

Appendix J

Stormwater Control Plan



STORMWATER CONTROL PLAN

Greenbark 30 Battery Energy Storage
Project, Goleta, California

PREPARED FOR
Greenbark 30 BESS, LLC

DATE
2 July 2024

REFERENCE
0600327



STORMWATER CONTROL PLAN

Greenbark 30 Battery Energy Storage Project, Goleta, California
0600327



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ACRONYMS AND ABBREVIATIONS

Acronym	Description
CA	California
HSG	Hydrologic soil groups
LID	Low Impact Development
NRCS	Natural Resource Conservation Service
SSURGO	USDA Soil Survey Geographic Database
USDA	United States Department of Agriculture

I. PROJECT DATA

The project data and information are summarized and represented in Table 1.

TABLE 1: PROJECT DATA

Project Name/Number	Greenbark 30 Battery Energy Storage Project
Application Submittal Date	July 3, 2024
Project Location	Terminus of Viajero Drive (City of Goleta)
Project Phase No.	NA
Project Type and Description	Battery Energy Storage
Total Project Site Area	2.1 ac. (91,476 sf)
New Impervious Surface Area	0.4 ac. (30,492 sf)
Replaced Impervious Surface Area	0 ac
Existing Impervious Surface Area to Remain	0 ac
Total Pre-Project Impervious Surface Area	0 ac
Total Post-Project Impervious Surface Area	0.4 ac. (18,758 sf)
Net Impervious Area	0.4 ac. (18,758 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

A. PROJECT LOCATION AND DESCRIPTION

The project parcel is identified as an unaddressed parcel (assessor parcel #079-210-053) located at the northern terminus of Viajero Drive, Goleta, California. The Project site parcel is comprised of 2.1 acres of undeveloped area. The Project will occupy the central portion of the parcel.

Surrounding uses include Union Pacific Railroad (UPRR) rail line right-of-way and an associated earthen berm along the northern perimeter of the Project site parcel; U.S. Interstate Highway 101 (US 101) and residential neighborhoods north of UPRR; a commercial parking lot and Ellwood Elementary School to the east; GenOn's Ellwood Generating Station (EGS), Las Armas Road, and the Hideaway residential neighborhood (accessed from Las Armas Road at Sanderling Lane) to the west; the Mariposa at Ellwood Shores elder care facility to the southeast (accessed from the east side of Viajero Drive); and a vacant commercial parking lot and Hollister Avenue to the south.

A 64-foot-wide undeveloped private road easement, referred to as Campesino Drive, runs east-west between Las Armas Road and the northern terminus of Viajero Drive. This easement is on the adjacent parcel to the south (vacant commercial parking lot), and it abuts the Project site parcel's southern border.



Land uses south of Hollister Avenue include Sandpiper Golf Course, The Bluffs residential neighborhood, Ellwood Mesa Open Space and Sperling Reserve, and the Pacific Ocean.

The Project site parcel and adjacent parcels to the east, south, and southeast are zoned General Commercial (CG). The adjacent EGS parcel to the west and the Ellwood Elementary School to the east are zoned Public/Quasi Public. The Hideaway residential neighborhood west of Las Armas Road is zoned Planned Residential.

Figure 1 shows the location of the Site and the vicinity area.

FIGURE 1: SITE LOCATION AND VICINITY AREA



The site is undeveloped, and no current or historical uses of the Project site parcel have been identified. The Project site parcel is generally flat lying, and slopes gently from north to south. An informal dirt footpath has been established along the eastern portion of the Project site parcel, entering from Viajero Drive.

The proposed project is comprised of a new battery energy storage system (BESS) facility. Associated site features include development of a new internal access driveway, landscape areas, drainage conveyance and a new stormwater control measure (SCM) consisting of a bioretention basin at the southern perimeter of the operational area. A 20-foot-wide internal perimeter road will encompass the BESS equipment and provide dual access from Viajero Drive in the southeast corner and from the adjacent EGS property in the southwest corner.

The project includes a disturbance area greater than 15,000 sf and less than 22,500 sf. In accordance with California Regional Water Quality Control Board for the Central Coast Region (Water Board) guidelines, the site is classified as Tier 3. Accordingly, the project must comply with the following requirements:

- Prevent offsite discharge from events up to the 95th percentile rainfall event using Stormwater Control Measures.

B. EXISTING SITE FEATURES AND CONDITIONS

The Project site parcel is undeveloped land located in the City of Goleta, in southern Santa Barbara County, California. Parcel access is from the northern terminus of Viajero Drive, approximately one-quarter mile north of Hollister Avenue.

The site area is 91,476 sf (2.1 acres). No current or historical uses of the Project site parcel have been identified. The site is pervious area covered by vegetation. Site vegetation consists primarily of sparse weeds, shrubs, and grasses, with a few trees along the western perimeter. The Project site parcel is generally flat lying, and slopes gently from north to south. Stormwater from the majority of the site drains generally to the south and discharges to the existing wetland at the south edge of the site. The majority of the wetland feature is located on the adjacent parcel to the south.

Soils present at the Site consist of MeC-Milpitas-Positas fine sandy loams soil.

The site is primarily composed of hydrologic soil group D which has a very slow infiltration rate and high runoff potential. The Soil Map and Hydrologic Soil Group descriptions are presented in the Appendix C.

C. OPPORTUNITIES AND CONSTRAINTS FOR STORMWATER CONTROL

The site provides opportunities to control stormwater onsite through the incorporation of self-retaining permeable areas. These areas include permeable gravel ground cover surrounding each battery storage unit and a permeable gravel base access road. Additionally, a new 2,610 sf bioretention basin at the south edge of the battery development will treat runoff from the site and infiltrate it into the ground.

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 areas will be routed to SCM-1 by surface grading and through the landscape area at the south of the site.

D. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES TO BE IMPLEMENTED ONSITE:

- Dispersal of runoff to proposed pervious areas – landscaping, bioswales and bioretention basin, permeable pavement with underdrains, permeable gravel areas, permeable gravel access roads.
- Limiting of clearing and grading of native vegetation to minimum area needed.
- Minimization of compaction of highly permeable soils.

III. DOCUMENTATION OF DRAINAGE DESIGN

A. DESCRIPTIONS OF EACH DRAINAGE MANAGEMENT AREA

The proposed project primarily consists of two disturbance areas and one undeveloped sub drainage area. The main site drainage area at the north consists of a drainage management area (DMA), which is directed to SCM-1 with an area of 2,610 sf.

The sub-drainage area at the southeast of the site includes the entrance to the facility and consists of no impervious area. This permeable pavement area will drain to an underdrain and the runoff will be infiltrated from there.

The sub-drainage area at the southwest portion of the property will remain undeveloped and is not included in the proposed plan and disturbance area.

DMAs are shown Appendix B and summarized in Table 2.

TABLE 2: DRAINAGE MANAGEMENT AREAS (DMAS)

DMA Name	Surface Type	Area (sf)
DMA1: Battery storage and facility pads - Drains to SCM1	Concrete Pavement	18,758
DMA2: Pervious area - Drains to SCM1	Permeable Gravel	51,032
DMA3: Self -Treating	Landscape	11,830
DMA4: Pervious area - Drains to Self -Retaining	Permeable Gravel	920
DMA5: Self - Retaining	Permeable Gravel	732

B. ONSITE STORM WATER CONTROL MEASURES (SCMS)

Proposed onsite impervious surface development at the main drainage area (I) will drain to SCM-1 which consists of a bioretention basin with a surface area of 2,610 sf at the south edge of the battery operational area. The proposed bioretention basin is designed to treat and detain peak flows and maximize stormwater infiltration. The basin consists of a 2.5-foot-deep rock section below a 2-foot sand/compost section. The basin capacity is approximately 2,364 cubic feet.

The runoff from the sub-drainage area at the southeast of the site will drain to the underdrain trench with a surface area of 732 sf. The trench depth is 1-foot-deep. The underdrain capacity is approximately 219 cubic feet.

The project results in no peak flow increase for the 2- to 100-year storms because of a net improvement in the site permeability and runoff characteristics. Therefore, detention routing



analysis for design storm peak flows through the proposed SCM is not necessary. Refer to “Drainage Analysis, Greenbark 30 Battery Energy Storage Project” report dated June 21, 2024, for detailed calculations.

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 Appendix A, “Central Coast Region Storm Water Control Measure Sizing Calculator”).

It is important to note that the SCM Calculator input includes the area of the DMAs, 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.

D. TABULATION AND SIZING CALCULATIONS

The site water quality design measures are summarized in Table 2 and Table 3.

TABLE 3: INFORMATION SUMMARY FOR LID FACILITY/STORM WATER CONTROL MEASURE – MAIN DRAINAGE AREA

Total Project Area (sf)	91,476 sf
Design Storm Depth (95 th percentile) (in)	2.2 inches
Applicable Requirements	Applicable Requirements Tier 3
Storm Water Control Measure(s)	2,610 sf bioretention basin

TABLE 4: LID/STORM WATER CONTROL MEASURES SIZING AND VOLUMES

LID / SCM	Area (sf)	Capacity (cu-ft)
Bioretention Basin	2,610	2,364
Direct Infiltration	732	293

IV. SOURCE CONTROL MEASURES

Site activities and potential sources of pollutants are described in Table 5.

TABLE 5: SOURCE CONTROL TABLE

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
Landscaping, Pesticide Use/Building and	Final Landscape Plans shall:	Maintain landscaping using minimum or no pesticides.



<p>Grounds Maintenance</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. 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 ensure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</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>
<p>Outdoor Storage of Equipment or Materials</p>	<p>Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains.</p> <p>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, Underground Storage Tank</p>	<p>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>
<p>Vehicle/Equipment Repair and Maintenance</p>	<p>No vehicle repair or maintenance will be done outdoors.</p> <p>No floor drains allowed in these areas.</p> <p>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>	<p>No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinse water from parts cleaning into storm drains.</p> <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> <p>No person shall leave unattended drip parts or other open containers</p>

		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 Enclosures		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 wash water containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

V. STORMWATER FACILITY MAINTENANCE

The following Maintenance Agreement will be timely executed between the Project owner and the City of Goleta.

Ownership and Responsibility for Maintenance in Perpetuity

OWNER:

PROPERTY ADDRESS:

APN:

THIS AGREEMENT is made and entered into in _____, California, this ____ day of _____, by and between _____, hereafter referred to as “**Owner**” and the City of Goleta, a municipal corporation, State of California hereinafter referred to as “**City**”;

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 1 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

BMP Description	See Plan Sheet Number
Bioretention Basin	Plan Sheet C-400 Preliminary ESC Design; Plan Sheet C-401 ESC Details

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.



APPENDIX A STORM WATER CONTROL MEASURE SIZING

CENTRAL COAST REGION STORM WATER CONTROL MEASURE SIZING CALCULATOR



ERM

Central Coast Region Stormwater Control Measure Sizing Calculator

Version: 7/2/2018

1. Project Information

Project name:	GREENBACK 30 BATTERY ENERGY STORAGE	
Project location:	Gotela, CA	
Tier 2/Tier 3:	Tier 3 - Retention	
Design rainfall depth (in):	2.2	
Total project area (ft²):	85882	
Total DMA area (ft ²):	83272	
Total new impervious area (ft ²):	18758	
Total replaced impervious within a USA (ft ²):		
Total replaced impervious not in a USA (ft ²):		
Total pervious/landscape area (ft ²):	64514	
Total SCM area (ft ²):	2610	

2. DMA Characterization

Add DMA Row

Remove DMA Row

Name	DMA Type	Area (ft ²)	Surface Type	New, Replaced?	Connection
DMA1	Drains to SCM	18758	Concrete or asphalt	New	SCM1
DMA2	Drains to SCM	51032	Crushed aggregate	Replaced	SCM1
DMA3	Self-Treating	11830			
DMA4	Drains to Self-Retaining	920	Crushed aggregate		DMA5
DMA5	Self-Retaining	732			

DMA Summary Area

Total assigned DMA area (ft ²):	83272
New impervious area (ft ²):	18758
Replaced impervious within a USA (ft ²):	0
Replaced impervious not in a USA (ft ²):	0
Total pervious/landscape area (ft ²):	63594

3. SCM Characterization

Add SCM Row

Remove SCM Row

Name	SCM Type	Safety Factor	SCM Soil Type	Infiltr. Rate (in/hr)	Area (ft ²)	Flow Control	Reservoir
SCM1	Bioretention	1	HSG C/D	0.25	2610	Orifice?	Depth (in)
						No	

4. Run SBUH Model

Launch Model

Clear Results

5. SCM Minimum Sizing Requirements

SCM Name	Min. Required Storage Vol. (ft ³)	Depth Below Underdrain (ft)	Drain Time (hours)	Orifice Diameter (in)
SCM1	2364	2.26	43.5	

6. Self-Retaining Area Sizing Checks

Self-Retaining DMA Name	Self-Retaining DMA Area (ft ²)	Tributary DMA Name(s)	Eff. Tributary DMA Area (ft ²)	Effective Tributary / SRA Area Ratio
DMA5	732	DMA4	0	0.00



APPENDIX B STORM WATER CONTROL PLAN

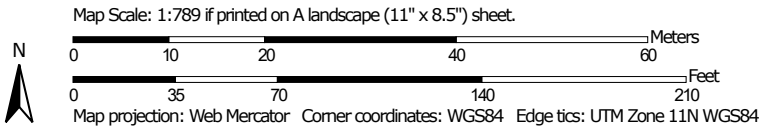


APPENDIX C HYDROLOGIC SOIL REPORT

Soil Map—Santa Barbara County, California, South Coastal Part
(S_i)




Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 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



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 16, Sep 12, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 12, 2022—Apr 29, 2022

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
MeC	Milpitas-Positas fine sandy loams, 2 to 9 percent slopes	2.8	100.0%
Totals for Area of Interest		2.8	100.0%

Santa Barbara County, California, South Coastal Part

MeC—Milpitas-Positas fine sandy loams, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hc63

Elevation: 20 to 520 feet

Mean annual precipitation: 20 to 23 inches

Mean annual air temperature: 59 to 62 degrees F

Frost-free period: 360 to 365 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Milpitas and similar soils: 45 percent

Positas and similar soils: 35 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Milpitas

Setting

Landform: Terraces

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Mixed alluvium

Typical profile

H1 - 0 to 25 inches: fine sandy loam

H2 - 25 to 54 inches: gravelly clay

H3 - 54 to 68 inches: very gravelly sandy loam

Properties and qualities

Slope: 2 to 9 percent

Depth to restrictive feature: 20 to 28 inches to abrupt textural change

Drainage class: Moderately well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Ecological site: R015XD115CA - CLAYPAN
Hydric soil rating: No

Description of Positas

Setting

Landform: Terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 19 inches: fine sandy loam
H2 - 19 to 41 inches: clay
H3 - 41 to 68 inches: clay loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: 14 to 26 inches to abrupt textural change
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R015XD115CA - CLAYPAN
Hydric soil rating: No

Minor Components

Botella

Percent of map unit: 7 percent
Landform: Valleys
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Ballard

Percent of map unit: 7 percent
Landform: Alluvial fans

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Talf

Down-slope shape: Linear

Across-slope shape: Convex

Hydric soil rating: No

Eroded soils

Percent of map unit: 6 percent

Hydric soil rating: No

Data Source Information

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

Survey Area Data: Version 16, Sep 12, 2023



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