

Butterfly + Songbird

GARDEN DESIGN DOCUMENT PACKAGE



FOR MORE INFORMATION VISIT:
INLANDVALLEYGARDENPLANNER.ORG



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Community
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Conservation District

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Butterfly & Songbird GARDEN DESIGN

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Plant shown in image :

SHOWY PENSTEMON
Penstemon spectabilis

Online Resources

PLAN YOUR GARDEN USING :

inlandvalleygardenplanner.org

The screenshot shows the 'Plant finder' section of the Inland Valley Garden Planner website. At the top, there are logos for the Water Conservation District, Waterwise Community Center, and the Garden Planner. A search bar is present with a search icon and 'Login' and 'Sign Up' links. Below the search bar, there are navigation links for 'Plant finder', 'Garden designs', and 'Helpful lists'. The main content area features a large image of purple flowers with a 'Plant finder' button overlaid. Below this is a search bar with the text 'Search by plant name' and a search icon. To the left, there are 'SEARCH CRITERIA' sections: 'PLANT TYPE' (Tree, Palm, Shrub, Vine, Perennial, Ground Cover, Grass, Succulent, California Native), 'WATER NEEDS' (Low Water Needs, Moderate Water Needs), 'CHARACTER' (Evergreen, Deciduous), 'SUN EXPOSURE' (Full Sun, Partial Sun, Shade), 'AESTHETICS' (Colorful Flowers, Pleasing Fragrance, Fall Color), and 'FUNCTIONS' (Hedges or Screens, Butterfly Plants, Bird, Wildlife Plants, Container Plants, Lawn Alternatives, Plants for Small Spaces, Plants for Slopes, Plants for Clay Soil). The search results show '58 PLANTS FOUND' and a list of shrubs. Three plants are visible: 'Allen Chickering sage' (Salvia 'Allen Chickering'), 'Ashleaf buckwheat' (Eriogonum cinereum), and 'Baja bush-snapdragon' (Galvezia juncea). Each plant entry includes a small image, the common name, botanical name, plant type, water needs, exposure, and height/width, along with a 'More info' button.

FOR MORE ABOUT GARDEN DESIGN, PLANT SELECTION, PLANT CARE TIPS & TRICKS AND MORE VISIT: inlandvalleygardenplanner.org

Plant List

FOR BUTTERFLY + SONGBIRD GARDEN DESIGN

COMMON NAME	SCIENTIFIC NAME
ALLEN CHICKERING SAGE	<i>Salvia 'Allen Chickering'</i>
CALIFORNIA BUSH SUNFLOWER	<i>Encelia californica</i>
CALIFORNIA COFFEEBERRY	<i>Rhamnus californica / Frangulia californica</i>
COFFEEBERRY 'EVE CASE'	<i>Frangulia californica 'Eve Case'</i>
COMMON YARROW	<i>Achillea millefolium</i>
CREeping BARBERRY	<i>Berberis repens</i>
DEER GRASS	<i>Muhlenbergia rigens</i>
DESERT MALLOW	<i>Sphaeralcea ambigua</i>
DESERT WILLOW	<i>Chilopsis linearis</i>
GOLDEN CURRANT	<i>Ribes aureum var. garcillium</i>
HUMMINGBIRD SAGE	<i>Salvia spathacea</i>
LILAC VERBENA	<i>Verbena lilacina 'De La Mina'</i>
MARGARITA FOOTHILL PENSTEMON	<i>Penstemon heterophyllus 'Margarita BOP'</i>
MULEFAT	<i>Baccharis salicifolia</i>
PALMER'S MALLOW	<i>Abutilon palmeri</i>
RED BUCKWHEAT	<i>Eriogonum grande var. rubescens</i>
SANTA CRUZ ISLAND BUCKWHEAT	<i>Eriogonum arborescens</i>
SUNSET MANZANITA	<i>Arctostaphylos 'Sunset'</i>



Small Yard Design

Document Package

500 SQ FT.

Includes :

- 05 Small Front Yard Design
- 06 Small Front Yard Design *(with plant labels)*
- 07 Small Front Yard Design | Plan View



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BUTTERFLY + SONGBIRD GARDEN

Small Front Yard Design

NOTES :

- 1** Decomposed Granite pathway
SEE DECOMPOSED GRANITE DETAIL PAGE
- 2** French drain at edge of landscape at sidewalk, to capture
water running off - SEE FRENCH DRAIN DETAIL PAGE
- 3** Optional light seeding of california annual wildflowers
in open mulch areas - SEE WILDFLOWERS DETAIL PAGE



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BUTTERFLY + SONGBIRD GARDEN
Small Front Yard Design
WITH PLANT LABELS

NOTES :





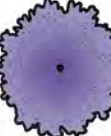
- 1 Decomposed Granite pathway
SEE DECOMPOSED GRANITE DETAIL PAGE
- 2 French drain at edge of landscape at sidewalk, to capture
water running off - SEE FRENCH DRAIN DETAIL PAGE
- 3 Optional light seeding of california annual wildflowers
in open mulch areas - SEE WILDFLOWERS DETAIL PAGE






Perennials/Shrubs ≤ 4'

-  *Achillea millefolium*
Common Yarrow - 1.5'
-  *Eriogonum grande var. rubescens*
Red Buckwheat - 2'
-  *Penstemon heterophyllus 'Margarita BOP'*
Margarita Foothill Penstemon - 2'
-  *Salvia spathacea*
Hummingbird Sage - 2'
-  *Verbena 'De La Mina'*
Lilac Verbena - 3'

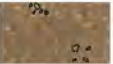

Shrubs > 5'

-  *Abutilon palmeri*
Palmer's Mallow - 5'
-  *Arctostaphylos 'Sunset'*
Sunset Manzanita - 5'
-  *Eriogonum arborescens*
Santa Cruz Island Buckwheat - 5'
-  *Muhlenbergia rigens*
Deer Grass - 6'
-  *Salvia 'Allen Chickering'*
Allen Chickering Sage - 6'

Landscape Elements

-  Birdbath
-  Boulders
-  Stepping stones

Groundcovers

-  Decomposed Granite
-  Woodchip mulch

NOTES :

- 1** Optional light seeding of annual wildflower in open mulch areas
SEE WILDFLOWERS DETAIL PAGE
- 2** French drain at edge of landscape where it meets sidewalk.
This will help capture any water running off of the landscape area
SEE FRENCH DRAIN DETAIL PAGE

Medium Yard Design

Document Package

1,200 SQ FT.

Includes :

- 09** Medium Front Yard Design
- 10** Medium Front Yard Design *(with plant labels)*
- 11** Medium Front Yard Design | Plan View
- 12** Medium Front Yard Design *(without tree + front shrubs)*
- 13** Medium Front Yard Design *(with plant labels + without tree & front shrubs)*



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BUTTERFLY + SONGBIRD GARDEN Medium Front Yard Design

NOTES :

- 1 Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2 Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE



EVE CASE CALIFORNIA COFFEEBERRY

SANTA CRUZ ISLAND BUCKWHEAT

LILAC VERBENA

DESERT WILLOW

EVE CASE CALIFORNIA COFFEEBERRY

DEER GRASS

DESERT MALLOW

PALMER'S MALLOW

RED BUCKWHEAT

ALLEN CHICKERING SAGE

LILAC VERBENA

RED BUCKWHEAT

MARGARITA FOOTHILL PENSTEMON

RED BUCKWHEAT

MARGARITA FOOTHILL PENSTEMON



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BUTTERFLY + SONGBIRD GARDEN
Medium Front Yard Design
WITH PLANT LABELS

NOTES :







- 1 Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2 Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE



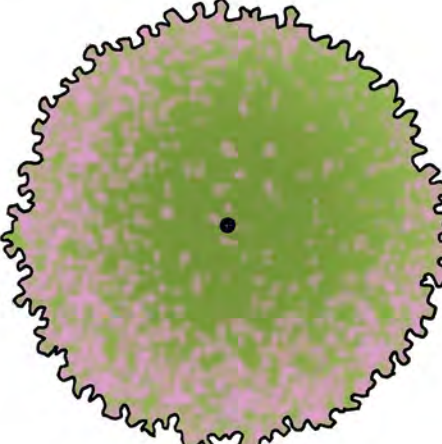
Perennials/Shrubs ≤ 4'

-  *Achillea millefolium*
Common Yarrow - 1.5'
-  *Eriogonum grande var. rubescens*
Red Buckwheat - 2'
-  *Muhlenbergia rigens*
Deer Grass - 4'
-  *Penstemon heterophyllus 'Margarita BOP'*
Margarita Foothill Penstemon - 2'
-  *Ribes aureum*
Golden Currant - 3'
-  *Sphaeralcea ambigua*
Desert Mallow - 4'
-  *Salvia spathacea*
Hummingbird Sage - 2'
-  *Verbena 'De La Mina'*
Lilac Verbena - 4'

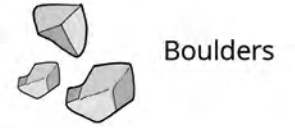
Shrubs > 4'

-  *Abutilon palmeri*
Palmer's Mallow - 5'
-  *Arctostaphylos 'Sunset'*
Sunset Manzanita - 5'
-  *Encelia californica*
California Bush Sunflower - 6'
-  *Eriogonum arborescens*
Santa Cruz Island Buckwheat - 6'
-  *Frangula (Rhamnus) californica 'Eve Case'*
Eve Case California Coffeeberry - 5'
-  *Salvia 'Allen Chickering'*
Allen Chickering Sage - 6'

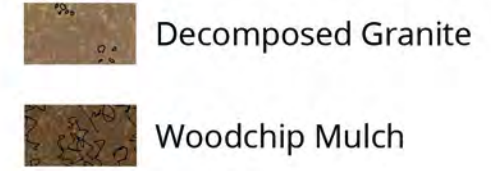
Trees

-  *Chilopsis linearis*
Desert Willow - 20'

Landscape Elements



Groundcovers



- NOTES :**
- 1** Optional seeding of annual wildflowers in open mulch areas
SEE WILDFLOWERS DETAIL PAGE
 - 2** Dry stream bed to capture water from roof
SEE DRY STREAM BED DETAILS PAGE
 - 3** Decomposed Granite walking strip along curb for car door exit
SEE DECOMPOSED GRANITE DETAIL PAGE



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BUTTERFLY + SONGBIRD GARDEN

Medium Front Yard Design

WITHOUT TREE & FRONT SHRUBS

NOTES :

- 1** Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2** Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE



EVE CASE CALIFORNIA COFFEEBERRY

SANTA CRUZ ISLAND BUCKWHEAT

CALIFORNIA BUSH SUNFLOWER

SUNSET MANZANITA

GOLDEN CURRANT

EVE CASE CALIFORNIA COFFEEBERRY

LILAC VERBENA

COMMON YARROW

DEER GRASS

RED BUCKWHEAT

ALLEN CHICKERING SAGE

LILAC VERBENA

RED BUCKWHEAT

MARGARITA FOOTHILL PENSTEMON

RED BUCKWHEAT

MARGARITA FOOTHILL PENSTEMON



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BUTTERFLY + SONGBIRD GARDEN

Medium Front Yard Design

WITH PLANT LABELS + WITHOUT TREE & FRONT SHRUBS

NOTES :

- 1 Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2 Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE

Large Yard Design

Document Package

1,800 SQ FT.

Includes :

- 15** Large Front Yard Design
- 16** Large Front Yard Design *(with plant labels)*
- 17** Large Front Yard Design | Plan View
- 18** Large Front Yard Design *(without trees)*
- 19** Large Front Yard Design *(with plant labels + without trees)*



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BUTTERFLY + SONGBIRD GARDEN Large Front Yard Design

NOTES :

- 1** Dry stream bed to capture water from roof
SEE DRY STREAM BED DETAIL PAGE
- 2** Rain chain - replaces roof drain downspout
where applicable (optional)



DESSERT
WILLOW

TOYON

EVE CASE
CALIFORNIA
COFFEEBERRY

CALIFORNIA
BUSH
SUNFLOWER

PALMER'S
MALLOW

LILAC
VERBENA

DEER
GRASS

SANTA CRUZ
ISLAND
BUCKWHEAT

DESERT
MALLOW

ALLEN
CHICKERING
SAGE

RED
BUCKWHEAT

DEER
GRASS

COMMON
YARROW

MARGARITA
FOOTHILL
PENSTEMON

COMMON
YARROW

COMMON
YARROW

NOTES :







- 1** Dry stream bed to capture water from roof
SEE DRY STREAM BED DETAIL PAGE
- 2** Rain chain - replaces roof drain downspout
where applicable (optional)



Perennials/Shrubs ≤ 4'

-  *Achillea millefolium*
Common Yarrow - 1.5'
-  *Eriogonum grande var. rubescens*
Red Buckwheat - 2'
-  *Muhlenbergia rigens*
Deer Grass - 4'
-  *Penstemon heterophyllus 'Margarita BOP'*
Margarita Foothill Penstemon - 2'
-  *Sphaeralcea ambigua*
Desert Mallow - 4'
-  *Verbena 'De La Mina'*
Lilac Verbena - 3'





Shrubs ≥ 5'

-  *Abutilon palmeri*
Palmer's Mallow - 5'
-  *Arctostaphylos 'Sunset'*
Sunset Manzanita - 5'
-  *Encelia californica*
California Bush Sunflower - 5'
-  *Eriogonum arborescens*
Santa Cruz Island Buckwheat -
-  *Frangulia (Rhamnus) californica 'Eve Case'*
Eve Case California Coffeeberry - 5'
-  *Salvia 'Allen Chickering'*
Allen Chickering Sage - 6'

Trees

- Chilopsis linearis*
Desert Willow - 20'
- Heteromeles arbutifolia*
Toyon - 18'

NOTES :

-  Optional light seeding of annual wildflower in open mulch areas
SEE WILDFLOWERS DETAIL PAGE
-  Dry stream bed to capture water from roof
SEE DRY STREAM BED DETAIL PAGE
-  Decomposed Granite walking strip along curb for car door exit
SEE DECOMPOSED GRANITE DETAIL PAGE
-  Rain chain as an option to replace roof drain downspouts, where applicable



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BUTTERFLY + SONGBIRD GARDEN

Large Front Yard Design

WITHOUT TREES

NOTES :

- 1** Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2** Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE
- 3** Rain chain - replaces roof drain downspout where applicable (optional)



DEER GRASS

DESERT MALLOW

ALLEN CHICKERING SAGE

MARGARITA FOOTHILL PENSTEMON

RED BUCKWHEAT

CALIFORNIA BUSH SUNFLOWER

LILAC VERBENA

MARGARITA FOOTHILL PENSTEMON

SUNSET MANZANITA

SANTA CRUZ ISLAND BUCKWHEAT

DEER GRASS

COMMON YARROW

COMMON YARROW



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BUTTERFLY + SONGBIRD GARDEN

Large Front Yard Design

WITH PLANT LABELS + WITHOUT TREES

NOTES :

- 1** Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2** Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE
- 3** Rain chain - replaces roof drain downspout where applicable (optional)

Extra-Large Yard Design

Document Package

2,500 SQ FT.

Includes:

- 21** Extra-Large Front Yard Design
- 22** Extra-Large Front Yard Design *(with plant labels)*
- 21** Patio Detail
- 23** Patio Detail *(with plant labels)*
- 24** Extra-Large Front Yard Design | Plan View
- 25** Extra-Large Front Yard Design *(without front tree)*
- 26** Extra-Large Front Yard Design *(with plant labels + without front tree)*
- 27** Extra-Large Front Yard Design *(without all trees)*
- 28** Extra-Large Front Yard Design *(with plant labeled + without all trees)*



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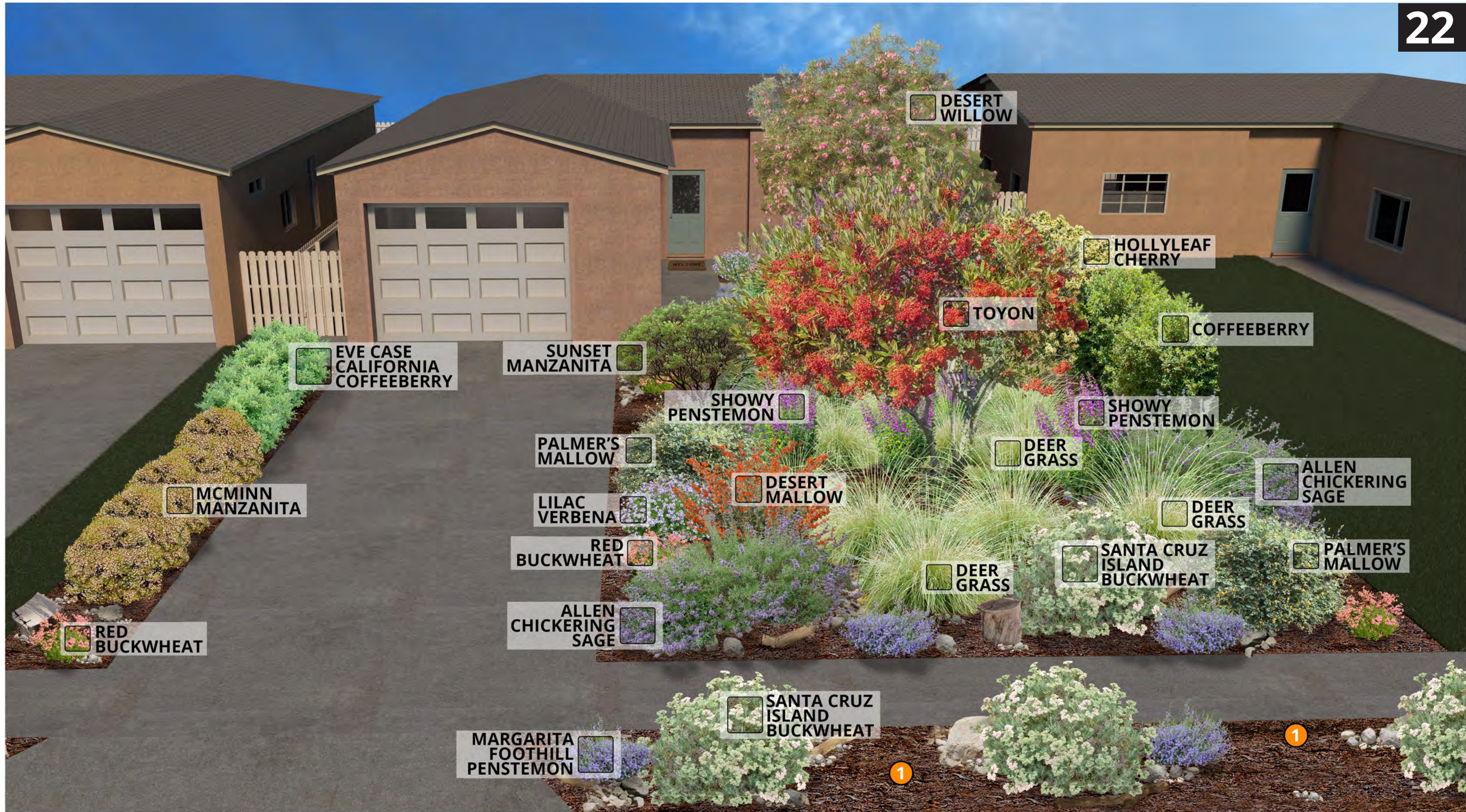
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BUTTERFLY + SONGBIRD GARDEN

Extra-Large Front Yard Design

NOTES :

- 1** Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2** Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE
- 3** Rain chain - replaces roof drain downspout where applicable (optional)



BUTTERFLY + SONGBIRD GARDEN
Extra-Large Front Yard Design
WITH PLANT LABELS

NOTES :

- 1** Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2** Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE
- 3** Rain chain - replaces roof drain downspout where applicable (optional)

SONGBIRD + BUTTERFLY GARDEN

Extra-Large Front Yard Design
PATIO DETAIL



1 Decomposed Granite pathway and patio
SEE PATHWAY DETAIL PAGE

2 Dry stream bed to capture water from roof
SEE DRY STREAM BED DETAIL PAGE



1

2

SONGBIRD + BUTTERFLY GARDEN

Extra-Large Front Yard Design
PATIO DETAIL



DESERT WILLOW

WESTERN REDBUD

LILAC VERBENA

GOLDEN CURRANT

EVE CASE CALIFORNIA COFFEEBERRY

COMMON YARROW

EVE CASE CALIFORNIA COFFEEBERRY

HUMMINGBIRD SAGE

MARGARITA FOOTHILL PENSTEMON

COMMON YARROW

RED BUCKWHEAT

LILAC VERBENA








1 Decomposed Granite pathway and patio
SEE PATHWAY DETAIL PAGE

2 Dry stream bed to capture water from roof
SEE DRY STREAM BED DETAIL PAGE



















Shrubs ≥ 5'

-  *Abutilon palmeri*
Palmer's Mallow - 5'
-  *Arctostaphylos 'Sunset'*
Sunset Manzanita - 5'
-  *Eriogonum arborescens*
Santa Cruz Island Buckwheat - 5'
-  *Frangula californica 'Eve Case'*
Eve Case California Coffeeberry - 5'
-  *Prunus ilicifolia*
Hollyleaf Cherry - 5'
-  *Ribes aureum*
Golden Currant - 6'
-  *Salvia 'Allen Chickering'*
Allen Chickering Sage - 6'

NOTES :

-  DECOMPOSED GRANITE, SEE DETAIL PAGE
-  SEE DRY STREAM BED DETAIL PAGE
-  Rain chain as an option to replace roof drain downspouts, where applicable

Perennials/Shrubs ≤ 4'

- | | | |
|--|---|---|
|  <i>Achillea millefolium</i>
Common Yarrow - 1.5' |  <i>Penstemon heterophyllus 'Margarita BOP'</i>
Margarita Foothill Penstemon - 2' |  <i>Salvia spathacea</i>
Hummingbird Sage - 2' |
|  <i>Arctostaphylos 'Howard McMinn'</i>
McMinn Manzanita - 4' |  <i>Penstemon spectabilis</i>
Showy Penstemon - 3' |  <i>Verbena 'De La Mina'</i>
Lilac Verbena - 3' |
|  <i>Eriogonum grande var. rubescens</i>
Red Buckwheat - 2' |  <i>Ribes aureum</i>
Golden Currant - 3' |  <i>Rhamnus californica</i>
Coffeeberry - 4' |
|  <i>Muhlenbergia rigens</i>
Deer Grass - 4' |  <i>Sphaeralcea ambigua</i>
Desert Mallow - 4' | |

Trees

-  *Cercis Occidentalis*
Western Redbud - 10'
-  *Chilopsis linearis*
Desert Willow - 15'
-  *Heteromeles arbutifolia*
Toyon - 15'



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BUTTERFLY + SONGBIRD GARDEN
Extra-Large Front Yard Design
WITHOUT FRONT TREE

NOTES :

- 1** Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2** Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE
- 3** Rain chain - replaces roof drain downspout where applicable (optional)



NOTES :

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BUTTERFLY + SONGBIRD GARDEN

Extra-Large Front Yard Design

WITHOUT ALL TREES

NOTES :

- 1** Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
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- 3** Rain chain - replaces roof drain downspout where applicable (optional)



LILAC VERBENA

HOLLYLEAF CHERRY

EVE CASE CALIFORNIA COFFEEBERRY

SUNSET MANZANITA

COFFEEBERRY

MCMINN MANZANITA

PALMER'S MALLOW

SHOWY PENSTEMON

DESERT MALLOW

ALLEN CHICKERING SAGE

LILAC VERBENA

DEER GRASS

RED BUCKWHEAT

DEER GRASS

SANTA CRUZ ISLAND BUCKWHEAT

PALMER'S MALLOW

ALLEN CHICKERING SAGE

RED BUCKWHEAT

RED BUCKWHEAT

SANTA CRUZ ISLAND BUCKWHEAT

MARGARITA FOOTHILL PENSTEMON



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BUTTERFLY + SONGBIRD GARDEN

Extra-Large Front Yard Design

WITH PLANTS LABELED + WITHOUT ALL TREES

NOTES :

- 1 Optional light seeding of california annual wildflowers in open mulch areas - SEE WILDFLOWERS DETAIL PAGE
- 2 Dry stream bed to capture water from roof SEE DRY STREAM BED DETAIL PAGE
- 3 Rain chain - replaces roof drain downspout where applicable (optional)

Detail Pages

Includes :

- Bloom Color Calendar **31**
- Dry Streambed Detail Pages **32**
- French Drain Detail Pages **37**
- Mulch Detail Pages **40**
- Pathways Detail Pages **43**
- Wildflowers Detail Pages **49**
- Planting Detail Pages **52**

Bloom Color Calendar

Use this chart to understand what time of year these plants bloom in Southern California gardens
 "Bloom seasons" show the main flower color of the plant,
 "Off bloom seasons" show the leaf color, which can also be useful in your planting design.
 We encourage adding value for the birds, butterflies, and pollinators by having blooms throughout the seasons!

BOXES WITH ICON:
 MEANS IT IS USUALLY IN
 BLOOM SOMETIME THIS SEASON



garden style :
BUTTERFLY + SONGBIRD

CASUAL AND COLORFUL

With beautiful colors, this eco-friendly style will give back to the environment to provide food sources and shelter!

31

PLANT NAME	SPRING	SUMMER	FALL	WINTER
DESERT WILLOW	🌿	🌿	🌿	
GOLDEN CURRANT	🌿	🌿		
LILAC VERBENA	🌿	🌿		
HUMMINGBIRD SAGE	🌿	🌿		
DESERT MALLOW	🌿	🌿		🌿
COMMON YARROW	🌿			
SUNSET MANZANITA	🌿			🌿
MULEFAT	🌿			
CREeping BARBERRY	🌿			
SANTA CRUZ ISLAND BUCKWHEAT	🌿	🌿		
DEER GRASS	🌿	🌿		
COFFEEBERRY	🌿			
CALIFORNIA BUSH SUNFLOWER	🌿			
PALMER'S MALLOW	🌿	🌿	🌿	🌿
REDBUCKWHEAT	🌿	🌿	🌿	
COFFEEBERRY 'EVE CASE'	🌿	🌿		
MARGARITA FOOTHILL PENSTEMON	🌿	🌿		
ALLEN CHICKERING SAGE	🌿	🌿		

PLANT TEXTURES

Photography credit
 for plant images :
 Robert Perry



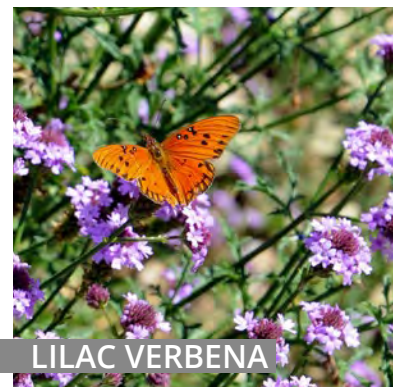
TOYON



SUNSET MANZANITA



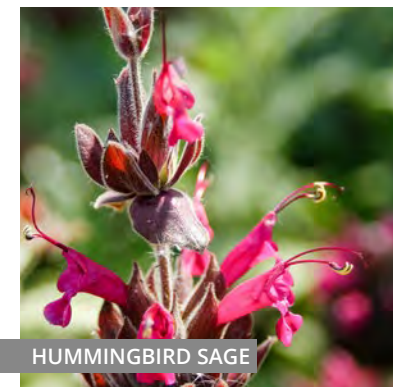
CREeping BARBERRY



LILAC VERBENA



CALIFORNIA BUSH SUNFLOWER



HUMMINGBIRD SAGE



COMMON YARROW

Dry Streambed

DETAIL PAGES

32

DRY STREAMBED

What is a dry streambed?

A DRY STREAMBED IS A SUNKEN AREA OF THE LANDSCAPE DESIGNED TO LOOK LIKE A SMALL, SEASONALLY DRY CREEK OR STREAM.

Why might I need a dry streambed?

THEY ARE BUILT IN A LANDSCAPE TO ACCUMULATE RAINWATER FROM ROOFS, DRIVEWAYS, OR OTHER SURFACES AND ALLOW IT TO ABSORB INTO THE GROUND. THESE FEATURES HELP US TREAT RAINWATER LIKE THE RESOURCE IT IS AND MAY HELP SOLVE PUDDLING OR FLOODING ISSUES CURRENTLY EXISTING ON YOUR PROPERTY.

BENEFITS include deeper watering of the garden in rain events, potential groundwater recharge, and improving local water quality by holding and cleaning rainfall through natural processes.

DRY STREAMBED WITH BERM DETAIL BIRD'S EYE VIEW



IMAGE TAKEN AT THE THEODORE PAYNE FOUNDATION NATIVE PLANT GARDEN TOUR [nativeplantgardentour.org]



« MATERIALS

The gravel, rocks, and boulders used in dry streambeds are usually purchased from landscape material yards or construction materials yards. For a list of businesses that sell this type of material in the western San Bernardino County area, see our : **Local Landscape Suppliers List :** cbwcd.org/suppliers

PLANNING

Dry streambeds do not need to be as large as the ones featured in the **illustrated drawings on the following pages**, but the depicted scale in the drawings helps to show the relevant information. The photos on this page provide some *“real world”* examples of residential-scale dry streambeds. The illustrated details on the next page can also be applied to swales without rock and to infiltration basins.



INFILTRATION BASIN

The term *‘infiltration basin’* is used for a landscape feature very similar to a dry streambed or a swale, but it usually refers to a feature that is shaped more like a rounded oval basin that holds and infiltrates water, while a dry streambed or swale is usually longer and narrower (like a dry stream!).

DRY STREAMBED

A dry streambed features rocks and gravel covering much of its surface and may or may not have plants in the part that accumulates water.

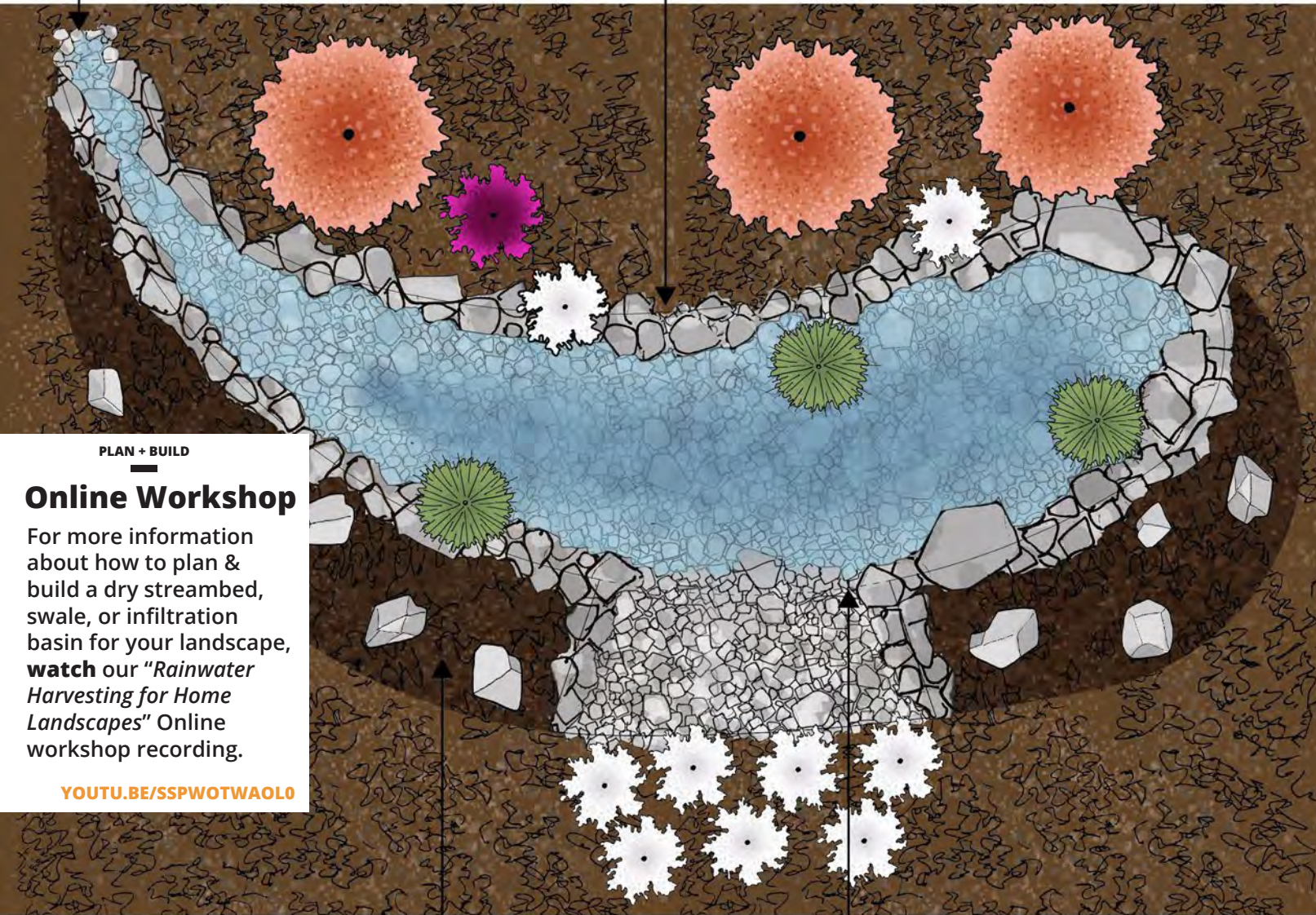
SWALE

A similar landscape feature, often called a *‘swale’*, is a sunken area that accumulates water, but does not contain any or many rocks. The term swale, however, can sometimes be a bit confusing because the same word can be used to refer to other types of structures that move water.

Water flows in from roof gutter down spout

OR

Water flows in over land



PLAN + BUILD

Online Workshop

For more information about how to plan & build a dry streambed, swale, or infiltration basin for your landscape, **watch** our *“Rainwater Harvesting for Home Landscapes”* Online workshop recording.

[YOUTU.BE/SSPWOTWAOLO](https://youtu.be/SSPWOTWAOLO)

DRY STREAMBED WITH BERM DETAIL BIRD'S EYE VIEW

Berm created with soil from excavation, to increase pooling depth on slope

Overflow point, slightly lower than top of berm, directs excess water. “Armor” overflow area with gravel / stone to prevent erosion

For more information about Berms, see next page!



CALIFORNIA NATIVE GARDEN WITH A DRY STREAMBED, AND BROKEN CONCRETE BRIDGE [located in POMONA, CA]

What is a berm?

BERM

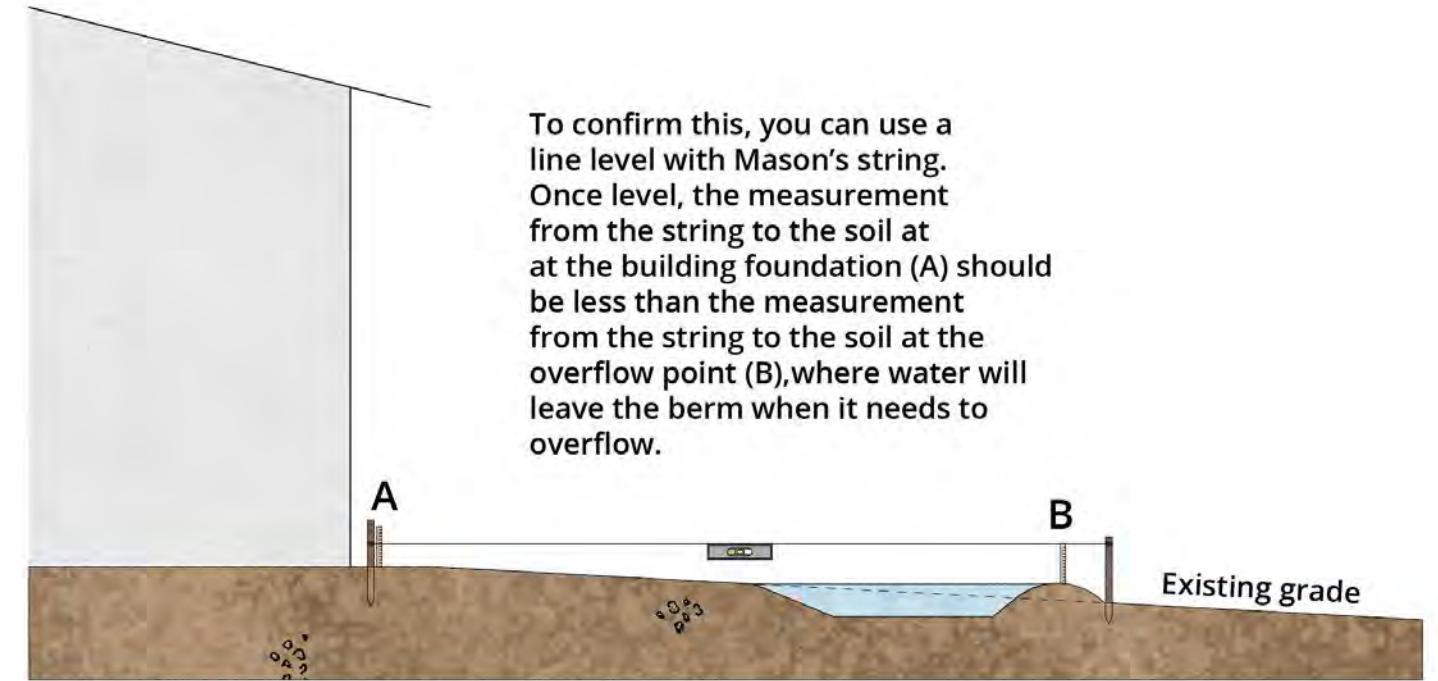
THE BERM IS THE MOUND OF SOIL IMMEDIATELY DOWNSLOPE OF THE EXCAVATED AREA.

BERMS SERVE TO **INCREASE** WATER HOLDING CAPACITY OF DRY STREAMBEDS, SWALES, AND INFILTRATION BASINS ON SLOPED SITES.

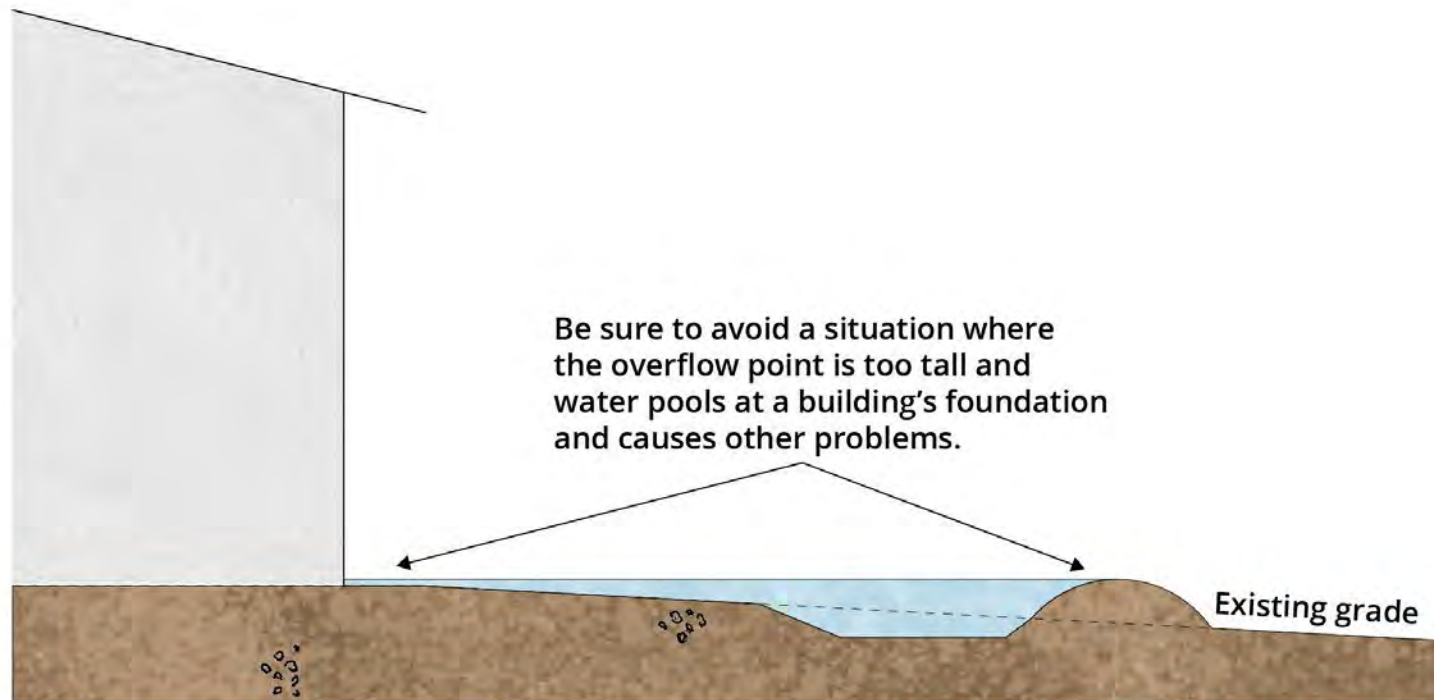
FOR A BIRD'S EYE VIEW OF A DRY STREAMBED AND BERM, REFER TO THE DRAWING ON THE PREVIOUS PAGE.



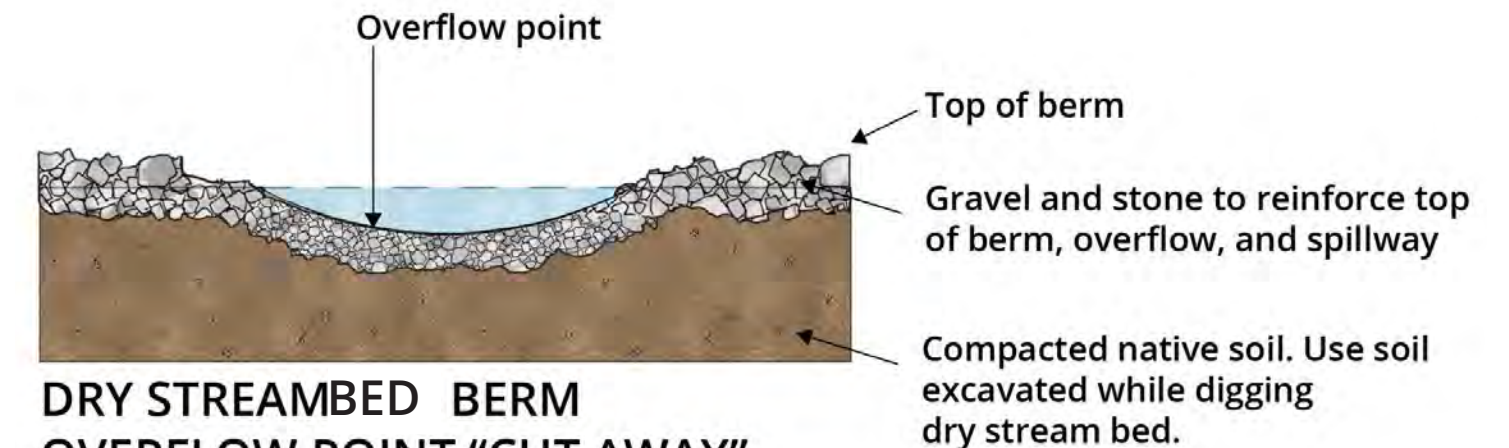
DRY STREAMBED BERM DETAIL FOR SLOPED SITES



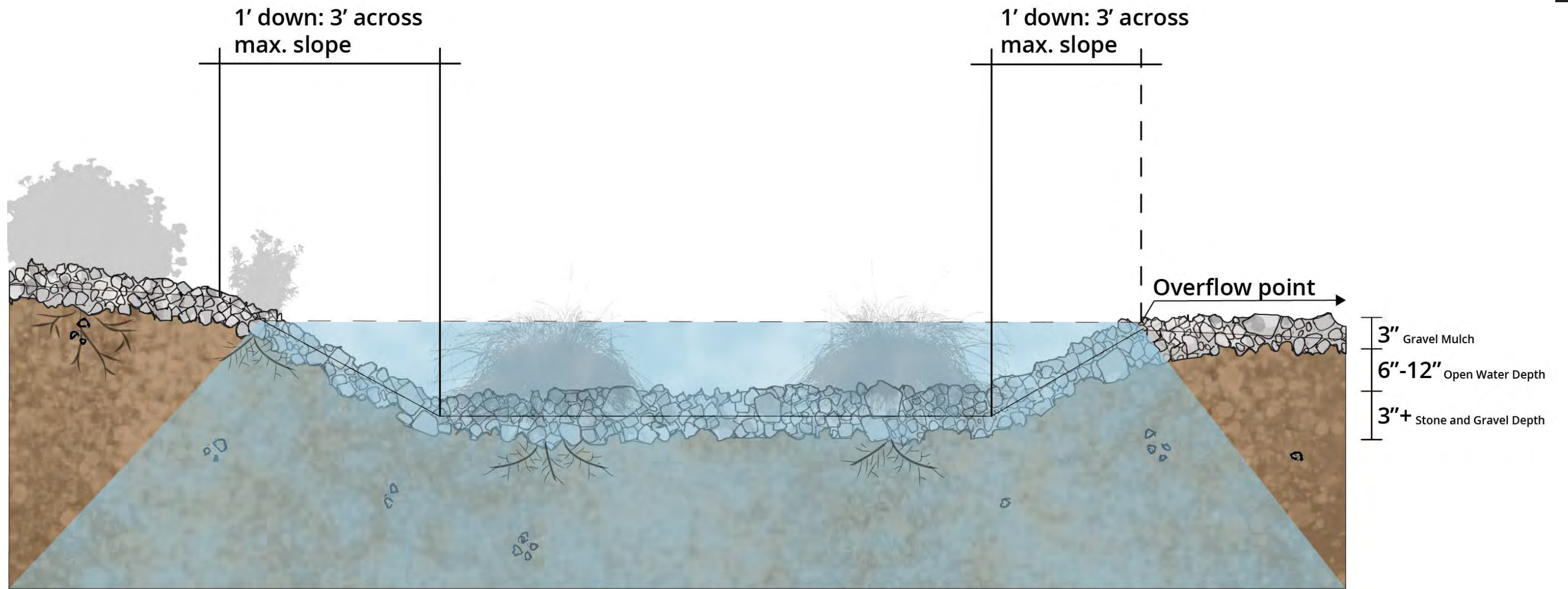
DRY STREAMBED OVERFLOW BERM DETAIL



DRY STREAMBED WITH BERM - TOO TALL - **AVOID THIS SITUATION!**



DRY STREAMBED BERM OVERFLOW POINT "CUT AWAY"



DRY STREAMBED TYPICAL DETAIL (WITH NO BERM NEEDED)

What plants thrive along or near a dry streambed?

MANY CALIFORNIA NATIVE AND WATERWISE PLANTS THRIVE IN THIS AREA. THIS LIST IS SIMPLY SOME OF OUR FAVORITES FOR THAT CONDITION.

For More Visit :

inlandvalleygardenplanner.org/helpful-lists



CA GREY RUSH



COMMON YARROW

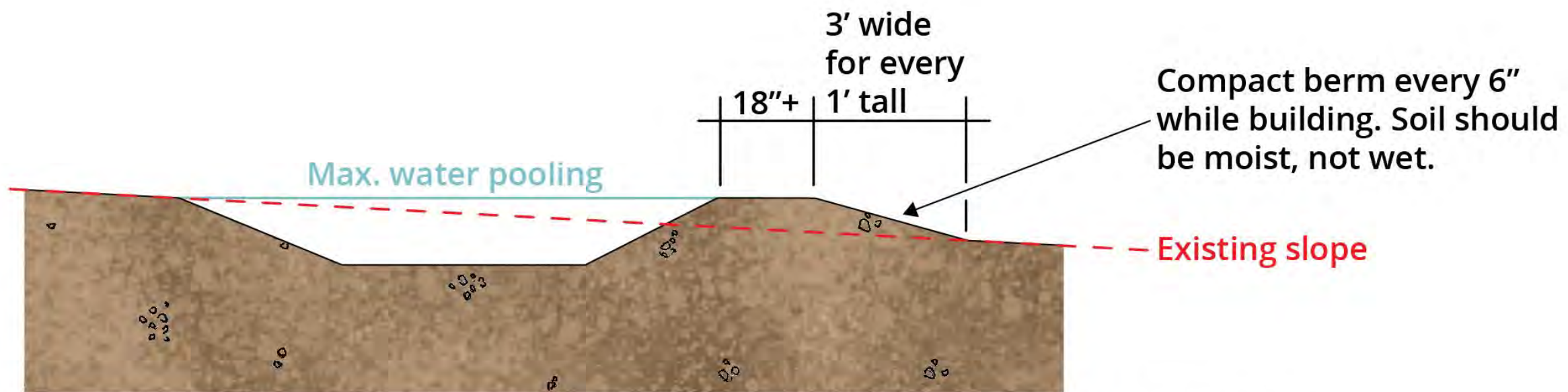


BERKLEY SEDGE



 Dry Streambed in front yard design
LOCATION : CLAREMONT, CA

Note: Dry streambeds and infiltration basins should usually only be used in landscape areas w/ less than 8% slope (Approx. 2" over 2' or more accurately 7-3/4" over 8'). To confirm this, you can use a line level, stakes, and a measuring tape, as shown in the "Dry streambed overflow berm detail." Note: The area draining into the dry streambed can be steeper. The area of dry streambed, berm, and immediately downslope are what should be 8% slope or less.



**DRY STREAMBED /INFILTRATION BASIN ON GENTLE SLOPE
BERM WIDTH DETAIL AND NOTES**

French Drain

DETAIL PAGES

BENEFITS include deeper watering of the garden in rain events, potential groundwater recharge, and improving local water quality by holding and cleaning rainfall through natural processes.

FRENCH DRAIN

What is a French drain?

FRENCH DRAINS ARE TRENCHES THAT HAVE BEEN FILLED WITH A LARGE DIAMETER GRAVEL, USUALLY 1.5" - 3", FOR THE PURPOSE OF CAPTURING WATER AND EITHER ALLOWING IT TO INFILTRATE IN PLACE, OR SLOWLY MOVING IT TO A PLACE THAT CAN INFILTRATE IT.

Why might I need a French drain?

THEY ARE USEFUL WHEN WATER CAPTURE OR INFILTRATION IS NEEDED ALONG PAVED WALKWAYS, SIDEWALKS, PATIOS, OR OTHER NARROW AREAS WHERE FEATURES LIKE DRY STREAMBEDS WILL NOT WORK.

IMAGE TAKEN AT THE THEODORE PAYNE FOUNDATION
NATIVE PLANT GARDEN TOUR [nativeplantgardentour.org]
GARDEN DESIGN BY : SCRUB JAY STUDIOS

MATERIALS

Cobble or small boulders can be mixed into the top layer of gravel or at the edges of a French drain for a more natural look. The gravel and cobble used in French drains is often purchased from a Landscape Materials Yard or Building Materials Yard. For business that sell these products in the western San Bernardino County area, see our **Local Landscape Suppliers List** : cbwcd.org/suppliers



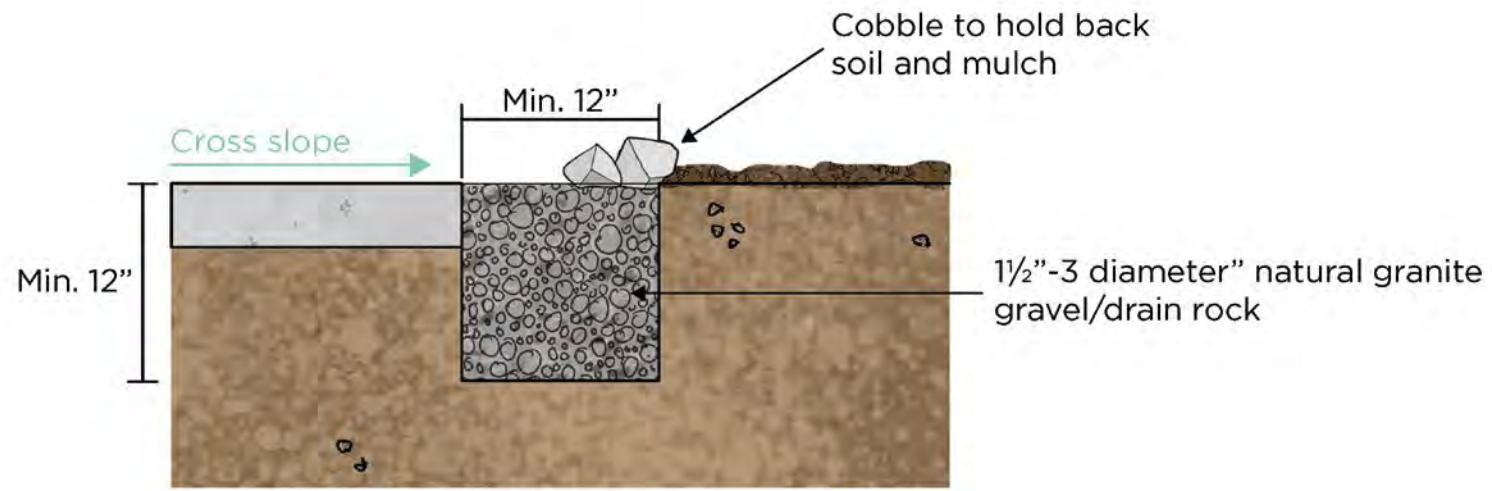
FUNCTION + PURPOSE

Capture Water

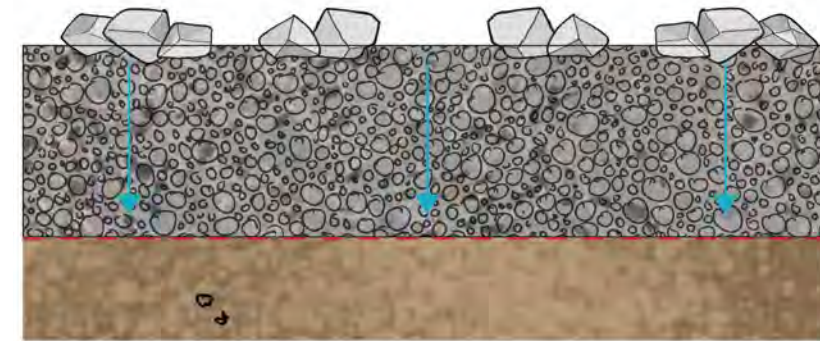
The bottom of the gravel filled trench in this photo is slightly sloped. When it rains, *some* water infiltrates in the trench, but in a large storm event, the slope allows water to move around the side of the house *through* the **French drain**. >>

Once the water is safely around and away from the house, it is allowed to drain in a larger dry streambed in the backyard.



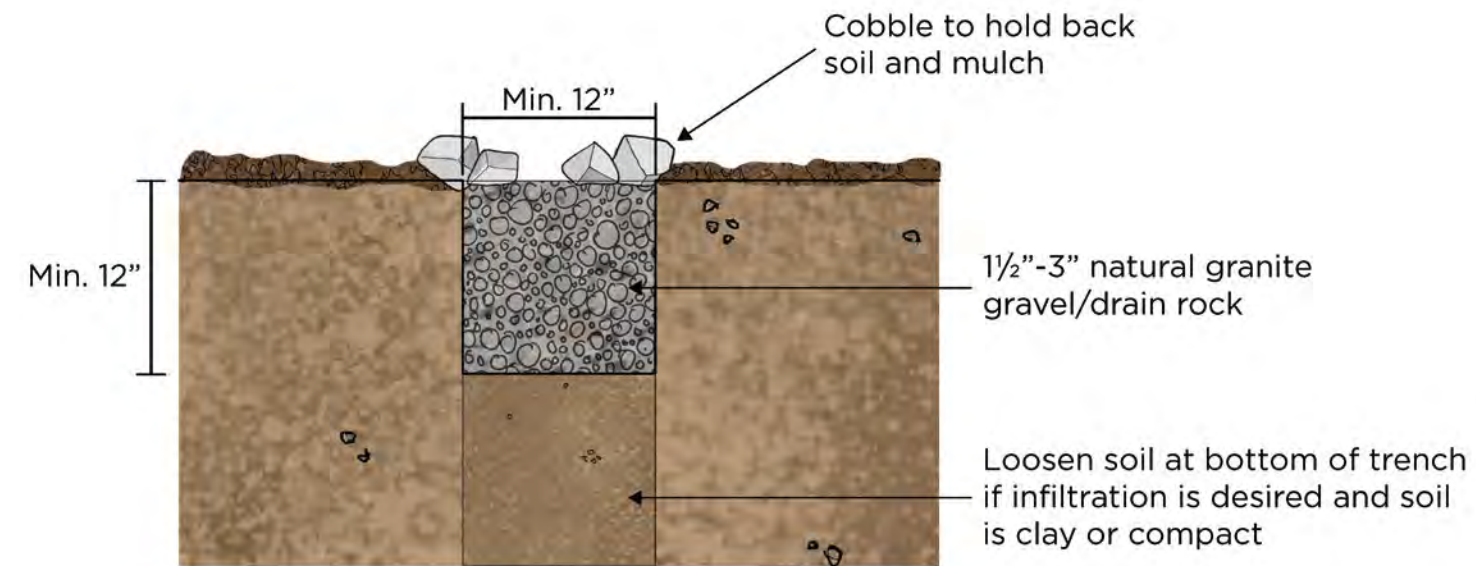


FRENCH DRAIN ALONG PAVEMENT

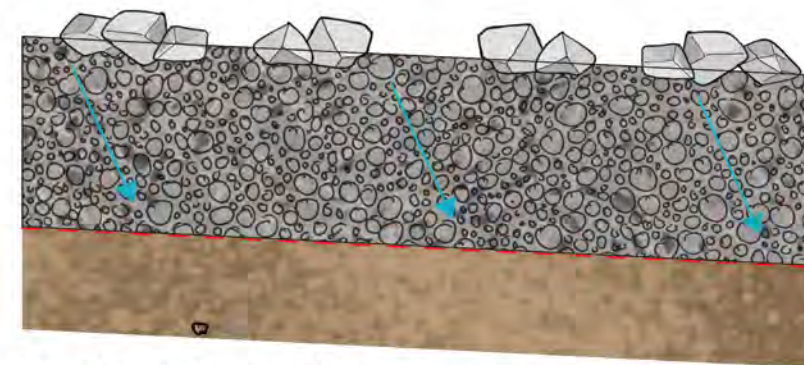


FRENCH DRAIN LEVEL BOTTOM

Level bottom to infiltrate water at bottom of french drain



FRENCH DRAIN DETAIL IN LANDSCAPE

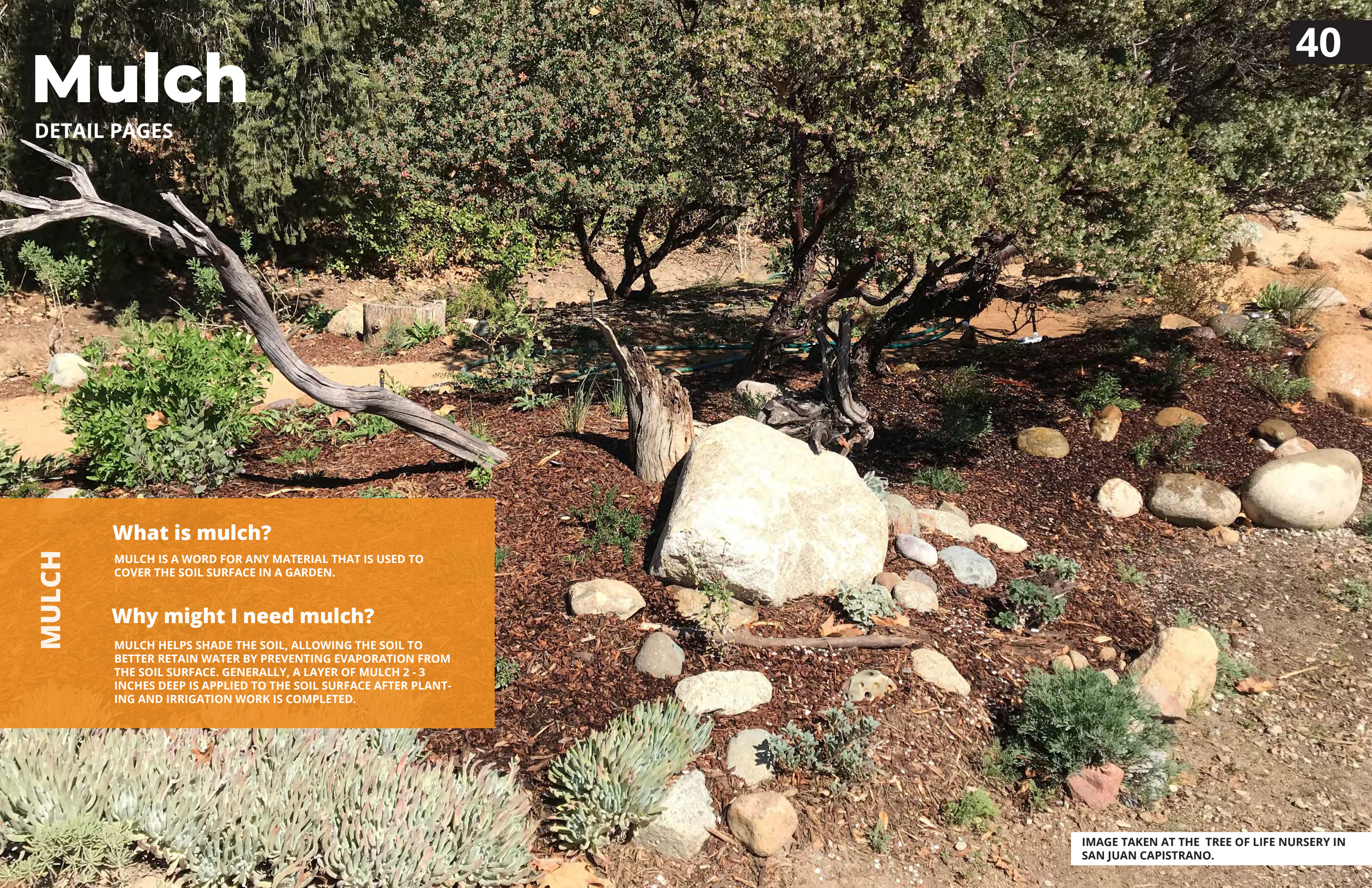


FRENCH DRAIN SLOPED BOTTOM

Sloped bottom will infiltrate water in place in small rain events and infiltrate some water in place while moving the rest of the water to the end of the french drain in larger rain events. Often this extra water is moved into an area that can better fit a larger dry stream bed or infiltration basin.

Mulch

DETAIL PAGES



MULCH

What is mulch?

MULCH IS A WORD FOR ANY MATERIAL THAT IS USED TO COVER THE SOIL SURFACE IN A GARDEN.

Why might I need mulch?

MULCH HELPS SHADE THE SOIL, ALLOWING THE SOIL TO BETTER RETAIN WATER BY PREVENTING EVAPORATION FROM THE SOIL SURFACE. GENERALLY, A LAYER OF MULCH 2 - 3 INCHES DEEP IS APPLIED TO THE SOIL SURFACE AFTER PLANTING AND IRRIGATION WORK IS COMPLETED.

IMAGE TAKEN AT THE TREE OF LIFE NURSERY IN SAN JUAN CAPISTRANO.

WOODCHIP MULCH

Woodchip mulch is either a combination of ground tree trimmings or a specific product produced from trees (often bark) manufactured for use in the landscape.



It is often one of the more economical ways to cover the soil in a newly planted garden, especially if it can be picked up for free from local mulch give-away programs:

- The Waterwise Community Center gives away woodchip mulch at our headquarters in Montclair (See cbwcd.org/mulch).

- If a large quantity of mulch is needed, some local community members have been successful obtaining free ground tree trimming mulch through the chipdrop app. If you are considering this, be sure to read all the information on the chipdrop website to be confident it matches your needs and expectations.

ALLOW LEAVES TO JOIN!

For California native plantings, an approximately 2" layer of woodchip mulch may be appropriate when installing new landscapes, but it is best to allow plants to "self-mulch" with their own leaves or chopped-up prunings from native plants in your garden after that, if possible.

MIXING IT UP!

Consider adding some gravel, small boulders, and a few branches or logs either during construction or over time for a naturalistic look. Deep repeated applications of imported woodchip mulch to native plantings can sometimes cause long-term problems, especially if they are *over-watered*.

WOODCHIP MULCH IN YOUR LANDSCAPE

- Fruit trees and most temperate or tropical-climate plants prefer a **deeper mulch** layer of 3" for smaller plants and 4" for trees.

- Be sure to maintain the woodchip mulch **at least 3" away** from the bases and stems of woody plants and shrubs. *Wet mulch up against stems can cause rot and encourage disease.*

BENEFITS IN TYPES OF SOILS

Woodchip breaks down over time, adding organic matter to the soil. This is great for fruit trees and plants that like **rich soil**, and it can help improve the drainage of *heavy clay* and *compacted soils*. California native and waterwise plants in *well-draining soils* may not care about additional organic matter though.

"TOUCH-UP"

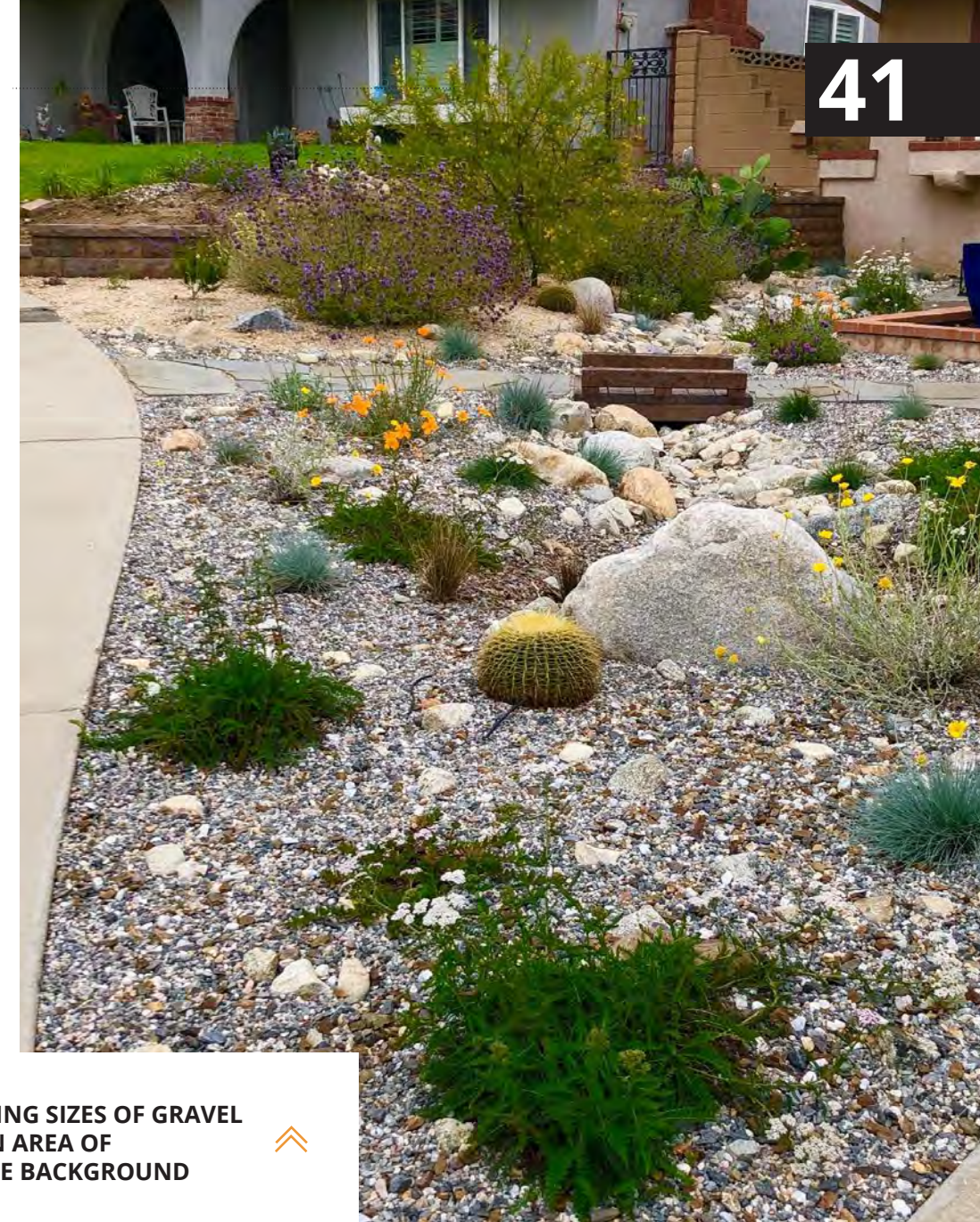
As woodchip mulch breaks down, additional woodchip mulch generally needs to be added every few years which can be costly or require large amounts of work in large yards. In yards with California native plants, one might decide to "touch up" the woodchip mulch in pathway areas every few years, but allow the planting areas to "self-mulch" with dropped leaves and chopped up trimmings.



TYPES OF MULCH

Below are the most *common* types of mulch used in gardens. These pages contain information about the best ways to **use** each.

- WOODCHIP MULCH
- GRAVEL MULCH
- DECOMPOSED GRANITE MULCH
- MIXING IN COBBLE & BOULDERS



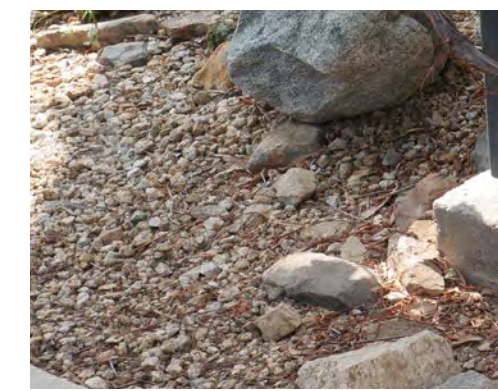
GARDEN IN RANCHO CUCAMONGA MIXING SIZES OF GRAVEL AND BOULDERS, FLAGSTONE, AND AN AREA OF DECOMPOSED GRANITE MULCH IN THE BACKGROUND

GRAVEL MULCH

Gravel mulch is appropriate for *California native and waterwise plants* from dry, sunny areas, including most succulents and desert plants.

Gravel mulch applied to large areas and all one size (for example an entire yard of ¾" gravel) tends to look "industrial" and potentially unattractive. *Mixing sizes of gravel* and choosing to work with the types

of gravel and rock that naturally occur in your area usually results in a much more attractive project.



HOT CLIMATE PRECAUTIONS

Remember that large areas of gravel in our hot climate can **absorb lots of heat** and, if light colored, can create lots of glare in the summer. Remember to *mix in* some heat-tolerant trees or large shrubs in your design if you are using all gravel mulch to provide some shade and structure to your landscape, which will help with these potential issues.

IMAGE TAKEN AT THE THEODORE PAYNE FOUNDATION NATIVE PLANT GARDEN TOUR [nativeplantgardentour.org]

DECOMPOSED GRANITE MULCH



WHAT IT IS

Decomposed granite is a natural product that is much smaller than gravel, and almost *similar to a very sandy soil*. It is similar to the natural soil of some southern California mountain areas, and it can make an appropriate mulch layer for **low water and native plants** from hot sunny areas and succulent gardens.

SLIPPERY SLOPE!

Decomposed granite *erodes easily during rain* when on slopes, so is best applied to relatively **flat landscape areas** only.

PURCHASING D.G. MULCH

Decomposed granite can be purchased "*with binder*" and "*without binder*." The binder is a product, usually naturally derived, that allows it to be **compacted** and form a hard and relatively resilient walking surface when properly installed. Decomposed granite with binder is usually **used for pathways and patio spaces**, while decomposed granite without binder is **used for mulching planted areas**.

LONG-TERM

As a *mineral mulch*, decomposed granite has the advantage of not needing to be renewed, like woodchip mulch needs, but it **can** have problems with weed **seeds germinating** and growing in it.

MIXING IN COBBLE & BOULDERS

Cobble and boulders of a stone type local to your area are often a nice addition to the garden surface, added among whatever type of mulch you choose, to achieve a **natural** looking effect.

Cobble and boulders are usually purchased at **landscape materials yards** and *charged by the pound*. Delivery is available for a fee. For larger quantities, cobble is usually purchased in metal baskets on pallets, while **larger boulders** can be selected individually.



IMAGE TAKEN AT TREE OF LIFE NURSERY IN SAN JUAN CAPISTRANO

DECOMPOSED GRANITE MULCH IN GARDEN OF SUCCULENTS MIXED WITH CALIFORNIA NATIVE AND MEDITERRANEAN PLANTS IN A RESIDENTIAL FRONT YARD [located in Pasadena, CA]

What are pathways?

PATHWAYS ARE WALKING SURFACES OF ANY TYPE THAT ALLOW ACCESS THROUGH A LANDSCAPE. REMEMBER, DON'T FORGET TO LEAVE SPACE FOR YOURSELF AS YOU PLAN FOR ALL YOUR NEW PLANTS!

Why might I need pathways?

PATHWAYS ARE ESSENTIAL TO ENJOY WALKING THROUGH YOUR GARDEN AND TO ACCESS AREAS TO CARE FOR YOUR LANDSCAPE. CHOOSING PERMEABLE MATERIALS LIKE GRAVEL, DECOMPOSED GRANITE, OR JUST A LAYER OF WOOD-CHIP MULCH FOR YOUR PATHWAYS, ALLOWS WATER TO SOAK IN WHEN IT RAINS AND HELPS PREVENT THE RUNOFF AND FLOODING ISSUES THAT CAN BE CAUSED BY CONCRETE HARDSCAPE.



USE OF DIFFERENT SIZES OF GRAVEL, STONE, AND RECYCLED CONCRETE FOR PATHWAYS AND PLANTING EDGES. NOTE HOW THE RAIN CHAIN BRINGS WATER FROM THE ROOF GUTTER DOWN ONTO THE COBBLESTONES. THE WATER CAN THEN SPREAD OUT ALONG THE GRAVEL PATH AND SLOWLY SINK INTO THE SOIL BELOW.

TYPES OF PATHWAYS

Below are the *most common* types of pathways and some information about the types of materials with which they might be used :

■ DECOMPOSED GRANITE

■ GRAVEL

PATHWAY TYPES BENEFITS

Decomposed granite and **gravel** are popular choices for pathways and patio areas in California native and waterwise gardens. *Compared* to concrete, brickwork, and other paving, they are less expensive options that have a nice, **natural feel** in the landscape. They are also permeable surfaces:


When it rains, they can **absorb most** of the rainfall in place, allowing it to **soak into the soil** below, rather than runoff and have to be dealt with elsewhere, as is the case with traditional paved surfaces like concrete.

MATERIALS

Materials for **decomposed granite** or **gravel** pathways are usually purchased from landscape materials yards or building materials yards. *Edging* and *permeable landscape fabric* are usually purchased from landscape and irrigation materials suppliers.

For lists of these businesses in the western San Bernardino County area, see our **Local Landscape Suppliers list:** cbwcd.org/suppliers

WALK-ABILITY

Decomposed granite pathway in a newly planted garden showing the path and a narrow “walking strip” to allow car doors to open and people to **walk along the curb** to the central path. If the parking strip planter was wider, a wider walking strip might be desirable. 



STABILITY OF D.G. PATHS

Decomposed granite pathways and patios are usually constructed with “stabilized” decomposed granite, which is most often mixed in by the supplier and ordered as “stabilized.” This additive, usually naturally derived, allows the decomposed granite to be moistened immediately after spreading it out, and compacted with a tamper. This forms a hard, resilient surface with some of the characteristics of harder paving, while retaining a natural feel.

CONSIDERATIONS FOR D.G.

Decomposed granite surfaces have many positive qualities in a landscape space, however, there are some considerations to be aware of:

When wet, as in immediately after a rain event, even stabilized decomposed granite acts somewhat like wet, muddy soil. After getting significantly wet, *it is best to wait* to walk on decomposed granite until it dries some.

Even with stabilized decomposed granite, shoes and dog paws can capture bits of the decomposed granite material and track them inside. That can be avoided by not using decomposed granite immediately near the house. If you have a *transitional space* between the decomposed granite and the house, such as a paved or gravel walk or patio, usually the *small bits of decomposed granite will fall off shoes* before reaching the door.

Finally, decomposed granite is **prone to erosion** on steep slopes, so should generally *not be used for steep pathways*.

EDGING OPTIONS

Decomposed granite pathways and patios should have metal, plastic, or natural rock edging installed to help retain the edge and allow for proper compaction during installation.



PATHWAY SHOWING PLASTIC EDGING IN THE SAME GARDEN AS THE ONE TO THE UPPER LEFT.

GRAVEL PATHWAYS

Gravel pathways and patios are usually constructed of a small “*pea gravel*” or even smaller “*bird’s eye gravel*.” **Pea gravel** is found either as natural small-sized gravel (that has been sifted) or crushed gravel. It is best to use non-crushed gravel because the edges of the gravel are *naturally* more rounded, which has a nicer look and is **more comfortable** to walk on.

It is not as important to use edging with gravel paths and patios but may be desirable depending on your conditions and design.

GRAVEL PATHWAY ALONG THE SIDE OF THE HOUSE ALLOWS WATER COMING OFF THE ROOF SUFFICIENT SPACE TO **SOAK IN** RATHER THAN CAUSE FLOODING UP AGAINST THE HOUSE DURING LARGE RAIN EVENTS.

GROUND COVER MATERIAL SHOWN : 1.5” - 2” GRAVEL

IMAGE TAKEN AT THE THEODORE PAYNE FOUNDATION
NATIVE PLANT GARDEN TOUR [nativeplantgardentour.org]
GARDEN DESIGN BY : SCRUB JAY STUDIOS

GRAVEL PATIO / DRIVEWAY ALLOWS LARGE QUANTITIES OF RAINWATER TO SOAK IN ON SITE DURING THE RAIN.

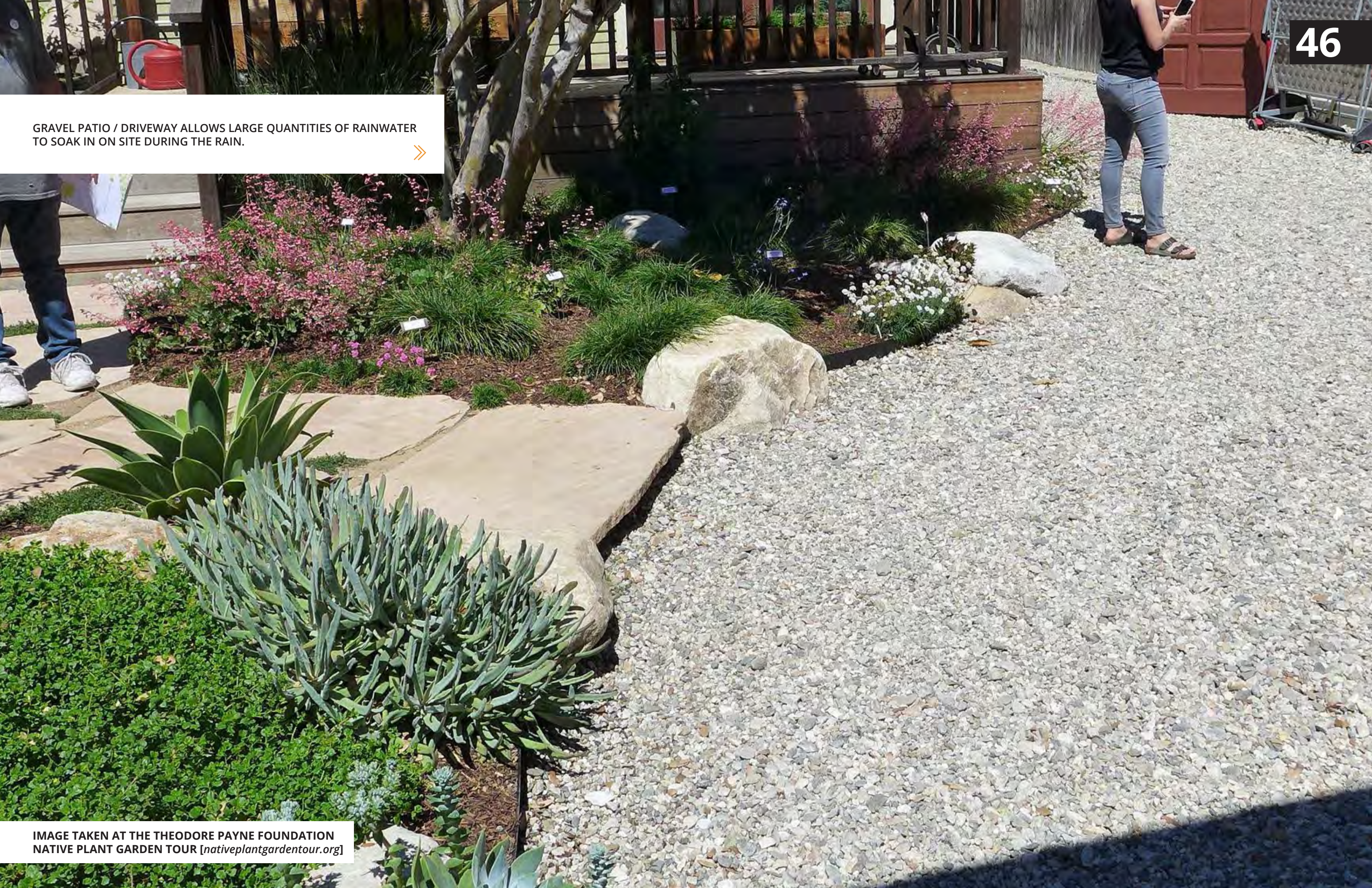


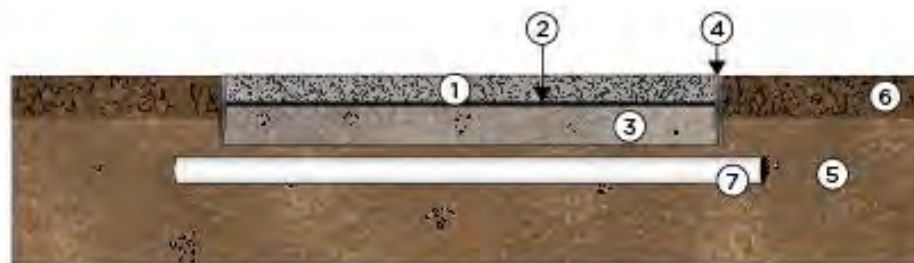
IMAGE TAKEN AT THE THEODORE PAYNE FOUNDATION NATIVE PLANT GARDEN TOUR [nativeplantgardentour.org]

Decomposed granite paths and patios are usually installed with a permeable landscape fabric underneath to keep the decomposed granite and native soil separated over time. Gravel paths and patios may or may not be installed with landscape fabric. It *may help* prevent weeds and *may help* prevent the gravel from sinking into the soil over time, requiring additional gravel. However, it *may be unsightly* if gravel shifts, exposing the fabric. It *might* also be a use of additional materials that may not be necessary in residential gardens if there are not weed problems in that area of the landscape.

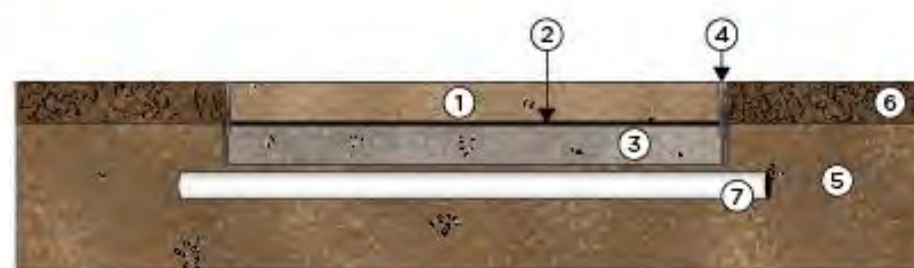
On these pages are diagrams showing a "cut away" view illustrating the construction of decomposed granite and gravel paths and patios:

DECOMPOSED GRANITE PATHWAY WITH STEEL, ALUMINUM, OR PLASTIC EDGING

- 01** Stabilized decomposed granite, compacted on site, 3"
- 02** Permeable landscape fabric
- 03** Compacted road base, 3," optional. It requires much more work to install this sub-layer and is more expensive, but provides a harder, more resilient installation. This is how decomposed granite is usually installed in high-traffic public spaces and is usually a job for a contractor.
- 04** Edging, staked in place. Steel, aluminum, or plastic all work. Steel and aluminum edging generally look better, are more stable, and last longer, but they are much more expensive and more difficult to install.
- 05** Native soil
- 06** Mulch
- 07** 2" or larger PVC pipes installed wherever future irrigation pipes or wiring may need to cross under the pathway, optional. If there is any chance that pipes or wires may need to go under the path in the future, it is much easier to install these "sleeves" of larger diameter pipe when the pathway is being installed. The pipes or wires can then be slid through the sleeves when needed. Covering the ends with unglued PVC caps will keep dirt out of the sleeves.



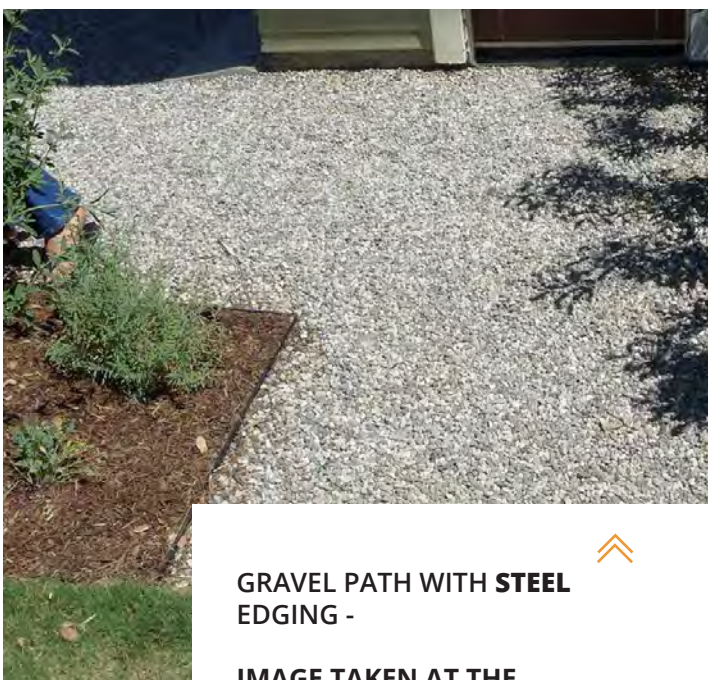
GRAVEL PATHWAY WITH STEEL,ALUMINUM, OR PLASTIC EDGING



DECOMPOSED GRANITE PATHWAY WITH STEEL, ALUMINUM, OR PLASTIC EDGING

GRAVEL PATHWAY WITH STEEL, ALUMINUM, OR PLASTIC EDGING

- 01** Pea gravel or Bird's eye gravel 1-2" *deep* depending on product. Test the depth that feels right to walk on for your gravel choice and preferences.
- 02** Permeable landscape fabric, *optional*
- 03** Compacted road base, 3," optional. It requires much more work to install this sub-layer and is more expensive, but provides a harder, more resilient installation. This is how pathways are usually installed in high-traffic public spaces and is usually a job for a contractor.
- 04** Edging, staked in place. Steel, aluminum, or plastic all work. Steel and aluminum edging generally look better, are more stable, and last longer, but they are much more expensive and more difficult to install.
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GRAVEL PATH WITH **STEEL** EDGING -

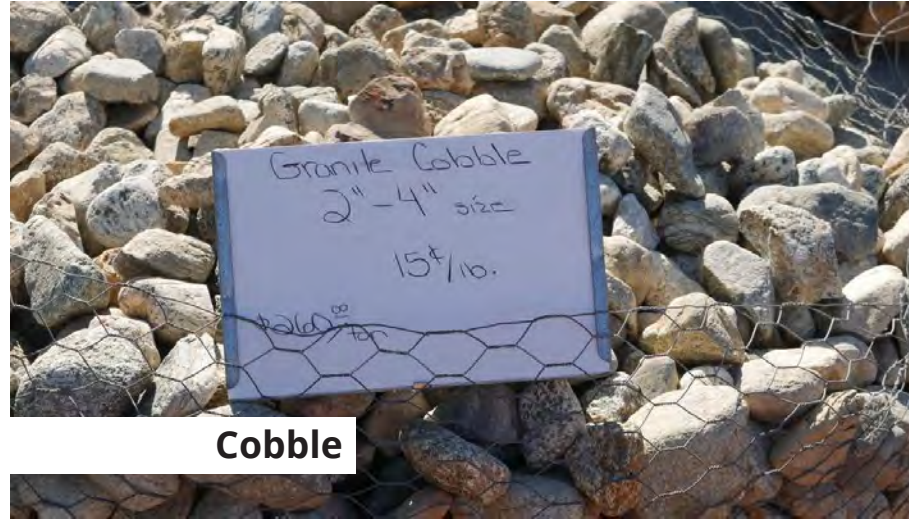
IMAGE TAKEN AT THE THEODORE PAYNE FOUNDATION NATIVE PLANT GARDEN TOUR [nativeplantgardentour.org]

DECOMPOSED GRANITE PATHWAY WITH COBBLE EDGING

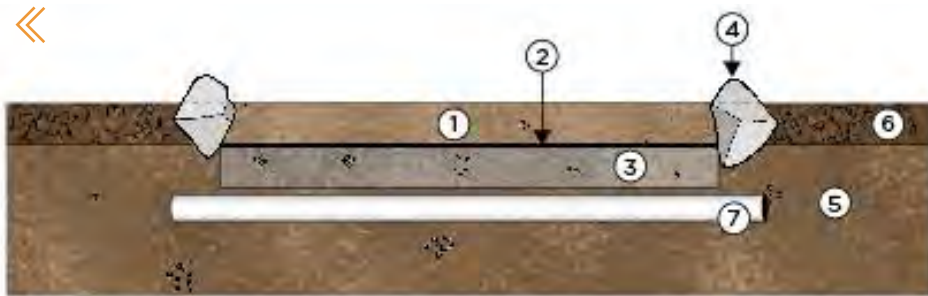
- 01** Stabilized decomposed granite, compacted on site, 3"
- 02** Permeable landscape fabric
- 03** Compacted road base, 3," optional. It requires much more work to install this sub-layer and is more expensive, but provides a harder, more resilient installation. This is how decomposed granite is usually installed in high-traffic public spaces and is usually a job for a contractor.
- 04** River rock / granite cobble and / or small boulders
- 05** Native soil
- 07** 2" or larger PVC pipes installed wherever future irrigation pipes or wiring may need to cross under the pathway, optional. If there is any chance that pipes or wires may need to go under the path in the future, it is much easier to install these "sleeves" of larger diameter pipe when the pathway is being installed. The pipes or wires can then be slid through the sleeves when needed. Covering the ends with unglued PVC caps will keep dirt out of the sleeves.



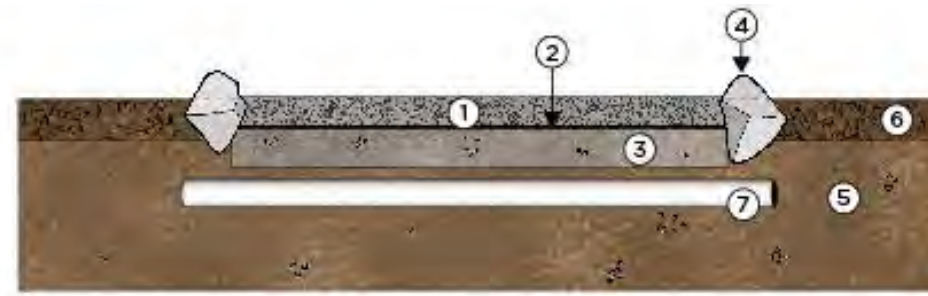
Pea Gravel



Cobble



DECOMPOSED GRANITE PATHWAY WITH COBBLE EDGING



PEA GRAVEL PATHWAY WITH COBBLE EDGING



DECOMPOSED GRANITE PATIO AREA AT TREE OF LIFE NURSERY [located in SAN JUAN CAPISTRANO]

PEA GRAVEL PATHWAY WITH COBBLE EDGING

- 01** Pea gravel or Bird's eye gravel 1-2" deep depending on product. Test the depth that feels right to walk on for your gravel choice and preferences.
- 02** Permeable landscape fabric, optional
- 03** Compacted road base, 3," optional. It requires much more work to install this sub-layer and is more expensive, but provides a harder, more resilient installation. This is how pathways are usually installed in high-traffic public spaces and is usually a job for a contractor.
- 04** River rock / granite cobble and / or small boulders
- 05** Native soil
- 06** Mulch
- 07** 2" or larger PVC pipes installed wherever future irrigation pipes or wiring may need to cross under the pathway, optional. If there is any chance that pipes or wires may need to go under the path in the future, it is much easier to install these "sleeves" of larger diameter pipe when the pathway is being installed. The pipes or wires can then be slid through the sleeves when needed. Covering the ends with unglued PVC caps will keep dirt out of the sleeves.



Annual Wildflowers

DETAIL PAGES

ANNUAL WILDFLOWERS

What are annual wildflowers?

ANNUAL WILDFLOWERS ARE PLANTS THAT GROW FROM SEED DIRECTLY IN THE LANDSCAPE AND ONLY LIVE FOR ONE SEASON. IN OUR AREA, WE RECOMMEND USING CALIFORNIA NATIVE WILDFLOWERS WHICH ARE SEEDED INTO THE GARDEN INTO THE FALL FOR SPRING BLOOMS.

Why might I use annual wildflowers in my landscape?

WHETHER FOR BEAUTY, FOOD FOR POLLINATORS AND SONG-BIRDS, OR TO FILL EMPTY SPACE, THERE ARE MANY REASONS TO INTEGRATE SOME AREAS OF CALIFORNIA NATIVE ANNUAL WILDFLOWERS INTO AREAS OF YOUR GARDEN THAT ARE NOT ALREADY OCCUPIED BY OTHER PLANTS.



ANNUAL WILDFLOWERS

A few small patches of wildflowers can add a lot to your garden while requiring very little work. However, large meadows of wildflowers do tend to require a lot of weeding, so it is best to start small when you are first experimenting with growing annual wildflowers.

Many different **California native** wildflowers grow easily in our home gardens. Here are some of the easiest and *most beautiful* to start with:

Sunny areas:

- **California poppy**
- **Desert bells**
- **Tansy leaf phacelia** (for larger areas)
- **Clarkia** (many species)

Part shade areas:

- **Clarkia** (many species)

Goldfinches eating clarkia seeds after the blooms have faded and the plants have dried. **Goldfinches love clarkia seeds!**



WHERE TO BUY

Many retailers of California native wildflowers also sell mixes of different wildflower seeds and can help you select which mixes might be best to try in your situation.

Mixes can be a lot of fun, because even with the same seed mix, different spaces in your yard and the weather in different years can result in a different mix of flowers!

In **our area**, local retailers include :

- 01** Grow Native Nursery at the California Botanic Garden in Claremont
- 02** Theodore Payne Foundation in Sun Valley
- 03** Tree of Life Nursery in San Juan Capistrano
- 04** Peaceful Valley Farm Supply, online (if ordering from Peaceful Valley, be sure you are ordering **California native wildflower seeds** or **mixes** as they sell seeds from many other areas as well)



Wildflowers are great for empty spaces in the landscape!

MIX INTO YOUR LANDSCAPE OR EDGES OF PATHWAYS TO GET SEASONAL POPS OF COLOR LIKE THIS CLARKIA

PLANTING SEEDS

California native wildflowers must be seeded into your garden in fall though *early winter*. Immediately before the first rains is usually a perfect time to do it. To spread seed, lightly sprinkle your seeds into the desired area, being careful not to spread seeds too closely to small new plantings, because the wildflowers tend to grow *very quickly* and may shade small adjacent plants. Seed can be spread directly on open soil or on top of a mulched garden surface.

Wildflowers will sprout up best in **open soil** or in **lightly mulched** gardens (1-2").

You can either leave the seeds on the surface, or very *lightly* rake them into the soil or mulch, ideally settling them only 1/8"-1/4" or so into the soil.

After seeding you can either just let the rain water them, or, for more control and to help guarantee good **growth**, you can water occasionally, usually no more than once per week when the weather is dry, until they get **established**.

"Established" means it has grown significantly.

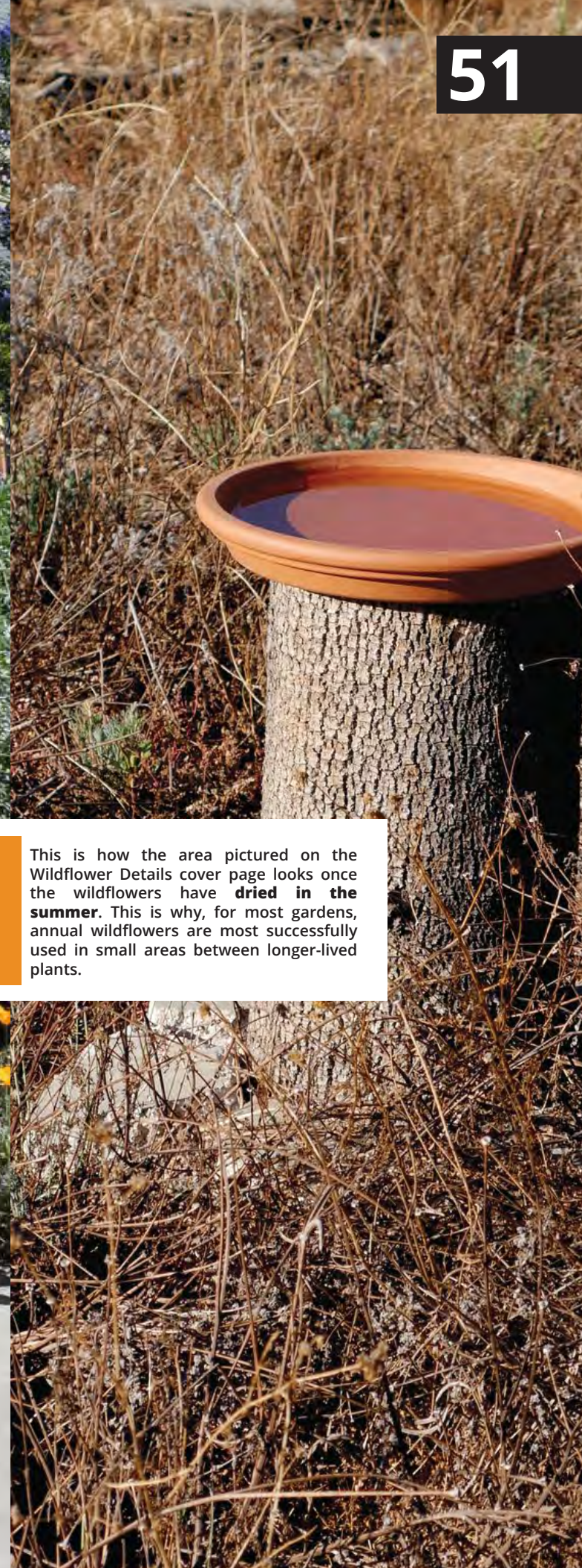
Clarkias growing in a very narrow strip of soil without enough room for most planting options.

"OFF-SEASON" WILDFLOWERS

Wildflowers will grow through the fall and winter, then bloom in the spring. If desired, blooms can be extended with an occasional irrigation in the spring.

After blooms fade, allow seeds to **ripen** to feed *seed-eating* birds. If you live in an urban wildland interface area and wildfire is a concern, remove spent wildflowers before they dry. If you live in an urban area without this concern, you may choose to allow plants to dry out and drop seed naturally. Some will be eaten by birds, and some will usually regrow the following season. After seeds drop you may either **chop up** plants to add to the mulch layer, **compost** them if you do not mind wildflower seeds in your compost, or place them in your **green bin**.

California poppies and clarkias lightly seeded in between other, more permanent plantings.



This is how the area pictured on the Wildflower Details cover page looks once the wildflowers have **dried in the summer**. This is why, for most gardens, annual wildflowers are most successfully used in small areas between longer-lived plants.

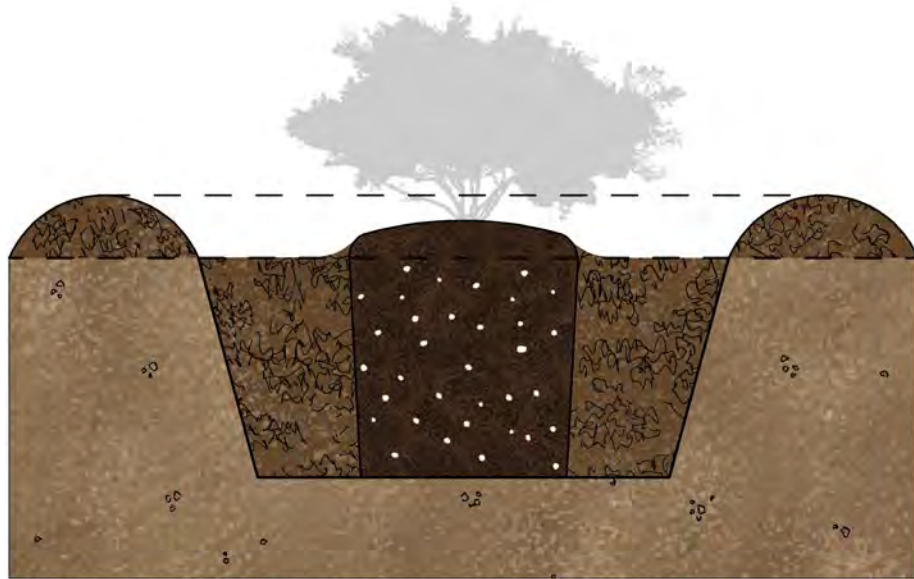
Why might I use these techniques for planting my new landscape?

PLANTING WATERWISE AND CALIFORNIA NATIVE PLANTS PROPERLY IS ONE OF THE MOST IMPORTANT THINGS YOU CAN DO TO SET UP YOUR GARDEN PROJECT FOR SUCCESS. IT IS NOT COMPLICATED, BUT PEOPLE OFTEN TELL US THEY NEVER LEARNED THE TECHNIQUES WE COVER HERE AND IN OUR ONLINE PRESENTATIONS

WE HIGHLY RECOMMEND YOU CHECK OUT OUR "INSTALLATION AND ESTABLISHMENT OF CALIFORNIA NATIVE AND WATERWISE GARDENS" ONLINE WORKSHOP RECORDING ON OUR YOUTUBE CHANNEL AT [CBWCD.ORG/YOUTUBE](https://www.cbwcd.org/youtube).

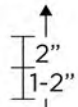
WE GUIDE YOU THROUGH A STEP-BY-STEP PLANTING PROCESS AND PROVIDE MANY MORE TIPS TO HELP MAKE YOUR PROJECT A SUCCESS!





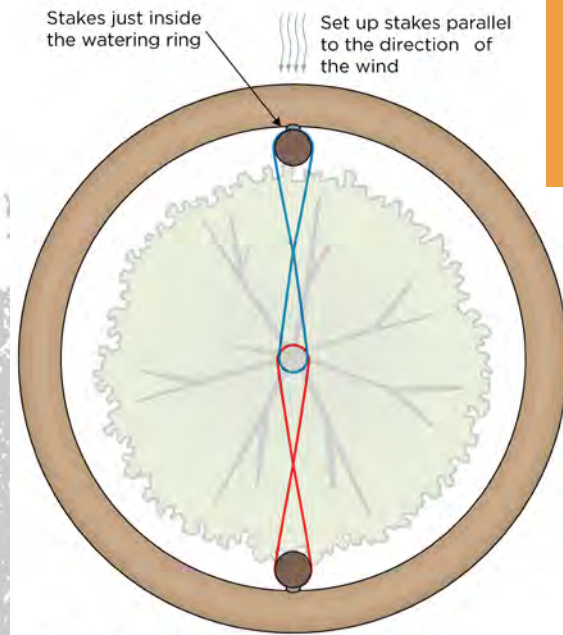
PLANTING FOR 1 & 5 GALLON PLANTS

Watering ring to 2" above top of root ball



Top of root ball 1-2" above surrounding soil level

Dig hole slightly less deep than and twice as wide as root ball. Usually backfill with native soil only. No fertilizer is needed! Add up to 1/4 compost only if soil is extremely rocky or very heavy clay.



PLANTING DETAIL TREE OVERHEAD VIEW

NOTE : PROPER STAKING AND TYING OF TREES THAT REQUIRE STAKING IS ESSENTIAL TO ESTABLISH A STRONG TREE THAT HAS THE BEST CHANCE OF RESTING DAMAGE DURING STRONG WINDS.

TREE STAKES

In most situations, **tree stakes** should be firmly inserted into the soil about *two feet from the main trunk* of the tree, parallel with the main direction of winds on the site, and should use "figure eight" shaped ties with proper tree tie material and tree stakes, available from a local landscape supply store. For local locations in the western San Bernardino County area, see our **Local Landscape Suppliers List :** cbwcd.org/suppliers A *post pounder* will be needed to properly install tree stakes.

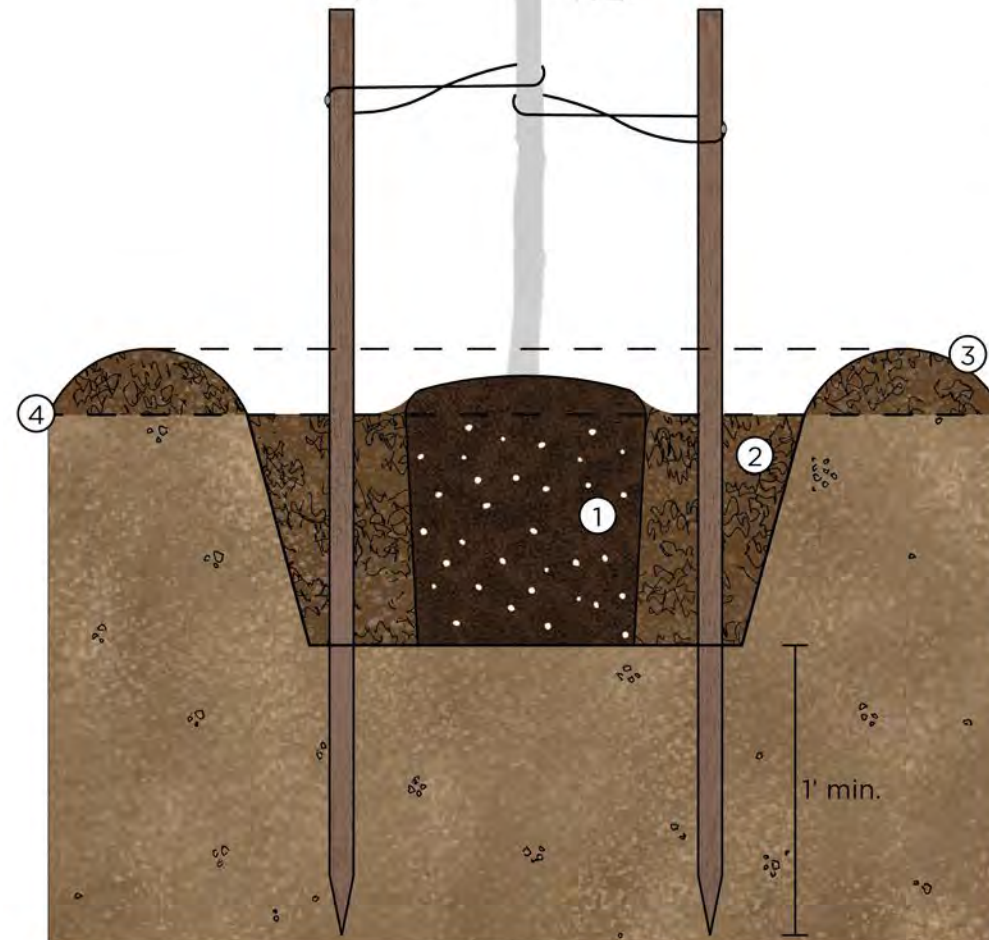
TREE TIES

Ties should be applied as low on the trunk as possible to support the tree as needed, but also allowing the tree to move in the breeze to establish strength. If the tree came with a stake attached to it in the nursery pot, remove it during the process of properly setting these longer-term stakes and ties. **Remove** stakes and ties as soon as the tree has **developed** the strength to stand on its own, often after *1-2 years*, depending on the size and structure of the tree at the time of planting. The stakes and ties are like a crutch, and they should be on *no longer* than they need to be so that the tree can continue to better develop structural strength on its own.

KEY

PLANTING DETAIL 5 AND 15 GALLON TREES

- # Key for image to the right, **Planting detail for 5 and 15 gallon trees**
- 1 LIGHTLY LOOSEN OR SHAVE ROOT BALL TO ENSURE ROOTS GROW OUTWARD AND DO NOT CIRCLE (SEE ONLINE WORKSHOP MENTIONED ON PREVIOUS PAGE FOR MORE DETAILS)
 - 2 NATIVE SOIL BACKFILL
 - 3 BUILD "WATERING RING" TO ALLOW FOR AT LEAST 1-2" OF WATER TO POOL ON TOP OF THE ROOTBALL OF THE TREE WHEN FULL
 - 4 STURDY AND COMPACTED "WATERING RING" TO ALLOW FOR DEEP IRRIGATION THROUGH THE DEPTH OF THE ROOT BALL AFTER PLANTING. IF YOU WILL BE CONTINUING TO WATER WITH A HOSE, BE SURE TO MAINTAIN THIS WATERING RING SO IT CONTINUES TO BE ABLE TO HOLD ENOUGH WATER.



PLANTING DETAIL 5 AND 15 GALLON TREES

Watering ring min. 1"-2" above top of root ball



Top of root ball 1-2" above surrounding soil level

Dig hole slightly less deep than and twice as wide as root ball. Usually backfill with native soil only. No fertilizer is needed! Add up to 1/4 compost only if soil is extremely rocky or very heavy clay.

A close-up photograph of numerous pink, spherical flower heads on thin, green, woody stems. The flowers are in various stages of bloom, with some showing individual petals and stamens. The background is a soft-focus green, suggesting a garden or field setting.

Enjoy the space *you* design!