ATTACHMENT H:

OWP LID SIZING TOOL USER GUIDE

Valley Transportation Authority

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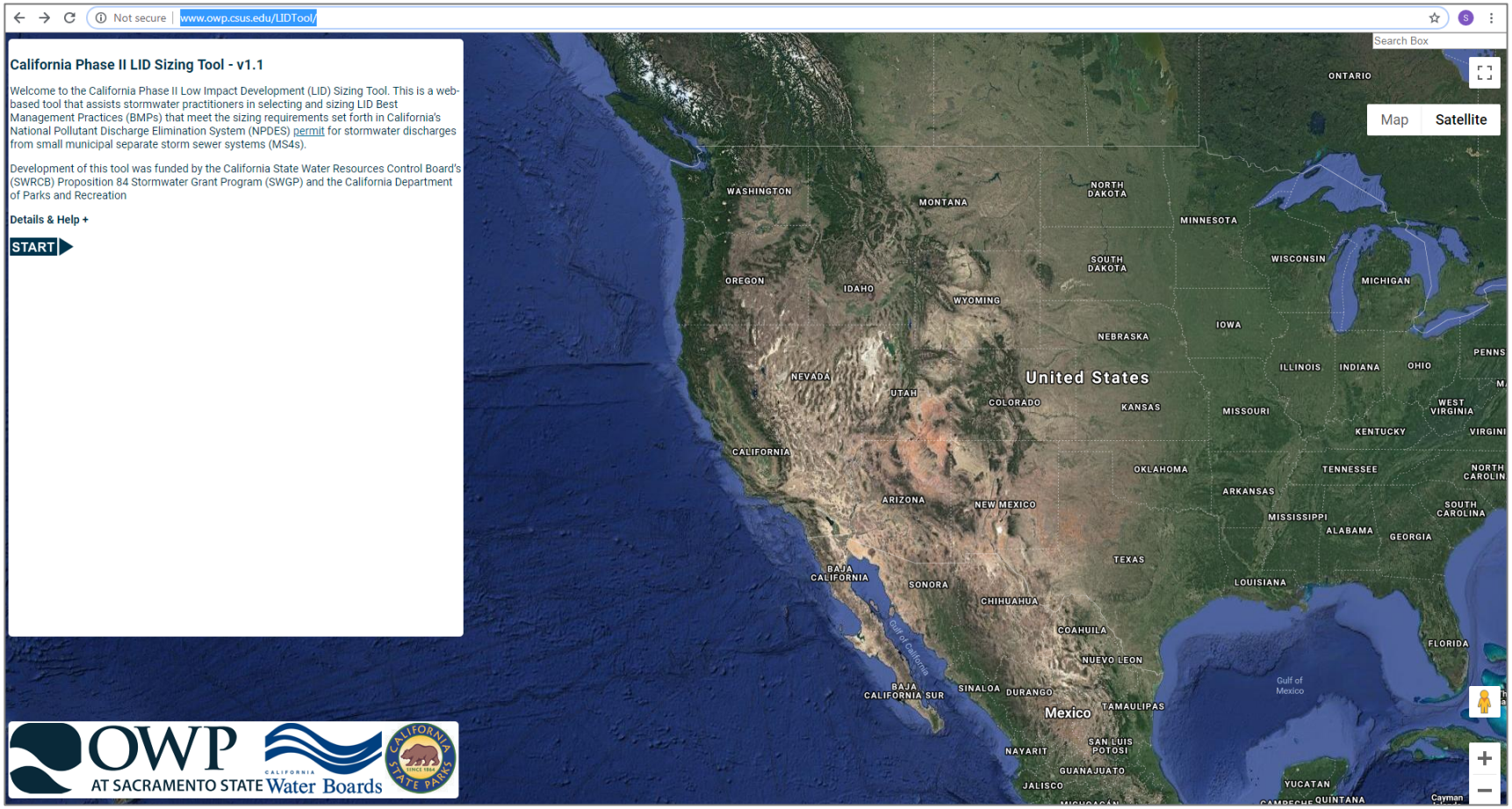
OWP LID Sizing Tool- User Guide

Use the Office of Water Programs online Low Impact Development (LID) Sizing Tool to select and size Stormwater Treatment Measures that meet the sizing requirements described in the MS4 permit. Access the online LID sizing tool at the following link: http://www.owp.csus.edu/LIDTool/ . The following steps will need to be completed for ***each*** Drainage Management Area (DMA).



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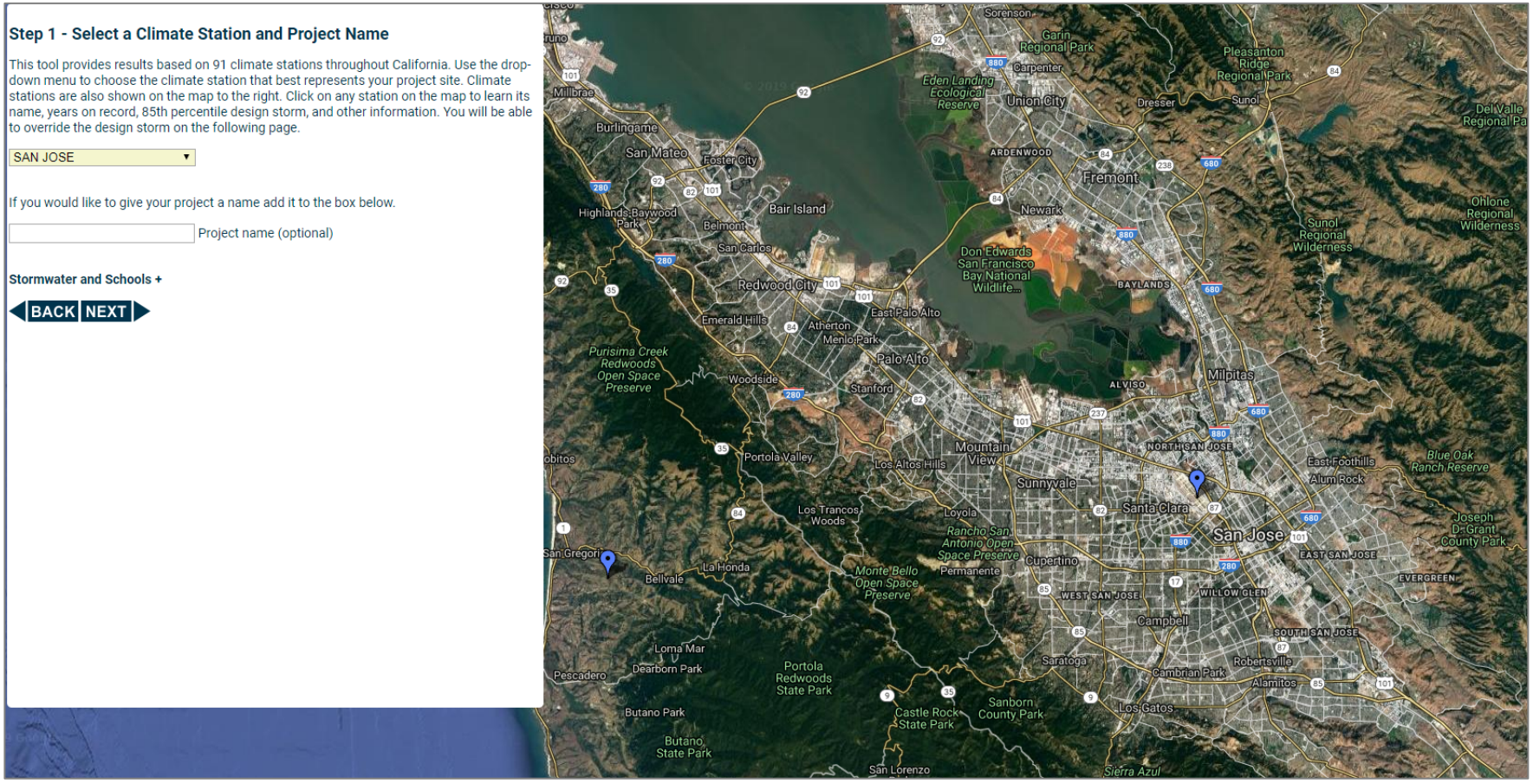
Step 1: Select a Climate Station nearest to your project, then click **Next**.



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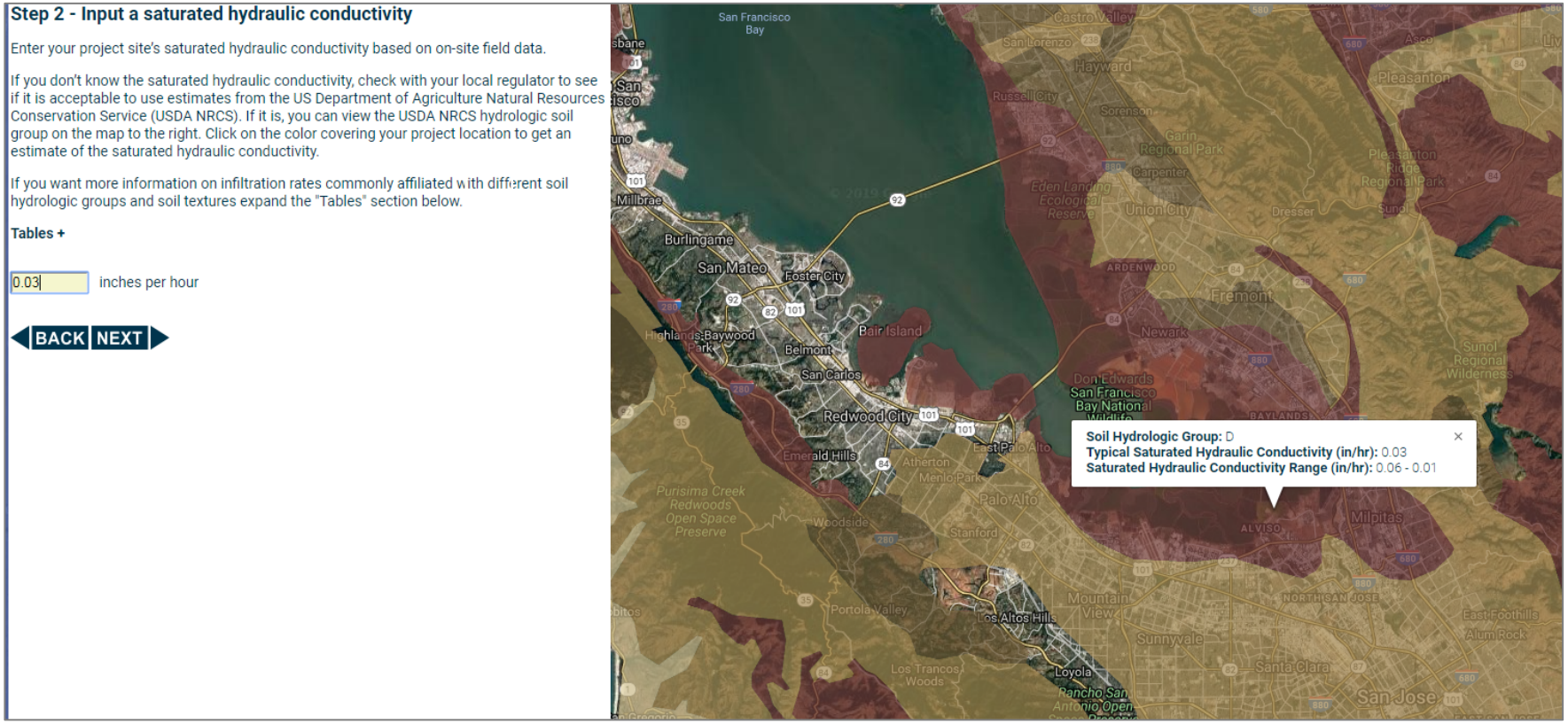
Step 2: Enter your project site's saturated hydraulic conductivity based on on-site field data, then click **Next.**



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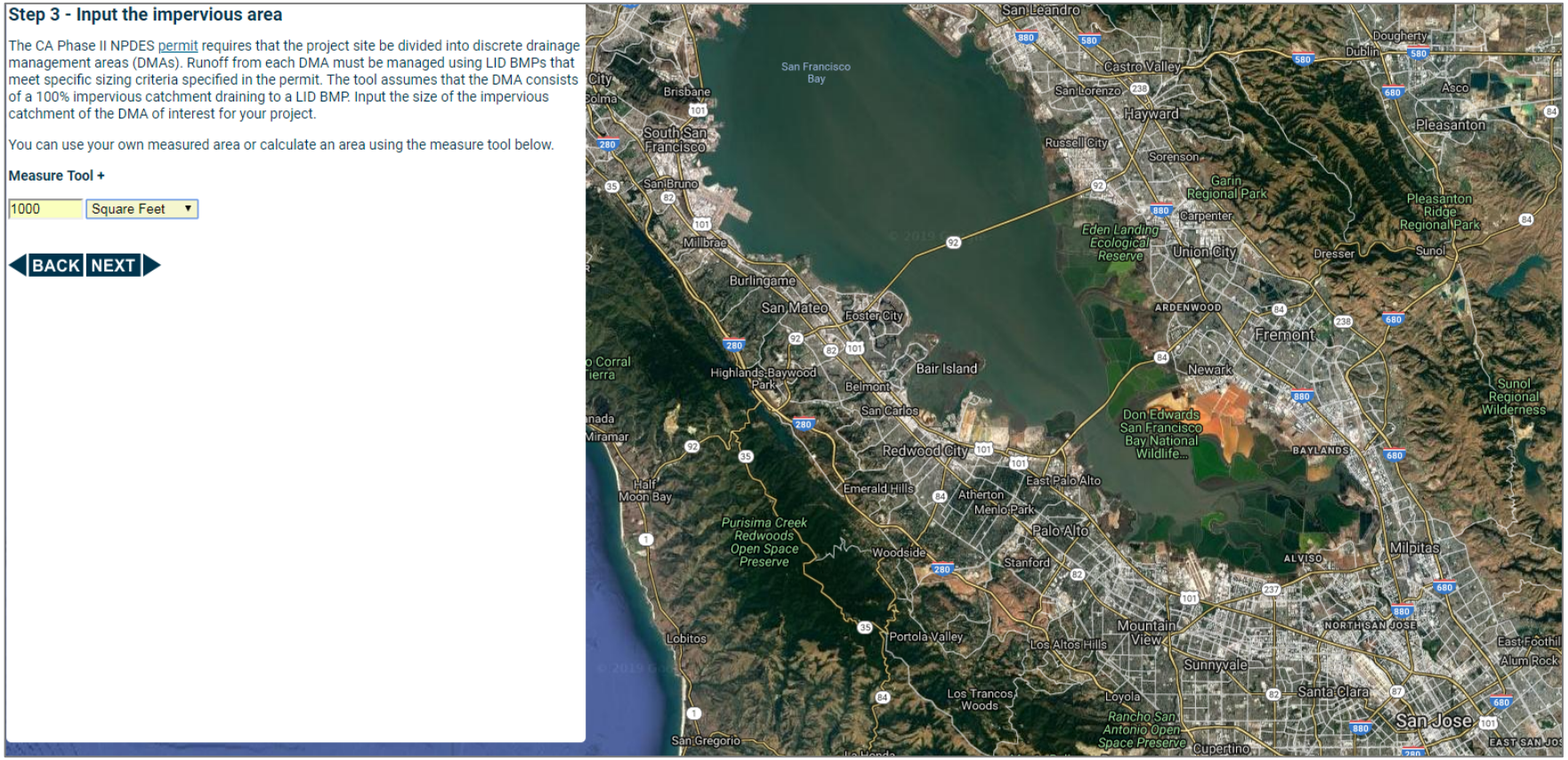
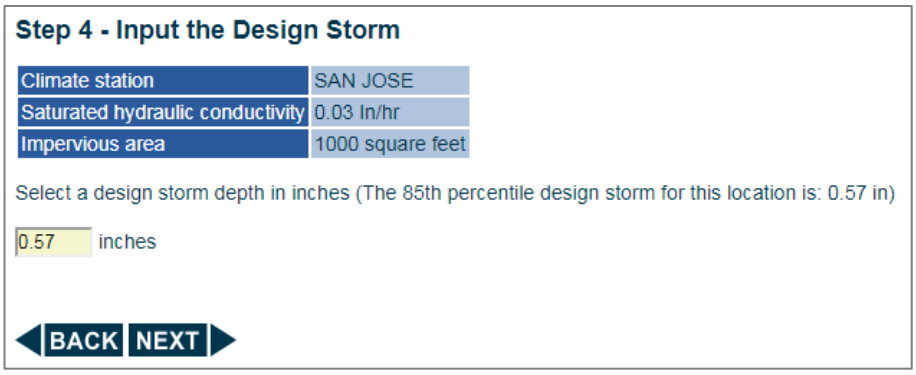
Step 3: Type in the impervious area of the DMA, then click **Next.**



Step 4: Type in the 85th percentile design storm depth in inches. This will be auto-calculated based on the location previously selected. Click **Next.**



Step 4 - Input the Design Storm

Climate station	SAN JOSE
Saturated hydraulic conductivity	0.03 In/hr
Impervious area	1000 square feet

Select a design storm depth in inches (The 85th percentile design storm for this location is: 0.57 in)

0.57 inches

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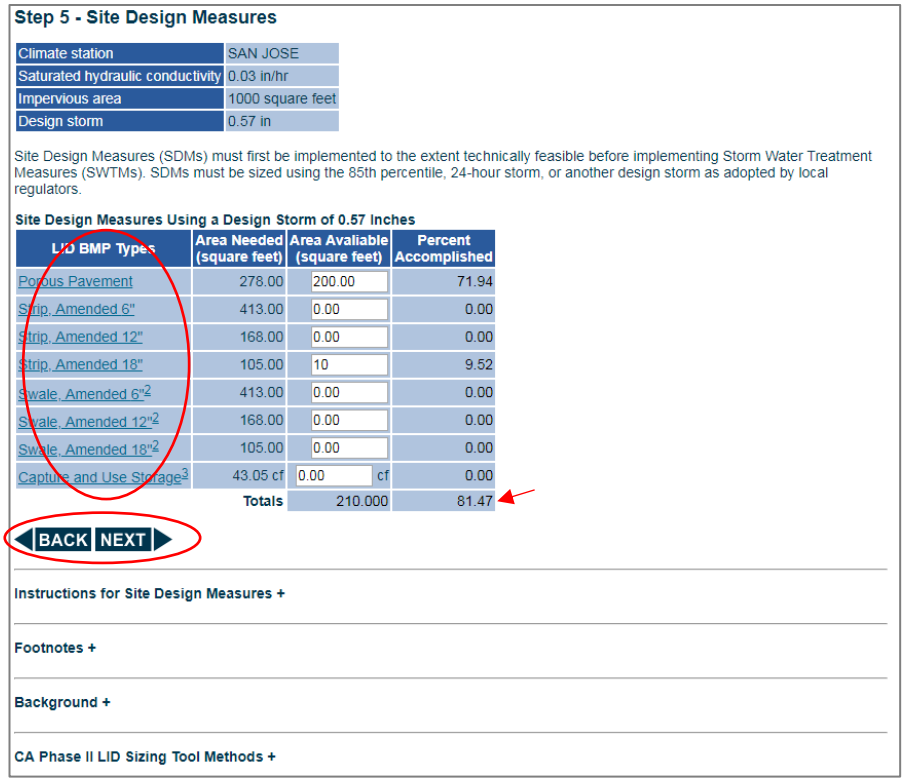
Step 5: Type in the area (SF) devoted to each Site Design Runoff Reduction Measure selected in **Attachment E** (Site Design Runoff Reduction Measure Checklists) of VTA's Landscaping and Design Criteria Manual. Click on the **LID BMP Types** or **Instructions for Site Design Measures** for descriptions of each type of Runoff Reduction Measure. Note the percent accomplished from the Site Design Runoff Reduction Measures. Click **Next.**



Step 5 - Site Design Measures

Climate station	SAN JOSE
Saturated hydraulic conductivity	0.03 in/hr
Impervious area	1000 square feet
Design storm	0.57 in

Site Design Measures (SDMs) must first be implemented to the extent technically feasible before implementing Storm Water Treatment Measures (SWTMs). SDMs must be sized using the 85th percentile, 24-hour storm, or another design storm as adopted by local regulators.

Site Design Measures Using a Design Storm of 0.57 Inches

LID BMP Types	Area Needed (square feet)	Area Avaliable (square feet)	Percent Accomplished
Porous Pavement	278.00	200.00	71.94
Strip, Amended 6"	413.00	0.00	0.00
Strip, Amended 12"	168.00	0.00	0.00
Strip, Amended 18"	105.00	10	9.52
Swale, Amended 6"[2]	413.00	0.00	0.00
Swale, Amended 12"[2]	168.00	0.00	0.00
Swale, Amended 18"[2]	105.00	0.00	0.00
Capture and Use Storage[3]	43.05 cf	0.00 cf	0.00
	Totals	210.000	81.47

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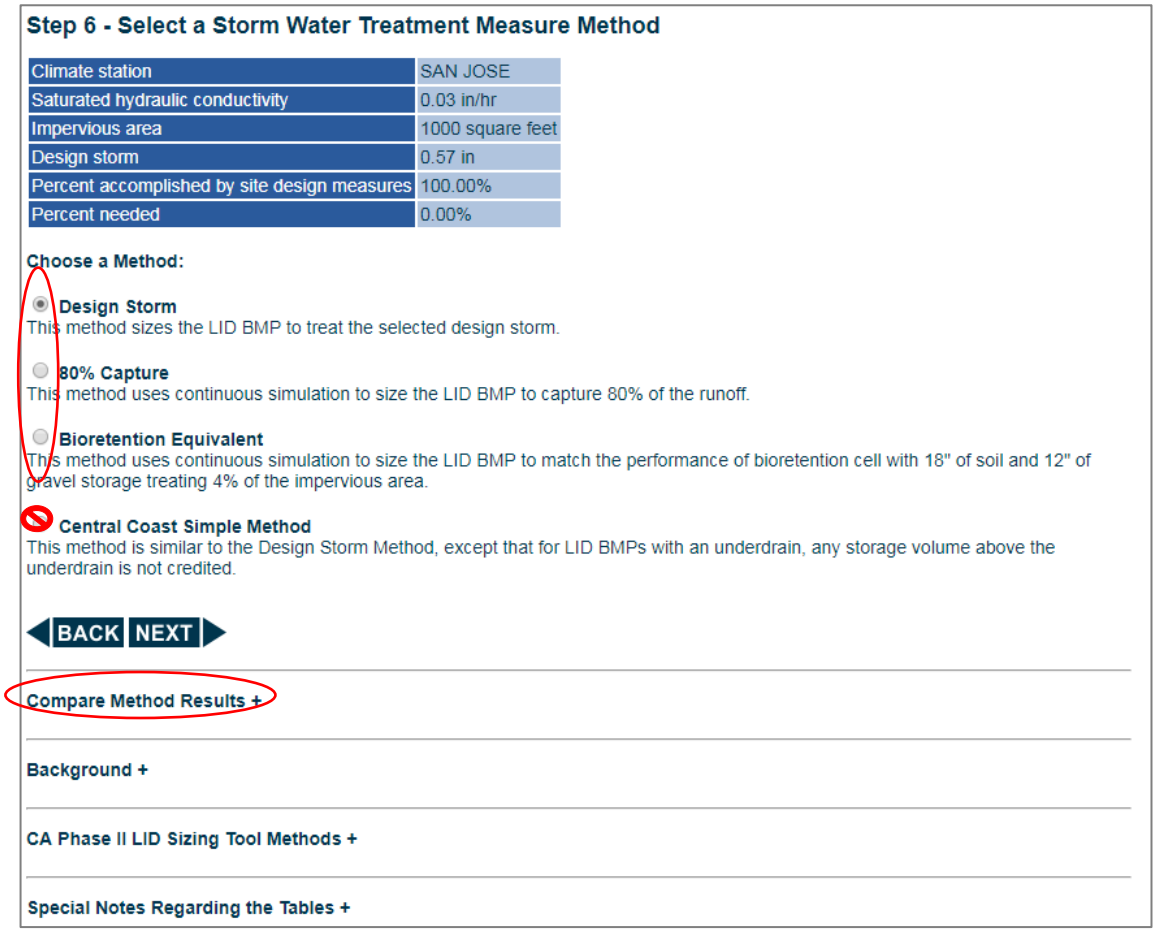
Step 6: Select the Stormwater Treatment Measure Method used to size the Stormwater Treatment Measures selected in **Attachment D2** (Stormwater Control Plan for Regulated Projects) of VTA's Landscaping and Design Criteria Manual. **Note**: The **Central Coast Simple Method** should not be selected, as this method is not applicable to VTA projects and is not included in the MS4 permit (2013). Click Compare Method Results for a comparison of sizing criteria based on the available methods. Click **Next.**



Step 7: Type in the area (SF) devoted to each Stormwater Treatment Measure selected in **Attachment D2** (Stormwater Control Plan for Regulated Projects). Click on the **LID BMP Types** or **Instructions for Storm Water Treatment Measures** for descriptions of each type of Stormwater Treatment Measure. Note the percent accomplished from the Stormwater Treatment Measures selected. Click **Next.**

Step 7 - Use a Storm Water Treatment Measure

Climate station	SAN JOSE
Saturated hydraulic conductivity	0.03 in/hr
Impervious area	1000 square feet
Design Storm	0.57 inches
Method	Design Storm

LID BMP Types	Area Needed (square feet)	Area Avaliable (square feet)	Percent Accomplished
Bioretention Cell - 18" Soil - 12" Gravel Storage	33.83	10	29.56
Bioretention Cell - 18" Soil - 24" Gravel Storage	26.44	0.00	0.00
Bioretention Cell - 18" Soil - 36" Gravel Storage	21.70	0.00	0.00
Bioretention Cell - 24" Soil - 12" Gravel Storage	30.21	0.00	0.00
Bioretention Cell - 24" Soil - 24" Gravel Storage	24.18	0.00	0.00
Bioretention Cell - 24" Soil - 36" Gravel Storage	20.15	0.00	0.00
Bioretention Cell - Soil Depth Varies[5] - No Gravel Storage	218.00	0.00	0.00
Infiltration Basin - Vegetated	356.00	0.00	0.00
Infiltration Gallery	93.64	0.00	0.00
Infiltration Trench	270.00	0.00	0.00
Overland Flow no amendment	N/A	N/A	N/A
Porous Pavement	278.00	0.00	0.00
Strip, Amended 6"	413.00	0.00	0.00
Strip, Amended 12"	168.00	0.00	0.00
Strip, Amended 18"	105.00	0.00	0.00
Swale, Amended 6"[6]	413.00	0.00	0.00
Swale, Amended 12"[6]	168.00	0.00	0.00
Swale, Amended 18"[6]	105.00	0.00	0.00
Capture and Use Storage[7]	43.05 cf	0.00 cf	0.00
Site Design Measures		210.000	81.47
	Totals	220.000	111.03

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Step 8: Ensure that the Total Percent Accomplished is greater than or equal to 100.00. Take a Screen Shot of this Summary and attach it to the Stormwater Control Plan (SWCP).

Step 8 - Summary

Climate station	SAN JOSE
Saturated hydraulic conductivity	0.03 in/hr
Design Storm	0.57 inches

Method	LID BMP Types	Area Needed (square feet)	Area Avaliable (square feet)	Percent Accomplished	Volume Evaporated (acre-ft/year)	Volume Infiltrated (acre-ft/year)	Volume of Passing Through the Underdrain (acre-ft/year)	Volume Untreated (acre-ft/year)
Site Design Measure - Design Storm	Porous Pavement	278.00	200.00	71.94	-	-	-	-
Site Design Measure - Design Storm	Strip, Amended 18"	105.00	10	9.52	-	-	-	-
Design Storm	Bioretention Cell - 18" Soil - 12" Gravel Storage	33.83	10	29.56	-	-	-	-
	Total LID BMP Area		220	111.02	-	-	-	-
	Total Impervious Area		1000	0.00	-	-	-	-
	Totals		1220.00	111.02	-	-	-	-

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