; width: 50px; height: 40px; margin: 20px auto; text-align: center; line-height: 40px;">N/A</div>	<input type="checkbox"/> Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater 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 shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. <input type="checkbox"/> Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer. <input type="checkbox"/>		<input type="checkbox"/> Move loaded and unloaded items indoors as soon as possible. <input type="checkbox"/> See Fact Sheet SC-30, “Outdoor Loading and Unloading,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> N. Fire Sprinkler Test Water <div style="border: 1px solid black; width: 50px; height: 40px; margin: 20px auto; text-align: center; line-height: 40px;">N/A</div>		<input type="checkbox"/> Provide a means to drain fire sprinkler test water to the sanitary sewer.	<input type="checkbox"/> See the note in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

<p>○ Miscellaneous Drain or Wash Water</p> <ul style="list-style-type: none"> <input type="checkbox"/> Boiler drain lines <input type="checkbox"/> Condensate drain lines <input type="checkbox"/> Rooftop equipment <input type="checkbox"/> Drainage sumps <input type="checkbox"/> Roofing, gutters, and trim. <div style="border: 1px solid black; width: 50px; height: 40px; margin: 20px auto; text-align: center; line-height: 40px;">N/A</div>		<ul style="list-style-type: none"> <input type="checkbox"/> Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. <input type="checkbox"/> 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. <p>Rooftop mounted equipment with potential to produce pollutants shall be roofed and/or have secondary containment.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. <input type="checkbox"/> Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. <input type="checkbox"/> 	
<p> P. Plazas, sidewalks, and parking lots.</p>			<p> Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.</p>

STEP 7

LID AND TREATMENT CONTROL SELECTION

A treatment control BMP and/or LID IMP must be selected to treat the project pollutants of concern identified in Table 7 “Project Pollutants of Concern”. A treatment control facility with a high or medium pollutant removal efficiency for the project’s most significant pollutant of concern shall be selected. It is recommended to use the design procedure in Chapter 4 of the SUSMP to meet NPDES permit LID requirements, treatment requirements, and flow control requirements. If your project does not utilize this approach, the project will need to demonstrate compliance with LID, treatment and hydromodification flow control requirements. Review Chapter 2 “Selection of Stormwater Treatment Facilities” in the SUSMP to assist in determining the appropriate treatment facility for your project.

Will this project be utilizing the unified LID design procedure as described in Chapter 4 of the Local SUSMP? <i>(If yes, please document in Attachment D following the steps in Chapter 4 of the County SUSMP)</i>	
<input checked="" type="radio"/> Yes	<input type="radio"/> No
If this project is not utilizing the unified LID design procedure, please describe how the alternative treatment facilities will comply with applicable LID criteria, stormwater treatment criteria, and hydromodification management criteria.	

- Indicate the project pollutants of concern (POCs) from Table 7 in Column 2 below.

TABLE 10: GROUPING OF POTENTIAL POLLUTANTS of Concern (POCs) by fate during stormwater treatment

Pollutant	Check Project Specific POC	Coarse Sediment and Trash	Pollutants that tend to associate with fine particles during treatment	Pollutants that tend to be dissolved following treatment
Sediment	✓✓	X	X	
Nutrients	✓✓		X	X
Heavy Metals	✓✓		X	
Organic Compounds			X	
Trash & Debris	✓✓	X		
Oxygen Demanding	✓✓		X	
Bacteria	✓✓		X	
Oil & Grease	✓✓		X	
Pesticides	✓✓		X	

*All POC's are Secondary POC's.

- Indicate the treatment facility(s) chosen for this project in the following table.

TABLE 11: GROUPS OF POLLUTANTS and relative effectiveness of treatment facilities

Pollutants of Concern	Bioretention Facilities (LID)	Settling Basins (Dry Ponds)	Wet Ponds and Constructed Wetlands	Infiltration Devices (LID)	Media Filters	Higher-rate biofilters	Higher-rate media filters	Trash Racks & Hydro-dynamic Devices	Vegetated Swales
Coarse Sediment and Trash	High	High	High	High	High	High	High	High	High
Pollutants that tend to associate with fine particles during treatment	High	High	High	High	High	Medium	Medium	Low	Medium
Pollutants that tend to be dissolved following treatment	Medium	Low	Medium	High	Low	Low	Low	Low	Low

- Please check the box(s) that best describes the Treatment Control BMP(s) and/or LID IMP selected for this project. Please check if the treatment facility is designed for water quality or hydromodification flow control.

TABLE 12: PROJECT LID AND TC-BMPS

LID and TC-BMP Type	Water Quality Treatment Only	Hydromodification Flow Control
Bioretention Facilities (LID)		
<input checked="" type="checkbox"/> Bioretention area	✗	✓
<input type="checkbox"/> Flow-through Planter		
<input type="checkbox"/> Cistern with Bioretention		
Settling Basins (Dry Ponds)		
<input type="checkbox"/> Extended/dry detention basin with grass/vegetated lining		
<input type="checkbox"/> Extended/dry detention basin with impervious lining		
Infiltration Devices (LID)		
<input type="checkbox"/> Infiltration basin		
<input type="checkbox"/> Infiltration trench		
<input type="checkbox"/> Other _____		

Wet Ponds and Constructed Wetlands		
<input type="checkbox"/> Wet pond/basin (permanent pool)		
<input type="checkbox"/> Constructed wetland		
Vegetated Swales (LID⁽¹⁾)		
<input type="checkbox"/> Vegetated Swale		
Media Filters		
<input type="checkbox"/> Austin Sand Filter		
<input type="checkbox"/> Delaware Sand Filter		
<input type="checkbox"/> Multi-Chambered Treatment Train (MCTT)		
Higher-rate Biofilters		
<input type="checkbox"/> Tree-pit-style unit		
<input type="checkbox"/> Other _____		
Higher-rate Media Filters		
<input type="checkbox"/> Vault-based filtration unit with replaceable cartridges		
<input type="checkbox"/> Other _____		
Hydrodynamic Separator Systems		
<input type="checkbox"/> Swirl Concentrator		
<input type="checkbox"/> Cyclone Separator		
Trash Racks		
<input type="checkbox"/> Catch Basin Insert		
<input type="checkbox"/> Catch Basin Insert w/ Hydrocarbon boom		
<input type="checkbox"/> Other _____		

⁽¹⁾ Must be designed per SUSMP “Vegetated Swales” design criteria for water quality treatment credit (p. 65).

For design guidelines and calculations refer to Chapter 4 “Low Impact Development Design Guide” in the SUSMP. Please show all calculations and design sheets for all treatment control BMPs proposed in Attachment D.

- Create a Construction Plan SWMP Checklist for your project.

Instructions on how to fill out table

1. Number and list each measure or BMP you have specified in your SWMP in Columns 1 and Maintenance Category in Column 3 of the table. Leave Column 2 blank.
2. When you submit construction plans, duplicate the table (by photocopy or electronically). Now fill in Column 2, identifying the plan sheets where the BMPs are shown. List all plan sheets on which the BMP appears. **This table must be shown on the front sheet of the grading and improvement plans.**

Stormwater Treatment Control BMPs and LID BMPs			
Description / Type	Sheet	Maintenance Category	Revisions
Bioretention Areas		CAT 1	

BMP's approved as part of Stormwater Management Plan (SWMP) dated xx/xx/xx on file with DPW. Any changes to the above BMP's will require SWMP revision and Plan Change approvals.

- Please describe why the chosen treatment control BMP(s) was selected for this project. For projects utilizing a low performing BMP, please provide a **feasibility analysis** that demonstrates utilization of a treatment control BMP with a high or medium removal efficiency ranking is infeasible.

Bioretention Areas have been chosen for this project due to their relatively high effectiveness of treatment, area available and ease of maintenance.

Please provide the sizing design calculations for each Drainage Management Area in Attachment D. Guidelines for design calculations are located in Chapter 4 of the County SUSMP. To assist in these calculations a BMP sizing calculator is available for use at the following location: http://www.projectcleanwater.org/html/wg_susmp.html

STEP 8

OPERATION AND MAINTENANCE

- Please check the box that best describes the maintenance mechanism(s) for this project.

TABLE 13: PROJECT BMP CATEGORY

CATEGORY	SELECTED		BMP Description
	YES	NO	
First ¹	<input checked="" type="checkbox"/>		Bioretention Area
Second ²			
Third ³			
Fourth ⁴			

Note:

1. A maintenance notification will be required.
 2. A recorded maintenance agreement and access easement will be required.
 3. The project will be required to establish or be included in a watershed specific Community Facility District (CFD) for long-term maintenance.
 4. The developer would be required to dedicate the BMP (and the property on which it is located and any necessary access) to the County.
- Please list all individual LID and Treatment Control BMPs (TC-BMPs) incorporated into the project. Please ensure the “BMP Identifier” is consistent with the legend in Attachment C “Drainage Management Area Exhibit”. Please attach the record plan sheets upon completion of project and amend the Major SWMP where appropriate. For each type of LID or TC-BMP provide an inspection sheet in Attachment F “Maintenance Plan”.

TABLE 14: PROJECT SPECIFIC LID AND TC-BMPs

BMP Identifier*: (Identifier to match TC-BMPs on TC-BMP Table.)	Type	Record Plan Page for TC-BMP	BMP Pollutant of Concern Efficiency (H,M,L)
IMP 1	Bioretention Area		

* For location of BMP's, see approved Record Plan dated XX/XX/XX, plan (TYPE) sheet (#)

➤ Responsible Party for Long-term Maintenance:

Identify the parties responsible for long-term maintenance of the BMPs identified above and Source Controls specified in Attachment B. Include the appropriate written agreement with the entities responsible for O&M in Attachment F. Please see Chapter 5 “Stormwater Facility Maintenance” of the County SUSMP for appropriate maintenance mechanisms.

Representative Name: Glenn Webber
Company Name: San Diego Freedom Ranch
Phone Number: 619-478-
Street Address: 1777 Buckman Spring Road
City/State/Zip: Campo, Ca
Email Address:

➤ Funding Source:

Provide the funding source or sources for long-term operation and maintenance of each BMP identified above. Please see Chapter 5 “Stormwater Facility Maintenance” of the County SUSMP for the appropriate funding source options. By certifying the Major SWMP the applicant is certifying that the funding responsibilities have been addressed and will be transferred to future owners.

San Diego Freedom Ranch will be responsible for all maintenance funding.

ATTACHMENTS

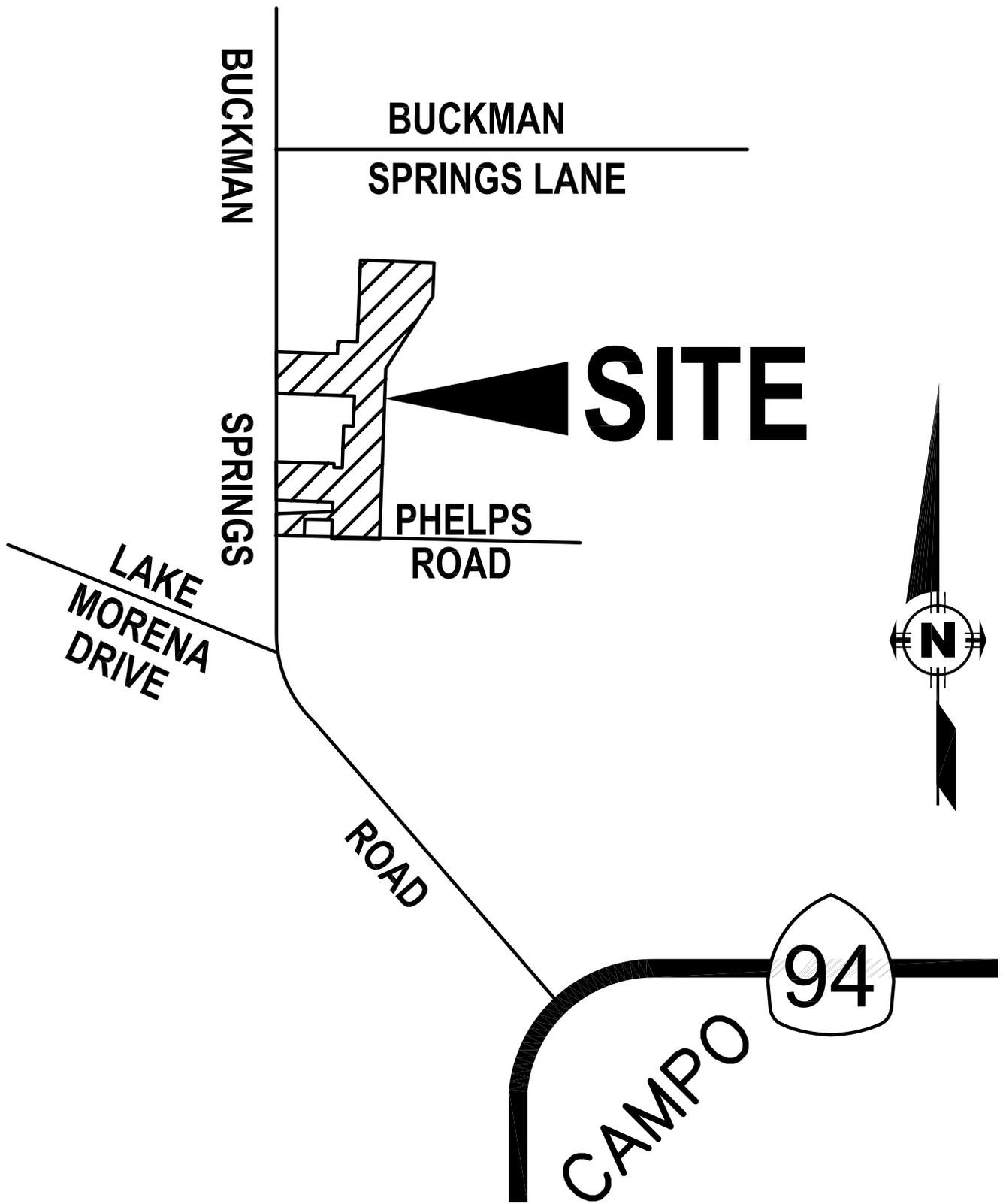
Please include the following attachments.

ATTACHMENT		COMPLETED	N/A
A	Project Location Map	✓	
B	Source Control Exhibit	✓	
C	Drainage Management Area (DMA) Exhibit	✓	
D	BMP Sizing Design Calculations (Water Quality and Hydromodification) and TC-BMP/IMP Design Details	✓	
E	Geotechnical Certification Sheet		✓
F	Maintenance Plan	✓	
G	Treatment Control BMP Certification	✓	
H	HMP Exemption Documentation		✓
I	Addendum		✓

Note: Attachments B and C may be combined.

ATTACHMENT A

Project Location Map



VICINITY MAP

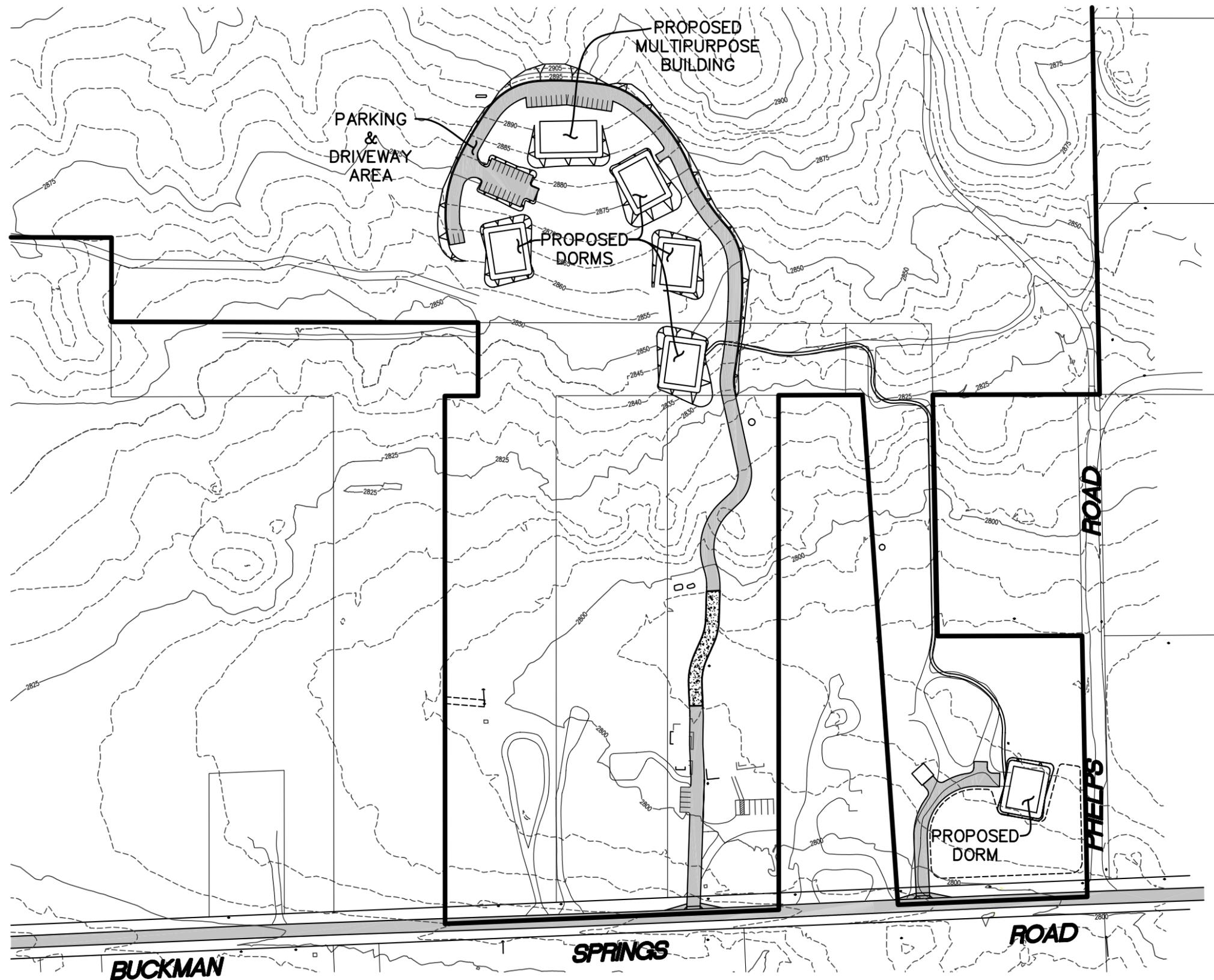
THOMAS BRO. PAGE 1317-H3

NO SCALE

ATTACHMENT B

Source Control Exhibit

SOURCE CONTROL EXHIBIT
SAN DIEGO FREEDOM RANCH
MAJOR USE PERMIT MODIFICATION



PARKING LOTS – SHALL BE MAINTAINED AND KEPT FREE OF LITTER AND DEBRIS.

REFUSE AREAS – LOCATION TO BE DETERMINED UPON CONSTRUCTION OF THE SITE. DUMPSTER SHALL BE COVERED AND ON A PAVED AREA THAT WILL PREVENT CONTACT WITH STORM WATER RUNOFF. AREA SHALL BE KEPT CLEAN AND MAINTAINED.

LANDSCAPE AREAS – IRRIGATION WILL BE MAINTAINED TO LIMIT OVER WATERING. PESTICIDE USE SHALL BE MINIMAL. PROJECT HAS BEEN DESIGNED TO PRESERVE TREES AND NATURAL VEGETATION AT ALL AREAS POSSIBLE.

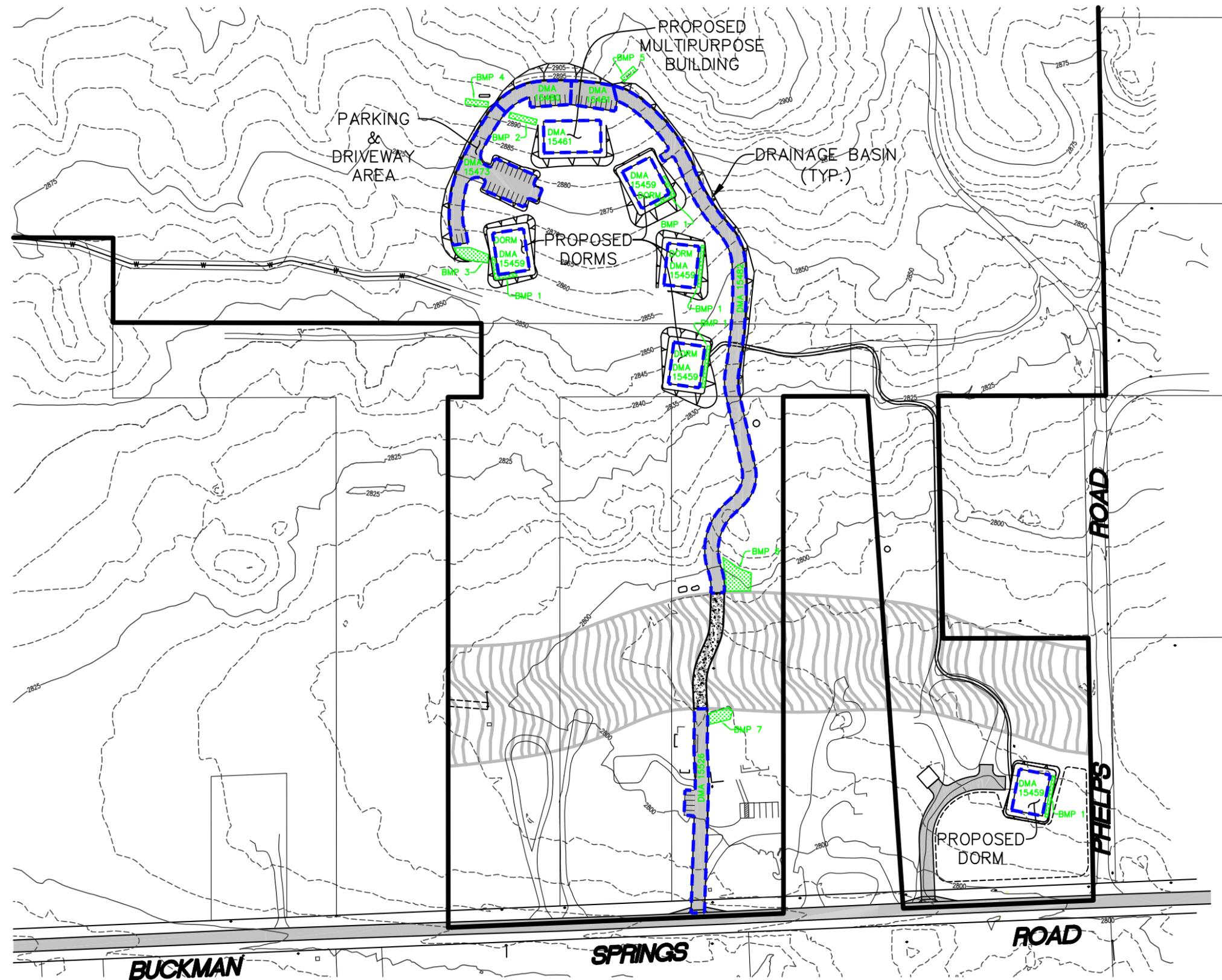
ATTACHMENT C

Drainage Management Area (DMA) Exhibit

DRAINAGE MANAGEMENT AREAS

SAN DIEGO FREEDOM RANCH

MAJOR USE PERMIT MODIFICATION



-  - BIORETENTION AREA
-  - BASIN BOUNDARY

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

ATTACHMENT D

Sizing Design Calculations and TC-BMP/LID Design Details

(Provide BMP Sizing Calculator results and/or continuous simulation modeling results, if applicable)

Project Summary

Project Name	Freedom Ranch MUP
Project Applicant	San Diego Freedom Ranch
Jurisdiction	County of San Diego
Parcel (APN)	
Hydrologic Unit	Tijuana

Compliance Basin Summary

Basin Name:	Project Watershed
Receiving Water:	South Property Line
Rainfall Basin	Lake Wohlford
Mean Annual Precipitation (inches)	20.0
Project Basin Area (acres):	3.10
Watershed Area (acres):	0.00
SCCWRP Lateral Channel Susceptibility (H, M, L):	
SCCWRP Vertical Channel Susceptibility (H, M, L):	
Overall Channel Susceptibility (H, M, L):	HIGH
Lower Flow Threshold (% of 2-Year Flow):	0.1

Drainage Management Area Summary

ID	Type	BMP ID	Description	Area (ac)	Pre-Project Cover	Post Surface Type	Drainage Soil	Slope
15459	Drains to LID	BMP 1	Dorm Buildings (Typ)	0.1	Pervious (Pre)	Roofs	Type B (moderate infiltration)	Moderate (5 - 10%)
15461	Drains to LID	BMP 2	Multipurpose Building	0.13	Pervious (Pre)	Roofs	Type B (moderate infiltration)	Moderate (5 - 10%)
15473	Drains to LID	BMP 3	Parking and Driveway Area	0.29	Pervious (Pre)	Concrete or asphalt	Type B (moderate infiltration)	Moderate (5 - 10%)
15480	Drains to LID	BMP 4	Parking and Driveway Area 2	0.11	Pervious (Pre)	Concrete or asphalt	Type B (moderate infiltration)	Moderate (5 - 10%)
15481	Drains to LID	BMP 5	Parking and Driveway Area 3	0.08	Pervious (Pre)	Concrete or asphalt	Type B (moderate infiltration)	Moderate (5 - 10%)
15482	Drains to LID	BMP 6	Driveway Area	0.55	Pervious (Pre)	Concrete or asphalt	Type B (moderate infiltration)	Moderate (5 - 10%)
15526	Drains to LID	BMP 7	Driveway Area 2	0.22	Pervious (Pre)	Concrete or asphalt	Type B (moderate infiltration)	Moderate (5 - 10%)

LID Facility Summary

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BMP ID	Type	Description	Plan Area (sqft)	Volume 1(cft)	Volume 2(cft)	Orifice Flow (cfs)	Orifice Size (inch)
BMP 1	Bioretention	Bioretention for Dorms (Treatment and flow control)	370	308	0.00	0.002	0.2
BMP 2	Bioretention	Bioretention for Multipurpose Building (Treatment and flow control)	481	400	0.00	0.003	0.2
BMP 3	Bioretention	Bioretention for Parking/Driveway (Treatment and flow control)	1073	894	0.00	0.006	0.4
BMP 6	Bioretention	Bioretention for Driveway (Treatment and flow control)	2036	1696	0.00	0.012	0.5
BMP 4	Bioretention	Bioretention for Parking / Driveway (Treatment and flow control)	407	339	0.00	0.002	0.2
BMP 5	Bioretention	Bioretention for Parking / Driveway (Treatment and flow control)	296	246	0.00	0.001	0.2
BMP 7	Bioretention	Bioretention for Driveway Area (Treatment and flow control)	814	678	0.00	0.005	0.3

Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit:

Tool:

Result View



Size LID Facility

Basin: **Project Watershed**

Project: **Freedom Ranch MUP**

Manage Your DMA's

Create a new DMA by clicking the New button and scroll down to view entry. Alternatively, select an existing DMA from table and view properties below. Click Edit button to change DMA properties then press Save to commit changes.

DMA ID	Description
15459	Dorm Buildings (Typ)
15461	Multipurpose Building
15473	Parking and Driveway Area
15480	Parking and Driveway Area 2

Define DMA Properties

DMA Type:

Drainage Area (ac):

BMP ID:

Drain To DMA ID:

Drainage Soil:

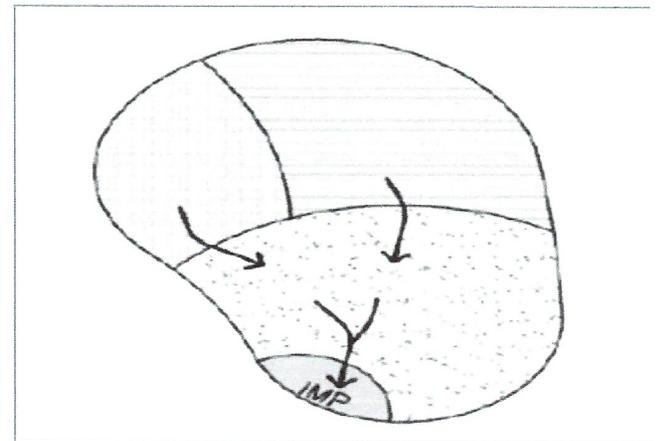
Pre-Project Cover:

Post Surface:

Pre-Project Slope:

Messages:

DMA Layout Large View



Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit: HydroMod Tools

Tool: LID Sizer

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

- Start
- DMA
- LID
- Report
- Export

Manage Your DMA's

Create a new DMA by clicking the New button and scroll down to view entry. Alternatively, select an existing DMA from table and view properties below. Click Edit button to change DMA properties then press Save to commit changes.

- New
- Edit
- Save
- Delete

DMA ID	Description
15459	Dorm Buildings (Typ)
15481	Multipurpose Building
15473	Parking and Driveway Area
15480	Parking and Driveway Area 2

Define DMA Properties

DMA Type: Drains to LID

Drainage Area (ac): 0.13

BMP ID: BMP 2

Drain To DMA ID: 15481

Drainage Soil: Type B (moderate infiltration)

Pre-Project Cover: Pervious (Pre)

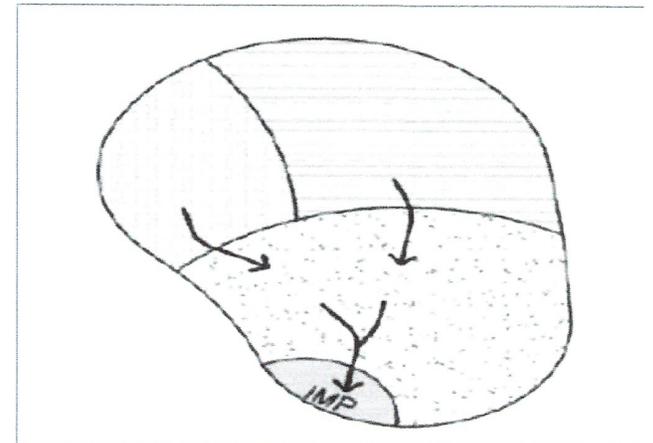
Post Surface: Roofs

Pre-Project Slope: Moderate (5 - 10%)

Messages:

Empty text box for messages.

DMA Layout Large View



Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit: HydrolMod Tools

Tool: LID Sizer

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

- Start
- DMA
- LID
- Report
- Export

Manage Your DMA's

Create a new DMA by clicking the New button and scroll down to view entry. Alternatively, select an existing DMA from table and view properties below. Click Edit button to change DMA properties then press Save to commit changes.

- New
- Edit
- Save
- Delete

DMA ID	Description
15459	Dorm Buildings (Typ)
15461	Multipurpose Building
15472	Parking and Driveway Area
15480	Parking and Driveway Area 2

Define DMA Properties

DMA Type: Drains to LID

Drainage Area (ac): 0.29

BMP ID: BMP 3

Drain To DMA ID:

Drainage Soil: Type B (moderate infiltration)

Pre-Project Cover: Pervious (Pre)

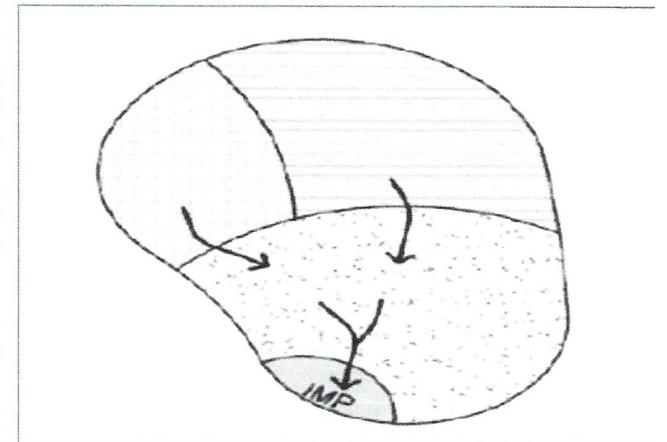
Post Surface: Concrete or asphalt

Pre-Project Slope: Moderate (5 - 10%)

Messages:

Empty text box for messages

DMA Layout



Manage Basins

- San Diego County - RMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit:

Tool:

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

- Scan
- DMA
- LID
- Report
- Export

Manage Your DMA's

Create a new DMA by clicking the New button and scroll down to view entry. Alternatively, select an existing DMA from table and view properties below. Click Edit button to change DMA properties then press Save to commit changes.

- New
- Edit
- Save
- Delete

DMA ID	Description
15469	Dorm Buildings (Typ)
15481	Multipurpose Building
15473	Parking and Driveway Area
15480	Parking and Driveway Area 2

Define DMA Properties

DMA Type:

Drainage Area (ac):

BMP ID:

Drain To DMA ID:

Drainage Soil:

Pre-Project Cover:

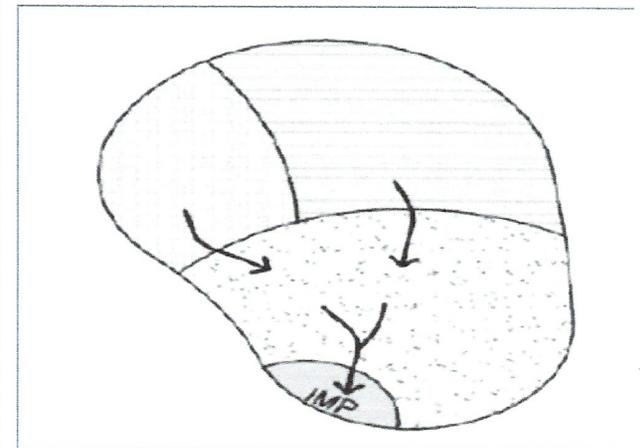
Post Surface:

Pre-Project Slope:

Messages:

Empty text area for messages.

DMA Layout Large View



Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit: HydroMod Tools

Tool: LID Sizer

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

- Start
- DMA
- LID
- Report
- Export

Manage Your DMA's

Create a new DMA by clicking the New button and scroll down to view entry. Alternatively, select an existing DMA from table and view properties below. Click Edit button to change DMA properties then press Save to commit changes.

- New
- Edit
- Save
- Delete

DMA ID	Description
15480	Parking and Driveway Area 2
15481	Parking and Driveway Area 3
15482	Driveway Area
15526	Driveway Area 2

Define DMA Properties

DMA Type: Drains to LID

Drainage Area (ac): 0.08

BMP ID: BMP 5

Drain To DMA ID: 00A

Drainage Soil: Type B (moderate infiltration)

Pre-Project Cover: Pervious (Pre)

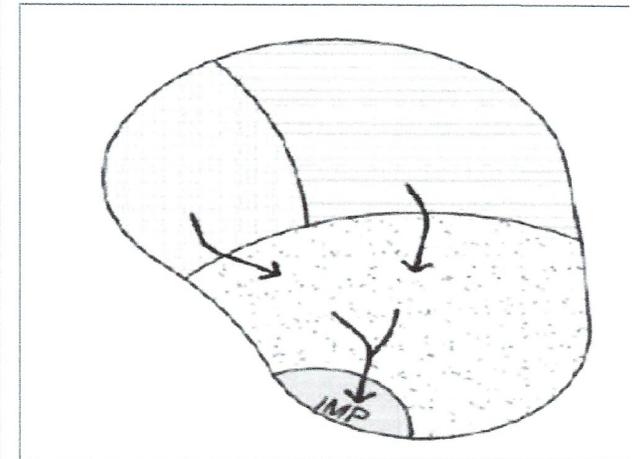
Post Surface: Concrete or asphalt

Pre-Project Slope: Moderate (5 - 10%)

Messages:

Empty text box for messages.

DMA Layout Large View



Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit:

Tool:

Result View



Size LID Facility

Basin: Project Watershed

Project: Freedom Ranch MUP

- Start
- DMA
- LID
- Report
- Export

Manage Your DMA's

Create a new DMA by clicking the New button and scroll down to view entry. Alternatively, select an existing DMA from table and view properties below. Click Edit button to change DMA properties then press Save to commit changes.

- New
- Edit
- Save
- Delete

DMA ID	Description
15480	Parking and Driveway Area 2
15481	Parking and Driveway Area 2
15482	Driveway Area
15526	Driveway Area 2

Define DMA Properties

DMA Type:

Drainage Area (ac):

BMP ID:

Drain To DMA ID:

Drainage Soil:

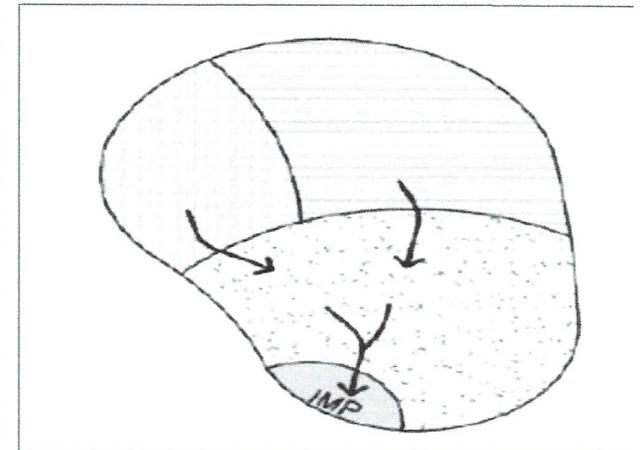
Pre-Project Cover:

Post Surface:

Pre-Project Slope:

Messages:

DMA Layout Large View



Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit: HydroMed Tools

Tool: LID Sizer

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

- Start
- DMA
- LID
- Report
- Export

Manage Your DMA's

Create a new DMA by clicking the New button and scroll down to view entry. Alternatively, select an existing DMA from table and view properties below. Click Edit button to change DMA properties then press Save to commit changes.

- New
- Edit
- Save
- Delete

DMA ID	Description
15480	Parking and Driveway Area 2
15481	Parking and Driveway Area 3
15482	Driveway Area
15526	Driveway Area 2

Define DMA Properties

DMA Type: Drains to LID

Drainage Area (ac): 0.22

BMP ID: BMP 7

Drain To DMA ID: N/A

Drainage Soil: Type B (moderate infiltration)

Pre-Project Cover: Pervious (Pre)

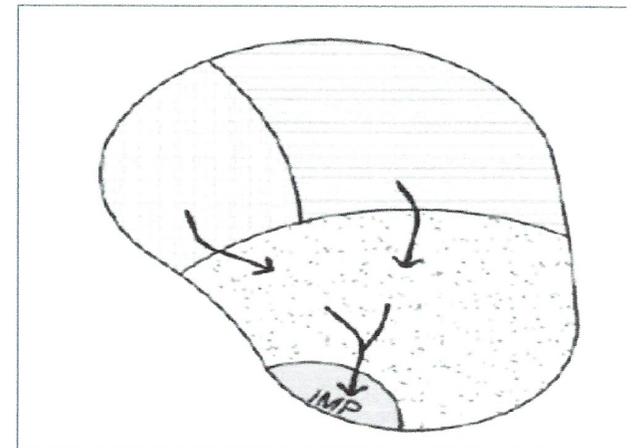
Post Surface: Concrete or asphalt

Pre-Project Slope: Moderate (5 - 10%)

Messages:

Empty text area for messages.

DMA Layout Large view



Enter address - street, city

Find

Location Raingauge Rain Contours

Loading Map...

Manage Basins

- San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit: HydroMod Tools

Tool: LID Sizer

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

- Start
- FMMA
- LID
- Deposit
- Export

Manage Your LID's

Create a new LID by clicking the New button and scroll down to view new entry. Alternatively select an existing LID from the table and view properties below. Click the Edit button to change LID properties and press SAVE to update the calculations.

- New
- Edit
- Save
- Delete

BMP ID	Description
BMP 1	Bioretention for Dorms
BMP 2	Bioretention for Multipurpose Building
BMP 3	Bioretention for Parking/Driveway
BMP 4	Bioretention for Driveway

LID Sizing

LID Type: **Bioretention** Flow Threshold (cfs): **0.002**

Drainage Area (ac): **0.10**

Minimum Area (sqft): 370.2	Proposed Area (sqft): 0.0
Minimum Volume V1 (cft): 308.4	Proposed Volume V1 (cft): 0.0
Minimum Volume V2 (cft): N/A	Proposed Volume V2 (cft): 0.0
Maximum Orifice Size (in): 0.2	Proposed Orifice Size (in): 0.0

Messages:

LID Layout Large View



Enter address - street, city

Find

Location Rain Gauge Rain Contours

Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit:

Tool:

Result View



Size LID Facility

Basin **Project Watershed**

Project **Freedom Ranch MUP**

- Start
- DMA
- LID**
- Report
- Export

Manage Your LID's

Create a new LID by clicking the New button and scroll down to view new entry. Alternatively select an existing LID from the table and view properties below. Click the Edit button to change LID properties and press SAVE to update the calculations.

- New
- Edit
- Save
- Delete

BMP ID	Description
BMP 1	Bioretention for Dorms
BMP 2	Bioretention for Multipurpose Building
BMP 3	Bioretention for Parking/Driveway
BMP 6	Bioretention for Driveway

LID Sizing

LID Type: Flow Threshold (cfs):

Drainage Area (ac):

Minimum Area (sqft): Proposed Area (sqft):

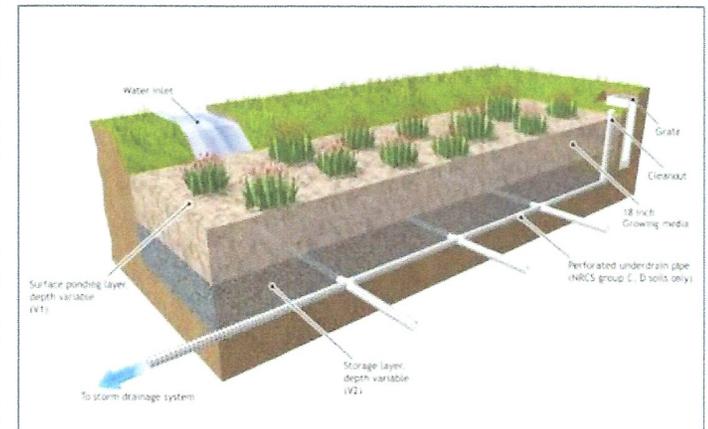
Minimum Volume V1 (cft): Proposed Volume V1 (cft):

Minimum Volume V2 (cft): Proposed Volume V2 (cft):

Maximum Orifice Size (in): Proposed Orifice Size (in):

Messages:

LID Layout Large View



Enter address - street, city...

Find

Location Rain Gauge Rain Contours

Manage Basins

- San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit:

Tool:

Result View

 **Size LID Facility**

Basin Project

Manage Your LID's

Create a new LID by clicking the New button and scroll down to view new entry. Alternatively select an existing LID from the table and view properties below. Click the Edit button to change LID properties and press SAVE to update the calculations.

BMP ID	Description
BMP 1	Bioretention for Dorms
BMP 2	Bioretention for Multipurpose Building
BMP 3	Bioretention for Parking/Driveway
BMP 6	Bioretention for Driveway

LID Sizing

LID Type: Flow Threshold (cfs):

Drainage Area (ac):

Minimum Area (sqft): Proposed Area (sqft):

Minimum Volume V1 (cft): Proposed Volume V1 (cft):

Minimum Volume V2 (cft): Proposed Volume V2 (cft):

Maximum Orifice Size (in): Proposed Orifice Size (in):

Messages:

LID Layout Large View

Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit:

Tool:

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

- Start
- DATA
- LID
- Report
- Export

Manage Your LID's

Create a new LID by clicking the New button and scroll down to view new entry. Alternatively select an existing LID from the table and view properties below. Click the Edit button to change LID properties and press SAVE to update the calculations.

- New
- Edit
- Save
- Delete

BMP ID	Description
BMP 3	Bioretention for Parking/Driveway
BMP 6	Bioretention for Driveway
BMP 4	Bioretention for Parking / Driveway
BMP 5	Bioretention for Parking / Driveway

LID Sizing

LID Type: Flow Threshold (cfs):

Drainage Area (ac):

Minimum Area (sqft):	<input type="text" value="407.2"/>	Proposed Area (sqft):	<input type="text" value="0.0"/>
Minimum Volume V1 (cft):	<input type="text" value="339.2"/>	Proposed Volume V1 (cft):	<input type="text" value="0.0"/>
Minimum Volume V2 (cft):	<input type="text" value="N/A"/>	Proposed Volume V2 (cft):	<input type="text" value="0.0"/>
Maximum Orifice Size (in):	<input type="text" value="0.2"/>	Proposed Orifice Size (in):	<input type="text" value="0.0"/>

Messages:

LID Layout Large View



Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit:
 Tool:

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

Manage Your LID's

Create a new LID by clicking the New button and scroll down to view new entry. Alternatively select an existing LID from the table and view properties below. Click the Edit button to change LID properties and press SAVE to update the calculations.

BMP ID	Description
BMP 3	Bioretention for Parking/Driveway
BMP 6	Bioretention for Driveway
BMP 4	Bioretention for Parking / Driveway
BMP 5	Bioretention for Parking / Driveway

LID Sizing

LID Type: Flow Threshold (cfs):
 Drainage Area (ac):

Minimum Area (sqft):	<input type="text" value="296.2"/>	Proposed Area (sqft):	<input type="text" value="0.0"/>
Minimum Volume V1 (cft):	<input type="text" value="246.7"/>	Proposed Volume V1 (cft):	<input type="text" value="0.0"/>
Minimum Volume V2 (cft):	<input type="text" value="N/A"/>	Proposed Volume V2 (cft):	<input type="text" value="0.0"/>
Maximum Orifice Size (in):	<input type="text" value="0.2"/>	Proposed Orifice Size (in):	<input type="text" value="0.0"/>

Messages:

LID Layout Large View



Manage Basins

San Diego County HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit: HydroMod Tools
 Tool: LID Sizer

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

Start DMA LID Report Export

Manage Your LID's

Create a new LID by clicking the New button and scroll down to view new entry. Alternatively select an existing LID from the table and view properties below. Click the Edit button to change LID properties and press SAVE to update the calculations.

New Edit Save Delete

BMP ID	Description
BMP 3	Bioretention for Parking/Driveway
BMP 6	Bioretention for Driveway
BMP 4	Bioretention for Parking / Driveway
BMP 5	Bioretention for Parking / Driveway

LID Sizing

LID Type: Bioretention Flow Threshold (cfs): 0.012

Drainage Area (ac): 0.55

Minimum Area (sqft): 2036.4	Proposed Area (sqft): 0.0
Minimum Volume V1 (cft): 1696.2	Proposed Volume V1 (cft): 0.0
Minimum Volume V2 (cft): N/A	Proposed Volume V2 (cft): 0.0
Maximum Orifice Size (in): 0.5	Proposed Orifice Size (in): 0.0

Messages:

LID Layout Large View



Manage Basins

San Diego County - HMP

Manage Map Layers

- Rain Gauges
- Mean Annual Rainfall
- Rain Basins
- Soil Type

Select a Tool

Toolkit:

Tool:

Result View



Size LID Facility

Basin Project Watershed

Project Freedom Ranch MUP

- Start
- DMA
- LID
- Report
- Export

Manage Your LID's

Create a new LID by clicking the New button and scroll down to view new entry. Alternatively select an existing LID from the table and view properties below. Click the Edit button to change LID properties and press SAVE to update the calculations.

- New
- Edit
- Save
- Delete

BMP ID	Description
BMP 6	Bioretention for Driveway
BMP 4	Bioretention for Parking / Driveway
BMP 5	Bioretention for Parking / Driveway
BMP 7	Bioretention for Driveway Area

LID Sizing

LID Type: Flow Threshold (cfs):

Drainage Area (ac):

Minimum Area (sqft):	<input type="text" value="814.5"/>	Proposed Area (sqft):	<input type="text" value="0.0"/>
Minimum Volume V1 (cft):	<input type="text" value="678.5"/>	Proposed Volume V1 (cft):	<input type="text" value="0.0"/>
Minimum Volume V2 (cft):	<input type="text" value="N/A"/>	Proposed Volume V2 (cft):	<input type="text" value="0.0"/>
Maximum Orifice Size (in):	<input type="text" value="0.3"/>	Proposed Orifice Size (in):	<input type="text" value="0.0"/>

Messages:

LID Layout Large View



ATTACHMENT E

Geotechnical Certification Sheet (if applicable)

The design of stormwater treatment and other control measures proposed in this plan requiring specific soil infiltration characteristics and/or geological conditions has been reviewed and approved by a registered Civil Engineer, Geotechnical Engineer, or Geologist in the State of California.

Name and registration #

Date

ATTACHMENT F

Maintenance Plan

(Use Chapter 5 of the SUSMP as guidance in developing your Maintenance Plan)

--- TO BE COMPLETED DURING CONSTRUCTION PHASE ---

The following is a general outline for to create your project specific Maintenance Plan.

- I. Inspection, Maintenance Log and Self-Verification Forms (Examples are provided in Appendix F of the San Diego County SUSMP)
- II. Updates, Revisions and Errata
- III. Introduction
 - A. Narrative overview describing the site; drainage areas, routing, and discharge points; and treatment facilities.
- IV. Responsibility for Maintenance
 - A. General
 - (1) Name and contact information for responsible individual(s).
 - (2) Organization chart or charts showing organization of the maintenance function and location within the overall organization.
 - (3) Reference to Operation and Maintenance Agreement (if any). A copy of the agreement should be attached.
 - (4) Maintenance Funding
 - (1) Sources of funds for maintenance
 - (2) Budget category or line item
 - (3) Description of procedure and process for ensuring adequate funding for maintenance
 - B. Staff Training Program
 - C. Records
 - D. Safety
- V. Summary of Drainage Areas and Stormwater Facilities
 - A. Drainage Areas

- (1) Drawings showing pervious and impervious areas (copied or adapted from initial SWMP).
- (2) Designation and description of each drainage area and how flow is routed to the corresponding facility.

B. Treatment and Flow-Control Facilities

- (1) Drawings showing location and type of each facility
- (2) General description of each facility (Consider a table if more than two facilities)
 - (1) Area drained and routing of discharge.
 - (2) Facility type and size

VI. Facility Documentation

- A. "As-built" drawings of each facility (design drawings in the draft Plan)
- B. Manufacturer's data, manuals, and maintenance requirements for pumps, mechanical or electrical equipment, and proprietary facilities (include a "placeholder" in the draft plan for information not yet available).
- C. Specific operation and maintenance concerns and troubleshooting

VII. Maintenance Schedule or Matrix

- A. Maintenance Schedule for each facility with specific requirements for:
 - (1) Routine inspection and maintenance
 - (2) Annual inspection and maintenance
 - (3) Inspection and maintenance after major storms

B. Service Agreement Information

Assemble and make copies of your maintenance plan. One copy must be submitted to the County, and at least one copy kept on-site. Here are some suggestions for formatting the maintenance plan:

- Format plans to 8½" x 11" to facilitate duplication, filing, and handling.
- Include the revision date in the footer on each page.
- Scan graphics and incorporate with text into a single electronic file. Keep the electronic file backed-up so that copies of the maintenance plan can be made if the hard copy is lost or damaged.

ATTACHMENT G

Treatment Control BMP Certification for DPW Permitted Land Development Projects



County of San Diego

DEPARTMENT OF PUBLIC WORKS

Treatment Control BMP Certification for DPW Permitted Land Development Projects

Permit Number _____ SWMP # _____

Project Name _____

Location / Address _____

Responsible Party for Construction Phase

Developer's Name: _____

Address: _____

City _____ State _____ Zip _____

Email Address: _____

Phone Number: _____

Engineer of Work: _____

Engineer's Phone Number: _____

Responsible Party for Perpetual Maintenance

Owner's Name(s)* _____

Address: _____

City _____ State _____ Zip _____

Email Address: _____

Phone Number: _____

* Note: If a corporation or LLC, provide information for principal partner or Agent for Service of Process. If an HOA, provide information of president at time of project closeout.

Maintenance Agreement No.: _____

Percent Impervious Before Construction: % _____

Percent Impervious After Construction: % _____

Proposed Disturbed Area: _____ Acres

Hydromodification Management:

Yes or No

Primary or Secondary Pollutants of Concerns (*check all that apply*)

- | | |
|------------------------------------------------------|-------------------------------------------|
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Nutrients |
| <input type="checkbox"/> Organic Compounds | <input type="checkbox"/> Trash and Debris |
| <input type="checkbox"/> Oxygen Demanding Substances | <input type="checkbox"/> Oil and Grease |
| <input type="checkbox"/> Bacteria and Viruses | <input type="checkbox"/> Pesticides |

Site Layout Strategies (*check all that apply*)

- | | |
|----------------------------------------------------------------|----------------------------------------------------------------|
| <input type="checkbox"/> Conserve Natural Areas | <input type="checkbox"/> Minimize Disturbance to Natural Areas |
| <input type="checkbox"/> Minimize and Disconnect Imp. Surfaces | <input type="checkbox"/> Minimize Soil Compaction |
| <input type="checkbox"/> Minimize erosion from slopes | |

Disperse Runoff from Impervious Surfaces to Pervious (*check all that apply*)

- | | |
|---------------------------------------------------|--------------------------------------------------------------|
| <input type="checkbox"/> Use of pervious surfaces | <input type="checkbox"/> Street and Road Design |
| <input type="checkbox"/> Parking Lot Design | <input type="checkbox"/> Driveway, Sidewalk, Bikepath Design |
| <input type="checkbox"/> Building Design | <input type="checkbox"/> Landscape Design |

Source BMPs (*check all that apply*)

- | | |
|--------------------------------------------------------------|---------------------------------------------------------------------|
| <input type="checkbox"/> Storm Drain Inlets | <input type="checkbox"/> Interior Floor Drains |
| <input type="checkbox"/> Interior Parking Garages | <input type="checkbox"/> Indoor & Structural Pest Control |
| <input type="checkbox"/> Landscape/Outdoor Pesticide Use | <input type="checkbox"/> Pools, spas, etc. |
| <input type="checkbox"/> Food Service | <input type="checkbox"/> Refuse Areas |
| <input type="checkbox"/> Industrial Processes | <input type="checkbox"/> Outdoor Storage of Equipment and Materials |
| <input type="checkbox"/> Vehicle and Equipment Cleaning | <input type="checkbox"/> Vehicle/ Equipment Repair and Maintenance |
| <input type="checkbox"/> Fuel Dispensing Areas | <input type="checkbox"/> Loading Docks |
| <input type="checkbox"/> Fire Sprinkler Test Water | <input type="checkbox"/> Misc. drain or wash water |
| <input type="checkbox"/> Plazas, sidewalks, and parking lots | |

Treatment Control, Hydromodification and LID BMPs

BMP Identifier: (Identifier to match TCBMPs on TCBMP Table.)	Type	Record Plan Page for TCBMP	BMP Pollutant of Concern Efficiency (H,M,L)

(Add sheet for all additional BMPs)

The Maintenance Agreement has been recorded. Yes or No

I certify that the above items for this project are in substantial conformance with the approved plans. Yes or No

Please sign your name and seal.

[SEAL]

Engineer's Print Name: _____

Engineer's Signed Name: _____

Date: _____

Submittals Required with Certification:

- Copy of the final approved SWMP.
- Copy of the approved record plan showing Stormwater TCBMP Table and the location of each verified as-built TCBMP.
- Copy of the specification sheets for the verified proprietary TCBMPs
- Recorded Maintenance Agreement (Category 1 or 2 only)
- Photograph(s) of TCBMP(s)

COUNTY - OFFICIAL USE ONLY:

For PDCI:

PDCI Inspector: _____

Date Project has/expects to close: _____

Date Certification received from EOW: _____

DPW Inspector concurs that every noted BMP on the plan and the SWMP or SWMP Addendum is installed onsite through field verification and completed as certified: Yes
or No

PDCI Inspector's Signed Name: _____ Date: _____

FOR WPP:

Date Received from PDCI: _____

WPP Submittal Reviewer: _____

WPP Reviewer concurs that the provided TC-BMP information is acceptable to enter into the TC-BMP Maintenance verification inventory. Yes or No

WPP Reviewer's Signed Name: _____ Date: _____

ATTACHMENT H

HMP Exemption Documentation (if applicable)

ATTACHMENT I

Addendum