Attachment 10

Stormwater Control Plan for 6868 Cortona Drive

Goleta, CA

A.P.N. 073-140-027



February 18, 2021

FLOWERS & ASSOCIATES, INC.

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I. Project Data

Table 1. Project Data

Project Name/Number	6868 Cortona Drive: W.O. 1912
Application Submittal Date	March 10, 2019
Project Location	APN: 073-140-027
Project Phase No.	6868 Cortona Drive (City of Goleta) NA
Project Type and Description	Energy Storage and Distribution Facility
Total Project Site Area	1.89 ac., 82,176 sf
New Impervious Surface Area	8,329 sf
Replaced Impervious Surface Area	8,559 sf
Existing Impervious Surface Area to Remain	8,316
Total Pre-Project Impervious Surface Area	32,485 sf
Total Post-Project Impervious Surface Area	25,204 sf
Net Impervious Area	-7,281 sf (post-pre project impervious)
Watershed Management Zone(s)	1
Design Storm Frequency and Depth	95 th percentile/24 hr. storm, 2.2 inches
Urban Sustainability Area	NA

II. Setting

II.A. Project Location and Description

The proposed project is located at 6868 Cortona Drive in the City of Goleta. See Figure 1, "Vicinity Map" below for project location. The property is proposed to be divided into 2 separate lots of which Lot 1 will be the subject property. See Attachment B for Lot denotation.



Figure 1. Vicinity Map

The project consists primarily of a new battery storage facility with switch gear facilities and associated site improvements including development of a new access driveway, landscape improvements, drainage conveyance improvements and a new stormwater control measure (SCM) consisting of a bioretention basin and referred to herein as SCM-1.

The proposed work area is defined by a sawcut and join line on the Southerly side within an existing asphalt concrete parking and access area. The westerly limit of the proposed parking lot improvements join the existing parking lot and runoff from this area drains to an existing bioswale in an adjacent parking island to the East.

The project site is on a relatively flat, mild slope toward the Southeast with stormwater primarily sheet flowing toward Cortona Drive. The project proposes to generally maintain existing drainage patterns.

Since the project proposes to create / replace more than 22,500 square feet, it is therefore classified as a Tier 4 project type.

II.B. Existing Site Features and Conditions

The site is currently partially developed, with an approximate net impervious surface coverage of 32,485 square feet or 40%. Current improvements include an existing shop building, adjacent concrete and a portion of the existing parking lot. The rest of the lot makes up 49,691 square feet or 60% and includes primarily open space with some landscaping near the existing parking lot. Existing vegetation on the site consists primarily of sparse weeds, shrubs, and grasses, with several trees. Stormwater from the majority of the site drains generally to the Southeasterly concrete swale located on Lot 2 that outlets at Cortona Drive. The stormwater runoff originating from the parking lot area drains into a bioswale located in the adjacent planter island.

The site is primarily composed of hydrologic soil group D which has a very slow infiltration rate and high runoff potential. See Attachment C.

II.C. Opportunities and Constraints for Stormwater Control

The site provides opportunities to control stormwater onsite though the incorporation of self-retaining permeable areas. These areas include gravel ground cover surrounding each megapack battery storage unit, a gravel base access road and a new 1,300 square foot bioretention basin.

Additionally, an existing bioswale located in the planter islands southeast of the project area will continue to treat runoff from the existing parking lot and will have reduced tributary area than the pre-project condition.

The majority of stormwater runoff generated on the project area will be from the proposed battery storage units and associated facilities, as they make up the majority of the impermeable surfaces. Stormwater from these improvements will be routed to SCM-1 by surface grading and proposed drainage conveyance facilities including vegetated swales, drainage inlets and stormdrain conduits.

Drainage beyond the design capacity of SCM-1 will overflow to the surface and follow the existing grade to an existing concrete swale adjacent to the southerly property line. The concrete swale discharges to Cortona Drive approximately 420 feet to the southeast.

II.D. Low Impact Development Design Strategies to be implemented onsite:

- Dispersal of runoff to proposed pervious areas landscaping, bioswales and bioretention basins.
- Limit of clearing and grading of native vegetation to minimum area needed.
- Minimize compaction of highly permeable soils.
- Maintain existing bioswale treatment areas

III. Documentation of Drainage Design

III.A. Descriptions of each Drainage Management Area

The proposed project primarily consists of a single tributary area from DMA areas 1 and 3 which is directed to SCM-1. DMA area 2 is an existing parking lot directed to an existing bio-swale which will remain.

See Attachment B and Table 2 below.

DMA Name	Surface Type	Area (sq.ft)
Battery storage and facility pads	Concrete Pavement	15,568
2. Parking Area (new & existing)	AC Pavement	9,636
3. Self -Treating	Landscaping/ Gravel	56,972

Table 2. Drainage Management Areas (DMAs)

III.B. Onsite Storm Water Control Measures (SCMs)

Proposed onsite impervious surface development will drain to SCM-1 which consists of a 1,300 square feet of bioretention basin. The proposed bioretention basin is designed to treat and detain peak flows and maximize stormwater infiltration. The basin consists of a 4-foot deep rock section below a 2-foot sand / compost section and allows for 6" of ponding at the surface. Capacity of the basin has a volume of approximately 1,997 cubic feet.

The project results in no peakflow increase for the 2-100 year storms because of a net decrease in impermeable area. Therefore, detention routing analysis for design storm peakflows through the proposed SCM is not necessary. Refer to report entitled "Drainage Analysis, 6868 Cortona Drive, City of Goleta" dated March 9, 2020 for detailed calculations.

III.C. Storm Water Calculator and Site Constraints

Regional Water Quality Control Board, Central Coast Region, Storm Water Control Measure Sizing Calculator, using SBUH Model, was utilized to determine sizing of the site's storm water control measures (see Attachment B, "Central Coast Region Storm Water Control Measure Sizing Calculator").

It is important to note that the SCM Calculator input includes the area of the DMA's, as well as other input variables, and uses this information and the area of the proposed corresponding SCM to yield a minimum required storage volume and corresponding rock depth to achieve required storage volume. Therefore, within this analysis, there is no additional calculation of the volume and verification of said volume is based on the area of the SCM and the corresponding construction detail.

The site water quality design measures are summarized in the tables below.

III.D. Tabulation and Sizing Calculations

Table 3. Information Summary for LID Facility/Storm Water Control Measure

Total Project Area (Square Feet)	82,176 sf
Design Storm Depth	2.2 inches (95 th percentile)
Applicable Requirements	Tier 4
Storm Water Control Measure(s)	1,300 sf bioretention basin

Table 4. LID/Storm Water Control Measures Sizing and Volumes

ı	ID/SCM	Area	1
L	.ID/SCIVI	Alte	1

Bioretention Basin	1,300 sq.ft , 1,997 +/- cu.ft.

IV. Source Control Measures

Site activities and potential sources of pollutants

Table 5. Source Control Table

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
Landscaping	Final Landscape Plans shall:	Maintain landscaping using
Pesticide	Preserve existing native	minimum or no pesticides.
Use/Building and	trees, shrubs, and ground	
Grounds	cover to the maximum extent	See applicable operational BMPs
Maintenance	possible.	in Fact Sheet SC-41, "Building
		and Grounds Maintenance," in the
	Design landscaping to	CASQA Stormwater Quality
	minimize irrigation and runoff,	Handbooks at
	to promote surface infiltration	www.cabmphandbooks.com
	where appropriate, and to	
	minimize the use of fertilizers	Provide IPM information to new
	and pesticides that can	

	contribute to stormwater	owners, lessees and operators.
	pollution.Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.	owners, research and operators.
	Consider using pest-resistant plants, especially adjacent to hardscape.	
	To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	
Outdoor Storage of Equipment or Materials	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 programs for: 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,	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
Vehicle/Equipment Repair and	No vehicle repair or maintenance will be done	permit the disposal, directly or
Maintenance	outdoors. No floor drains allowed in these areas.	indirectly of vehicle fluids, hazardous materials, or rinse water from parts cleaning into storm drains.
	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	No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a

	permit will be obtained and that the design meets that agency's requirements.	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. 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.
Driveways, Patios Sidewalks, Parking Areas, Loading Docks and Trash Enclosure		Sweep plazas, sidewalks, parking lots, loading docks and trash enclosure area regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

V. Stormwater Facility Maintenance

Ownership and Responsibility for Maintenance in Perpetuity

OWNER:	
PROPERTY ADDRESS:	
APN:	
THIS AGREEMENT is made and entered into in, thisday of, by and between	California,
hereafter referred to as "Owner" and the City of Goleta, a municipal corporation California hereinafter referred to as "City";	on, State of

WHEREAS, the Owner owns real property ("Property") in the City of Goleta, State of California, more specifically described in Exhibit "A" and depicted in Exhibit "B", each of which exhibits is attached hereto and incorporated herein by this reference;

WHEREAS, at the time of initial approval of development project known as within the Property described herein, the City required the project to employ on-site control measures to minimize pollutants in urban runoff;

WHEREAS, the Owner has chosen to install Bioretention and Infiltration Basins, hereinafter referred to as "Stormwater Quality Facility", as the on-site control measures to minimize pollutants in urban runoff;

WHEREAS, said Stormwater Quality Facility has been installed in accordance with plans and specifications accepted by the City;

WHEREAS, said Stormwater Quality Facility, with installation on private property and draining only private property, is a private facility with all maintenance or replacement, therefore, the sole responsibility of the Owner in accordance with the terms of this Agreement;

WHEREAS, the Owner is aware that periodic and continuous maintenance, including, but not necessarily limited to, filter material replacement and sediment removal, is required to assure peak performance of Stormwater Quality Facility and that, furthermore, such maintenance activity will require compliance with all Local, State, or Federal laws and regulations, including those pertaining to confined space and waste disposal methods, in effect at the time such maintenance occurs;

NOW THEREFORE, it is mutually stipulated and agreed as follows:

- 1. Owner hereby provides the City or City's designee complete access, of any duration, to the Stormwater Quality Facility and its immediate vicinity at any time, upon reasonable notice, or in the event of emergency, as determined by City's Director of Public Works no advance notice, for the purpose of inspection, sampling, testing of the Stormwater Quality Facility, and in case of emergency, to undertake all necessary repairs or other preventative measures at owner's expense as provided in paragraph 3 below. City shall make every effort at all times to minimize or avoid interference with Owner's use of the Property.
- 2. Owner shall use its best efforts diligently to maintain the Stormwater Quality Facility in a manner assuring peak performance at all times. All reasonable precautions shall be exercised by Owner and Owner's representative or contractor in the removal and extraction of material(s) from the Stormwater Quality Facility and the ultimate disposal of the material(s) in a manner consistent with all relevant laws and regulations in effect at the time. As may be requested from time to time by the City, the Owner shall provide the City with documentation identifying the material(s) removed, the quantity, and disposal destination.
- 3. In the event Owner, or its successors or assigns, fails to accomplish the necessary maintenance contemplated by this Agreement, within five (5) days of being given written notice by the City, the City is hereby authorized to cause any maintenance necessary to be done and charge the entire cost and expense to the Owner or Owner's successors or assigns, including administrative costs, attorney's fees and interest thereon at the maximum rate authorized by the Civil Code from the date of the notice of expense until paid in full.
- 4. The City may require the owner to post security in form and for a time period satisfactory to the city of guarantee the performance of the obligations state herein. Should the Owner fail to perform the obligations under the Agreement, the City may, in the case of a cash bond, act for the Owner using the proceeds from it, or in the case of a surety bond, require the sureties to perform the obligations of the Agreement. As an additional remedy, the Director may

- withdraw any previous storm water related approval with respect to the property on which a Stormwater Quality Facility has been installed until such time as Owner repays to City its reasonable costs incurred in accordance with paragraph 3 above.
- 5. This agreement shall be recorded in the City of Goleta, at the expense of the Owner and shall constitute notice to all successors and assigns of the title to said Property of the obligation herein set forth, and also a lien in such amount as will fully reimburse the City, including interest as herein above set forth, subject to foreclosure in event of default in payment.
- **6.** In event of legal action occasioned by any default or action of the Owner, or its successors or assigns, then the Owner and its successors or assigns agree(s) to pay all costs incurred by the City in enforcing the terms of this Agreement, including reasonable attorney's fees and costs, and that the same shall become a part of the lien against said Property.
- 7. It is the intent of the parties hereto that burdens and benefits herein undertaken shall constitute covenants that run with said Property and constitute a lien there against.
- 8. The obligations herein undertaken shall be binding upon the heirs, successors, executors, administrators and assigns of the parties hereto. The term "Owner" shall include not only the present Owner, but also its heirs, successors, executors, administrators, and assigns. Owner shall notify any successor to title of all or part of the Property about the existence of this Agreement. Owner shall provide such notice prior to such successor obtaining an interest in all or part of the Property. Owner shall provide a copy of such notice to the City at the same time such notice is provided to the successor.
- **9.** Time is of the essence in the performance of this Agreement.
- 10. Any notice to a party required or called for in this Agreement shall be served in person, or by deposit in the U.S. Mail, first class postage prepaid, to the address set forth below. Notice(s) shall be deemed effective upon receipt, or seventy-two (72) hours after deposit in the U.S. Mail, whichever is earlier. A party may change a notice address only by providing written notice thereof to the other party.

IN WITNESS THEREOF, the parties hereto have affixed their signatures as of the date first written above.

APPROVED AS TO FORM:	OWNER:
City Attorney	Name:
	Title:
CITY OF:	OWNER:
Name:	Name:
Title:	Title:
ATTEST:	
City Clerk Date	

NOTARIES ON FOLLOWING PAGE...

VI. Construction Checklist

Table 6.

Stormwater Control Plan See Plan Sheet #s Page # **BMP Description** Pgs. 3-5 **Bioretention Basin** Site and pg. 13 Improvement Plan, Sheet C-1. Storm Water Control Plan (Exhibit 2),

VII. Certifications

The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the County of Santa Barbara Project Clean Water's Stormwater Technical Guide.

Attachment A

Central Coast Region Storm Water Control Measure Sizing Calculator

Version: 3/28/2017

1. Project Information

Project name:	WO 1912; 6868 Cortona	
Project location:	Goleta	
Tier 2/Tier 3:		Tier 3 - Retention
Design rainfall depth (in):		2.2
Total project area (ft2):		82,176
Total DMA area (ft2):	82176	
Total new impervious a	15,568	
Total replaced impervio		
Total replaced impervious not in a USA (ft2):		9636
Total pervious/landscape area (ft2):		56972
Total SCM area (ft2):		1300

2. DMA Characterization

Name	DMA Type	Area (ft2)	Surface Type	New, Replaced?	Connection
DMA-1	Drains to SCM	15568	Concrete or asphalt	New	SCM-1
DMA-2	Drains to Self-Retaining	9636	Concrete or asphalt		
DMA-3	Self-Treating	56972			

Existing parking & bio-swale

DMA Summary Area	
Total DMA area (ft2):	72540
New impervious area (ft2):	25204
Replaced impervious within a USA (ft2):	0
Replaced impervious not in a USA (ft2):	0
Total pervious/landscape area (ft2):	56972

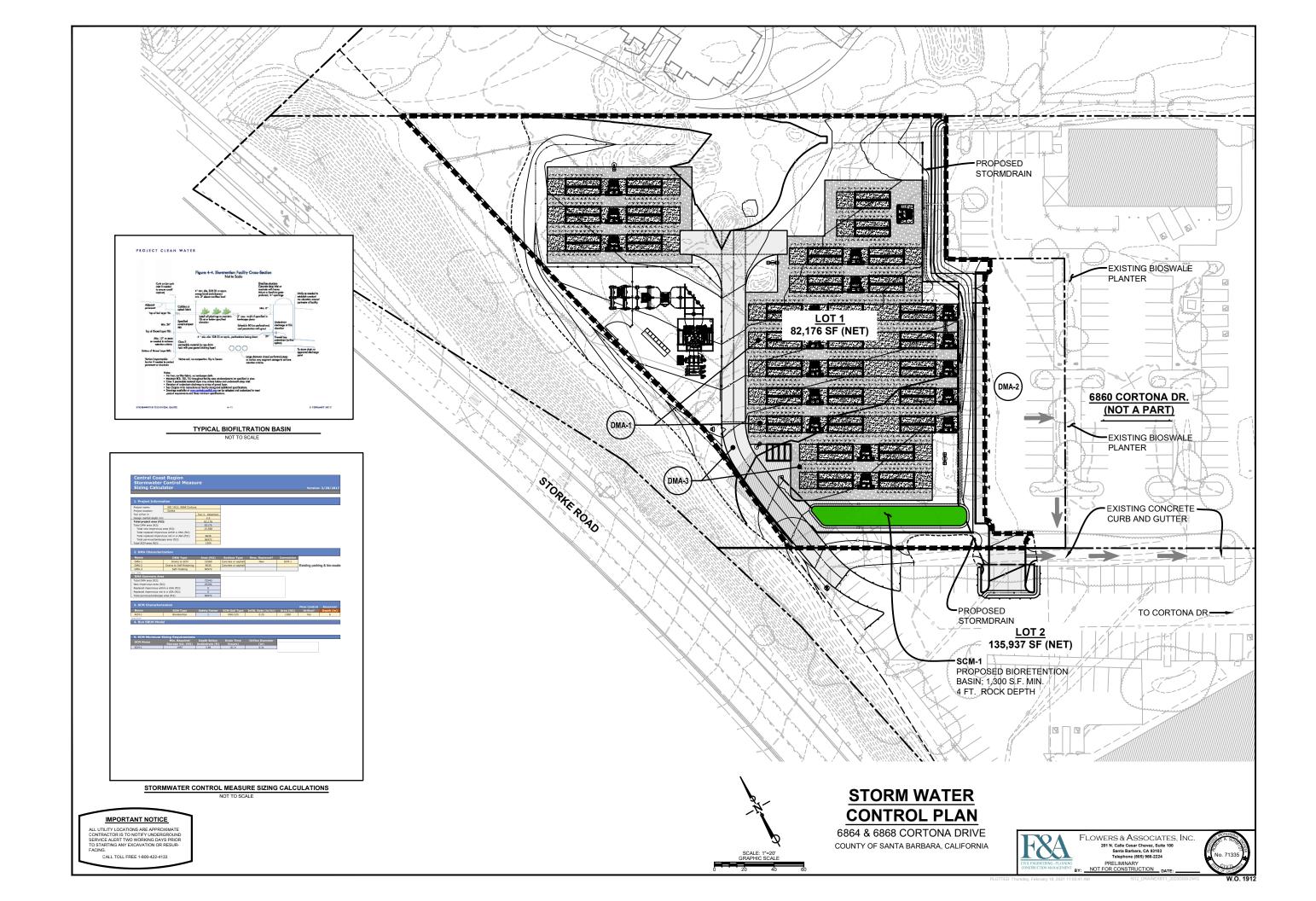
3. SCM Characteriz	ation					Flow Control	Reservoir
Name	SCM Type	Safety Factor	SCM Soil Type	Infilt. Rate (in/hr)	Area (ft2)	Orifice?	Depth (in)
SCM-1	Bioretention	1	HSG C/D	0.25	1300	Yes	6

4. Run SBUH Model

5. SCM Minimum S	Sizing Requirements			
SCM Name	Min. Required	Depth Below	Drain Time	Orifice Diameter
3CH Name	Storage Vol. (ft3)	Underdrain (ft)	(hours)	(in)
SCM-1	1997	3.84	61.4	0.31

Attachment B

Storm Water Control Plan



Attachment C

Hydrologic Soils Report



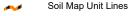
MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons



Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

_

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot
 Other
 Othe

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24.000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Santa Barbara County, California, South Coastal Part

Survey Area Data: Version 12, Sep 17, 2019

Soil map units are labeled (as space allows) for map scales 1:50.000 or larger.

Date(s) aerial images were photographed: Apr 12, 2018—May 7, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GcA	Goleta fine sandy loam, 0 to 2 percent slopes	0.4	16.6%
MeC	Milpitas-Positas fine sandy loams, 2 to 9 percent slopes	0.1	2.7%
MeE2	Milpitas-Positas fine sandy loams, 15 to 30 percent slopes, eroded	0.1	4.9%
XA	Xerorthents, cut and fill areas	1.8	75.8%
Totals for Area of Interest		2.4	100.0%

Hydrologic Soil Group and Surface Runoff

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

Report—Hydrologic Soil Group and Surface Runoff

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

Hydrologic Soil Group and Surface Runoff–Santa Barbara County, California, South Coastal Part					
Map symbol and soil name Pct. of map unit Surface Runoff Hydrologic Soil Group					
GcA—Goleta fine sandy loam, 0 to 2 percent slopes					
Goleta	85	Low	В		

Hydrologic Soil Group and Surface Runoff–Santa Barbara County, California, South Coastal Part					
Map symbol and soil name	Pct. of map unit	Surface Runoff	Hydrologic Soil Group		
MeC—Milpitas-Positas fine sandy loams, 2 to 9 percent slopes					
Milpitas	40	Very high	D		
Positas	40	Very high	D		
MeE2—Milpitas-Positas fine sandy loams, 15 to 30 percent slopes, eroded					
Milpitas	45	Very high	D		
Positas	40	Very high	D		
XA—Xerorthents, cut and fill areas					
Xerorthents	100	_	_		

Data Source Information

Soil Survey Area: Santa Barbara County, California, South Coastal Part

Survey Area Data: Version 12, Sep 17, 2019