

Spring Gardening Basics

Isabel Hernandez, Water Conservation Specialist
Saturday, April 12, 2025

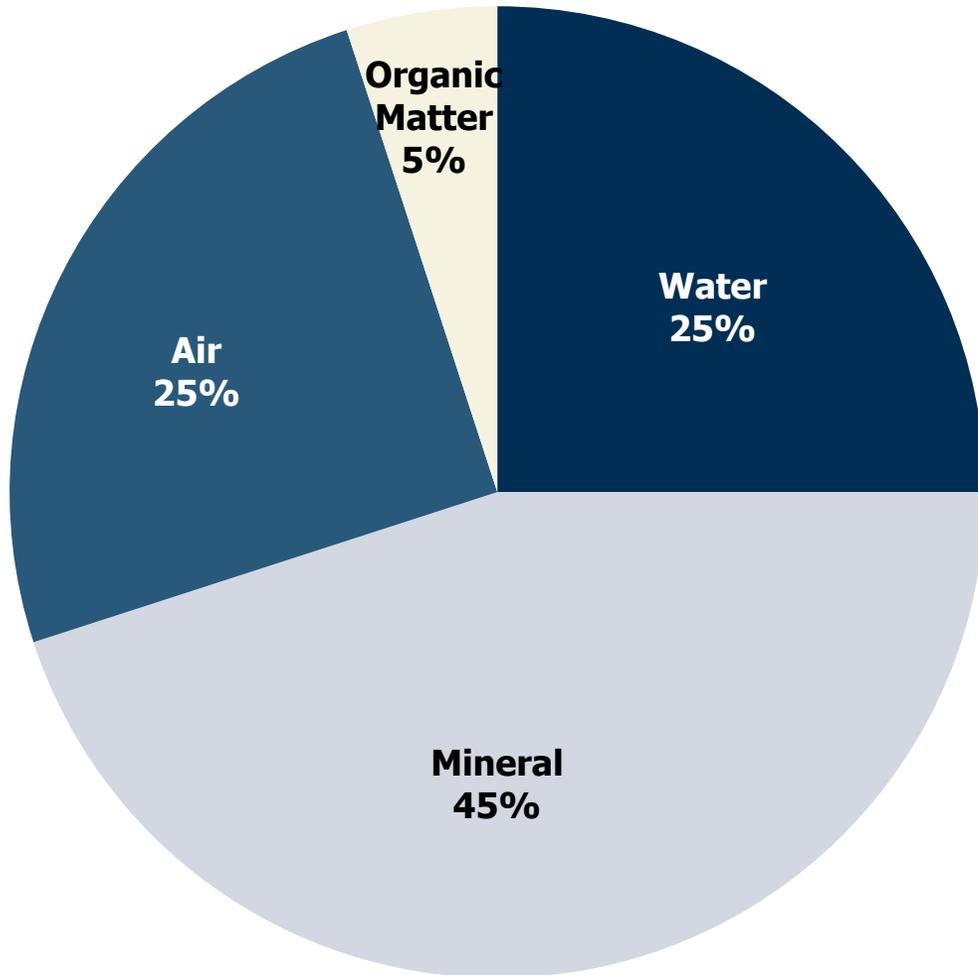


WORKSHOP SUMMARY

- Gardening basics
 - *Soil*
 - *Mulch / amendments / compost*
 - *Fertilizers*
 - *Plant selection*
 - *Planting tips*
- Garden management
 - *Tools*
 - *Weed control*
 - *Irrigation*
 - *Pest control*
 - *Disease / deficiency control*
 - *Resources*



HEALTHY SOIL COMPOSITION



25% Water - H₂O

All life needs an adequate amount



25% Oxygen - Air

Prevents soil compactions



5% Organic Matter - Compost

Breakdown of decaying plant material, manure, bacteria and living microorganism

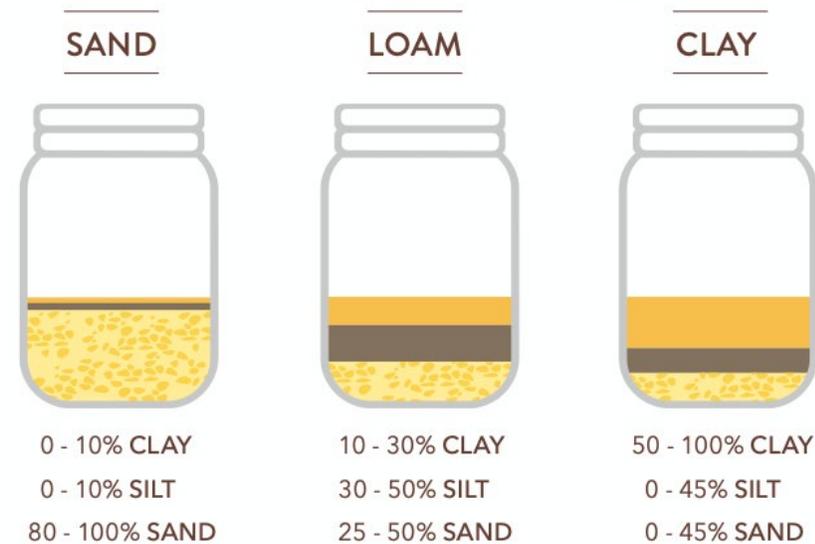


45% Mineral - Native Soil

Loam, Sand, Silt, Clay

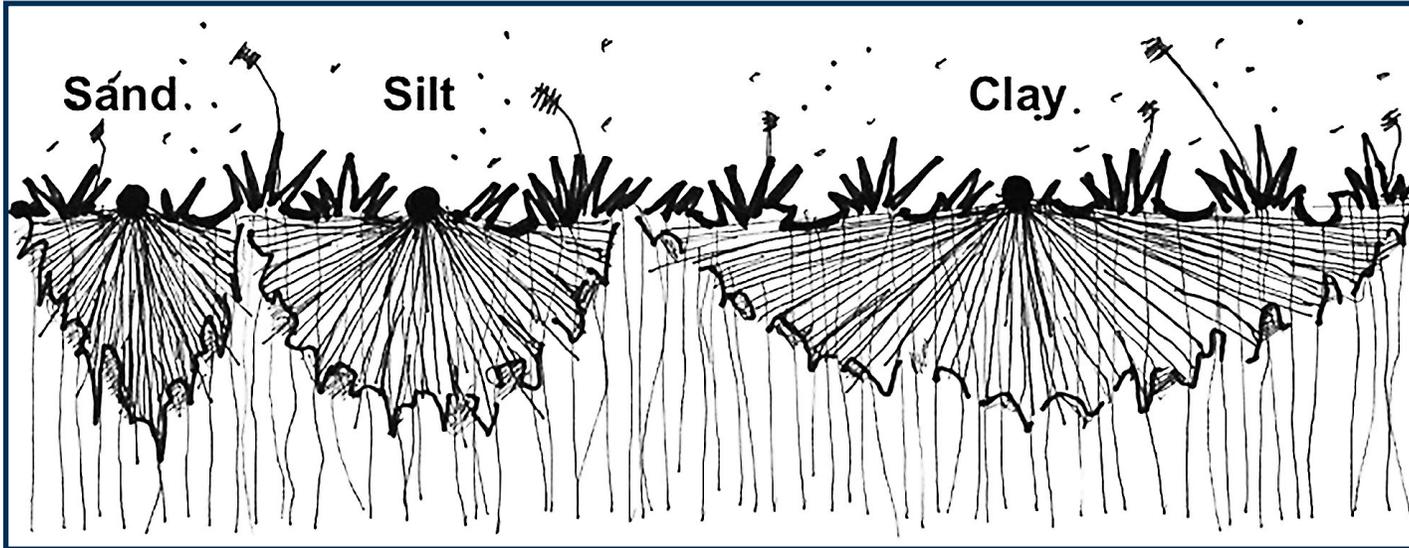
SOIL TYPE: TESTING

1. Fill clear jar halfway with soil samples
2. Fill jar with water leaving 1 inch of air
3. Attach lid, shake jar vigorously
4. Wait up to 24 hours for soil to settle



See page 29 of SoCal Yard Transformation Book for more testing options

SOIL: EFFECTS OF IRRIGATION



Soil Type	Rates of Infiltration	Spacing of Irrigation	Frequency Cycle	Duration of Irrigation
Sand	Deep / Direct	Closer	Less	More
Silt				
Clay	Shallow / Spread	Distant	More	Less

SOIL: WHAT KIND TO USE?



For Potting Containers

Potting mix

For California Native Plant Landscapes

Only native soil

For Edible Plants in Planter Box or In-Ground

Organic compost amended soil

SOIL PROBLEM CONDITIONS



Soil compaction



Over watering

Soil	Conditions	Problem	Solution
Soil compaction	Lacking 25% air, lacking 25% water	Impermeable for roots	Aerate soil add organic compost up to six to eight inches
Over watering	Exceeding 25%, water lacking, 25% air	Anaerobic conditions	Cut back on watering 80% plants die from overwatering

MULCH / COMPOST / AMENDMENTS

	Mulch	Amendments	Compost
Dry Organic Matter	*	*	*
Manure		*	*
Coffee Grounds		*	*
Compost Tea		*	*
Peat Moss		*	*
Worm Castings		*	*
Microbial Amendments		*	*
Gypsum		*	
Bone Meal /Fertilizer		*	
Perlite / Vermiculite		*	
Food Scraps			*
Green Organic Matter			*

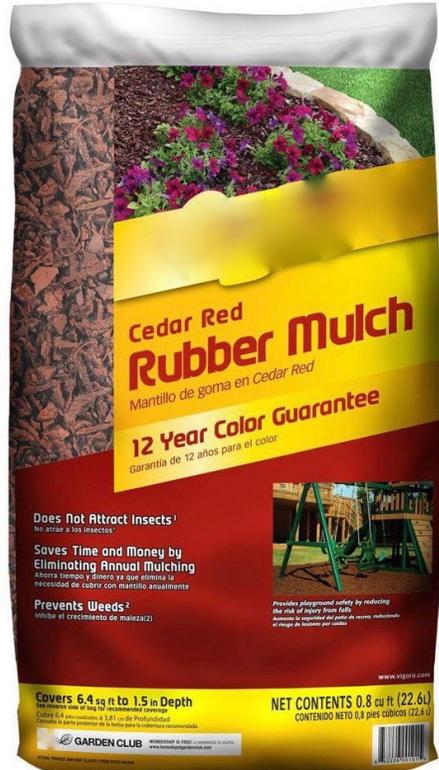
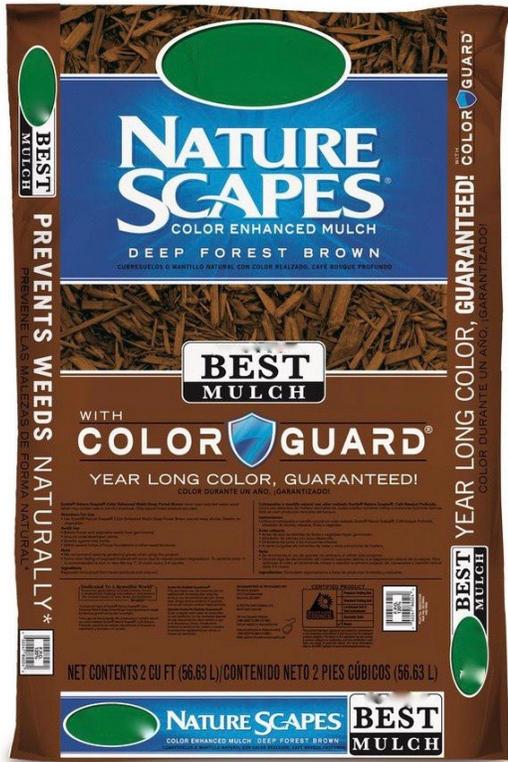


Organic



Amendments

MULCH TIPS & WARNINGS



Keep contaminated mulch or manure out of your garden

FERTILIZER

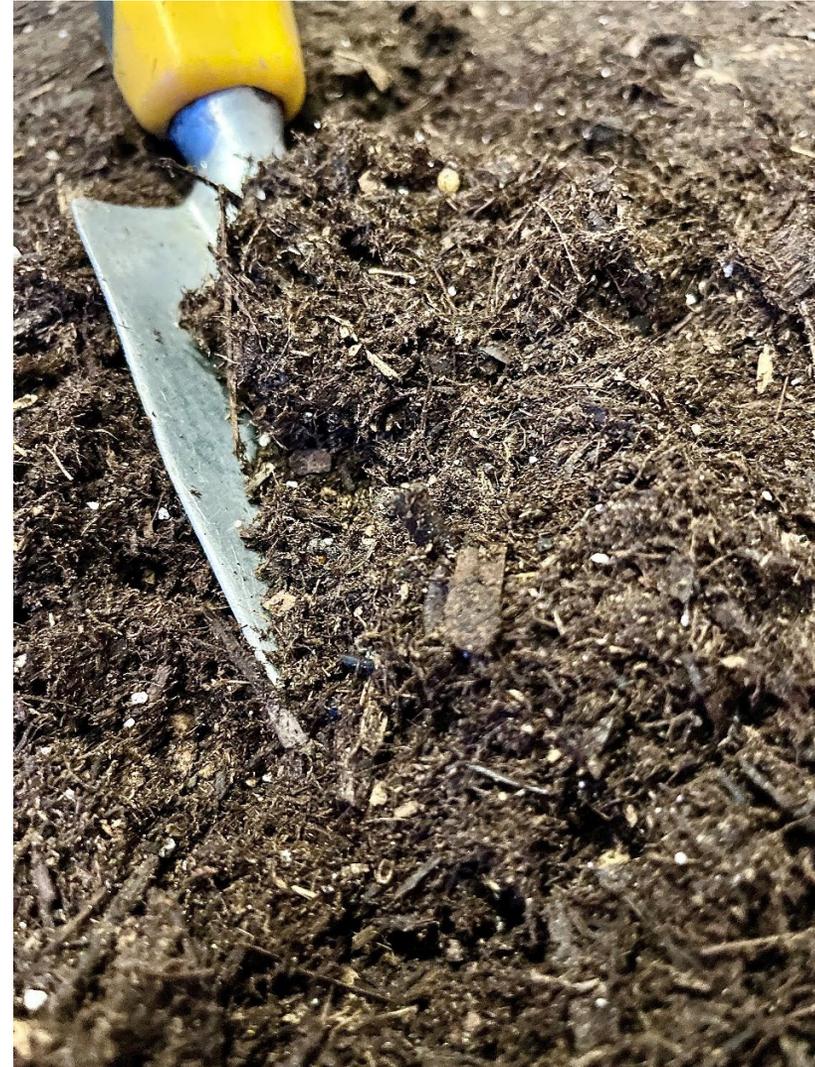
- Inorganic Fertilizer
- Liquid or granule fertilizer
- Made from minerals and rock
 - *Do not apply over plants, on stem or trunk*
 - *Fertilizer can burn plants*
 - *Apply as indicated*

Nutrients

NITROGEN (N)	PHOSPHORUS (P)	POTASSIUM (K)
Leaf Growth Color Pigment	Root Development Flowers / Fruit	Overall Plant Recovery & Support

FERTILIZER

- Organic
- Compost: Decomposed plant matter and animal waste
 - *Best - Nonmeat fertilizer*
 - *Does not burn plant*
 - *Can add anytime of year*
 - *Can add as often as needed*
- Manure: Nonmeat eating animal waste
 - *Excellent nitrogen source*
 - *Best when solarized*
- Bone meal: Ground animal bones
 - *Slow release*
 - *Phosphorus and calcium*



PLANT BUYING TIPS

- Environmental needs
 - *Can you accommodate plant's needs?*
 - *Lighting*
 - *USDA Zone*
 - *Watering needs*
 - *Maturity space needs*
- Functional needs
 - *What purpose will the plant serve?*
- Maintenance needs
 - *Can you keep up with the mature plant?*
- Small size plant
 - *Avoid root-bound plants*
- Vigor
 - *Healthy Plant*



PLANTING TIPS

- Plants must be moist when ready to plant
 - *Water thoroughly, to avoid dry pockets*
- The Planting Hole
 - *Dig soil out of the planting hole, up to 1.5 - 2x the pot diameter*
 - *Fill with water and permit water to absorb to existing soil*
- Plant on a cool day or late in the day
 - *Reduce heat stress of plant*
 - *Never plant on HOT days*



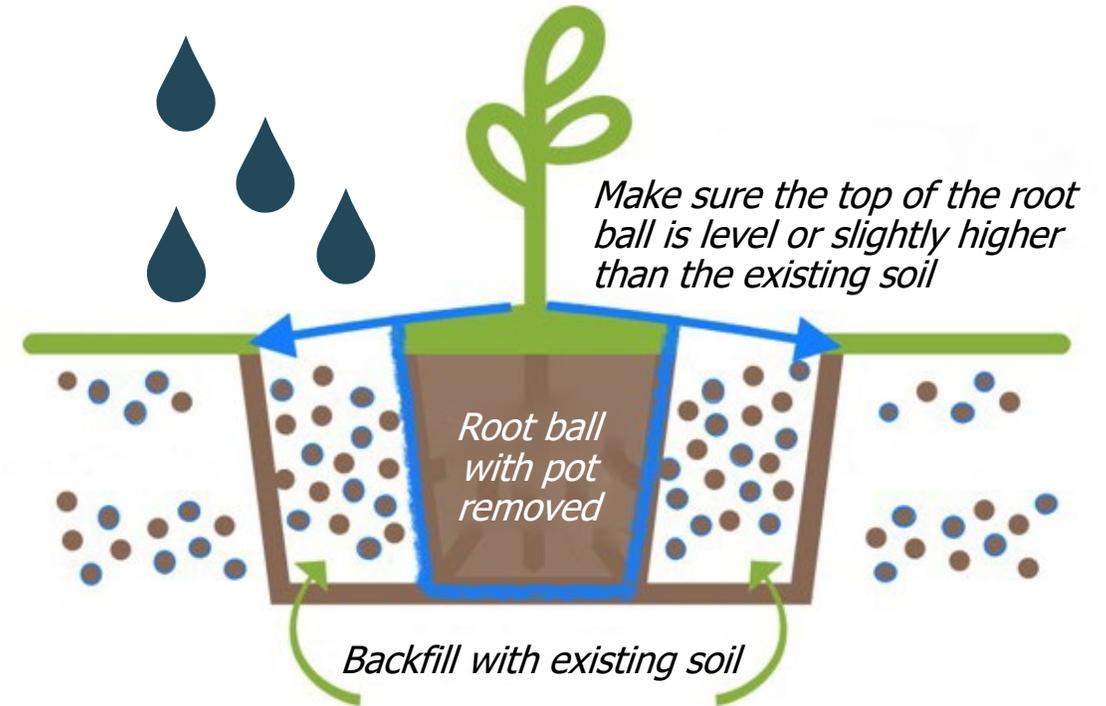
www.DigAlert.org

*Utility Conflicts with
Overhead &
Underground Lines*

100% Free Service

PLANTING TIPS

- No air pockets
 - *Backfill with existing soil only*
 - *Tamper soil to eliminate air pockets*
- Compost, mulch, fertilizer, and water
 - *Can add compost over plant soil*
 - *Add mulch up to 3 inches, do not touch plant*
 - *Do NOT add fertilizer*
 - *Water the soil around the plant*



GARDEN MANAGEMENT: TOOLS

- Maintain the tools
 - *Keep the tools clean*
 - *Keep the tools sharp*
 - *Discard or repair broken tools*
- Sanitize garden cutting tools
 - *Isopropyl Rubbing Alcohol 50 - 70%*
- Always use the correct tool
 - *Do not compromise safety for convenience*



GARDEN MANAGEMENT: GARDEN TASKS

- Inspect the garden
 - *Trim, prune or remove plants that are:*
 - *Dead*
 - *Damaged*
 - *Diseased*
- Divide overcrowded/
overgrown plants
 - *Moisten soil on plant*
 - *Use sharp garden tools*
 - *Split and divide plant*
 - *Relocate split or divided plants*



GARDEN MANAGEMENT: WEED CONTROL

- Weed management
- Prevent, control, and eradicate
 - *Tools:*
 - *Weed wacker*
 - *Hula hoe*
 - *Hand pulling tools*
 - *Sod cutter*
 - *Solarize weeds/soil with plastic during hot weather*
 - *Cardboard to suppress weed growth*
 - *Chemical herbicide*
 - *Pre-emergent herbicide*

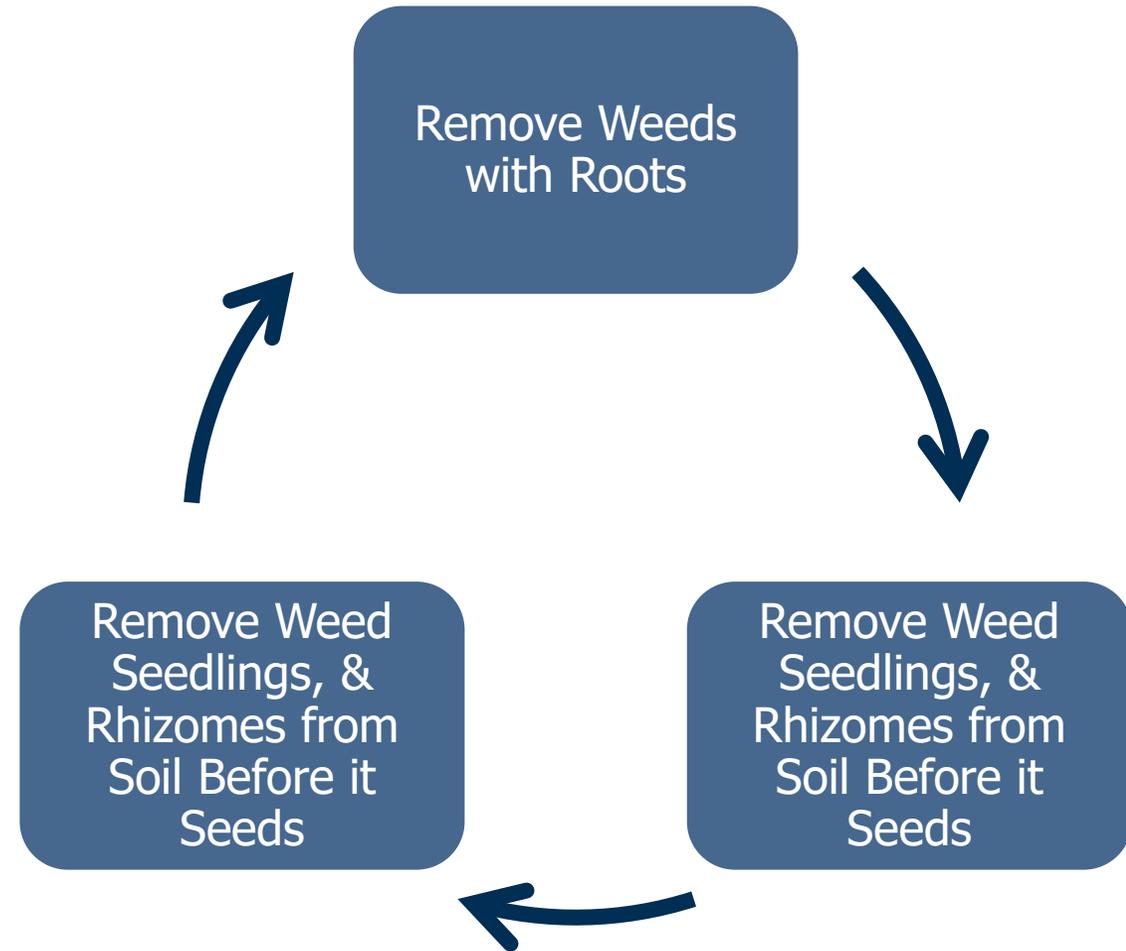
Vinegar Weed Recipe: 1-gallon distilled vinegar +1 cup salt + 2 tbsp dish soap



Do not put weeds in the compost pile

GARDEN MANAGEMENT: WEED CONTROL

- DO NOT USE
 - *Weed cloth or weed barrier*
 - *They do not block noxious weeds*
 - *The heat destroys the healthy microorganism in the soil*
- Slopes can collapse or erode under the weed cloth or weed barrier



GARDEN MANAGEMENT: IRRIGATION

- Drip irrigation is best
 - *Hydrozone Irrigation*
 - *Use a Weather Based Irrigation Controller*



*See SoCal Yard
Transformation Book
Pages 82-84*



GARDEN MANAGEMENT: IRRIGATION

- East Valley Water District outdoor residential watering guidelines



Water between
6:00 p.m. and 6:00 a.m.



No irrigation two days after
measurable rainfall

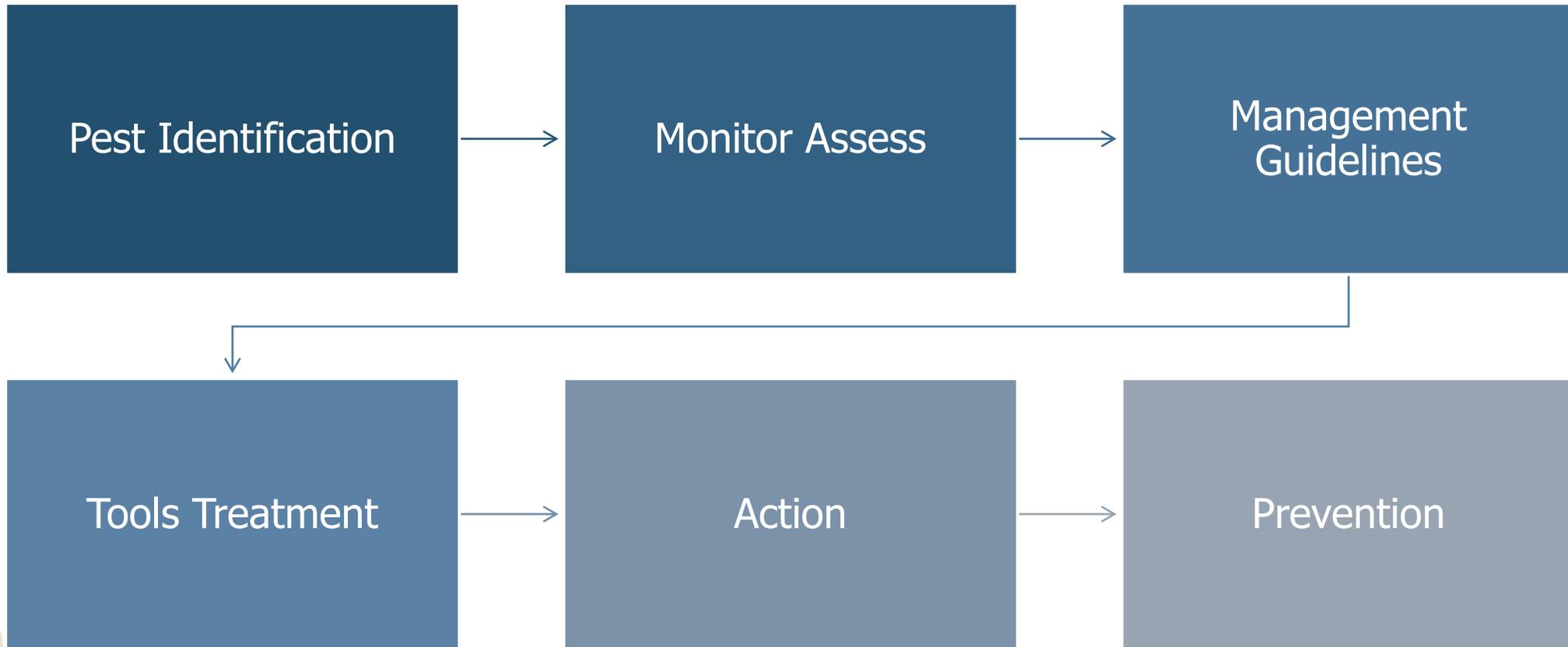


Water in three cycles of 3-5
minutes, one hour between
each cycle



Irrigation Troubleshooting
See So Cal Yard Transformation Book
Pages 100 - 104

GARDEN MANAGEMENT: PEST CONTROL



GARDEN MANAGEMENT: PEST CONTROL



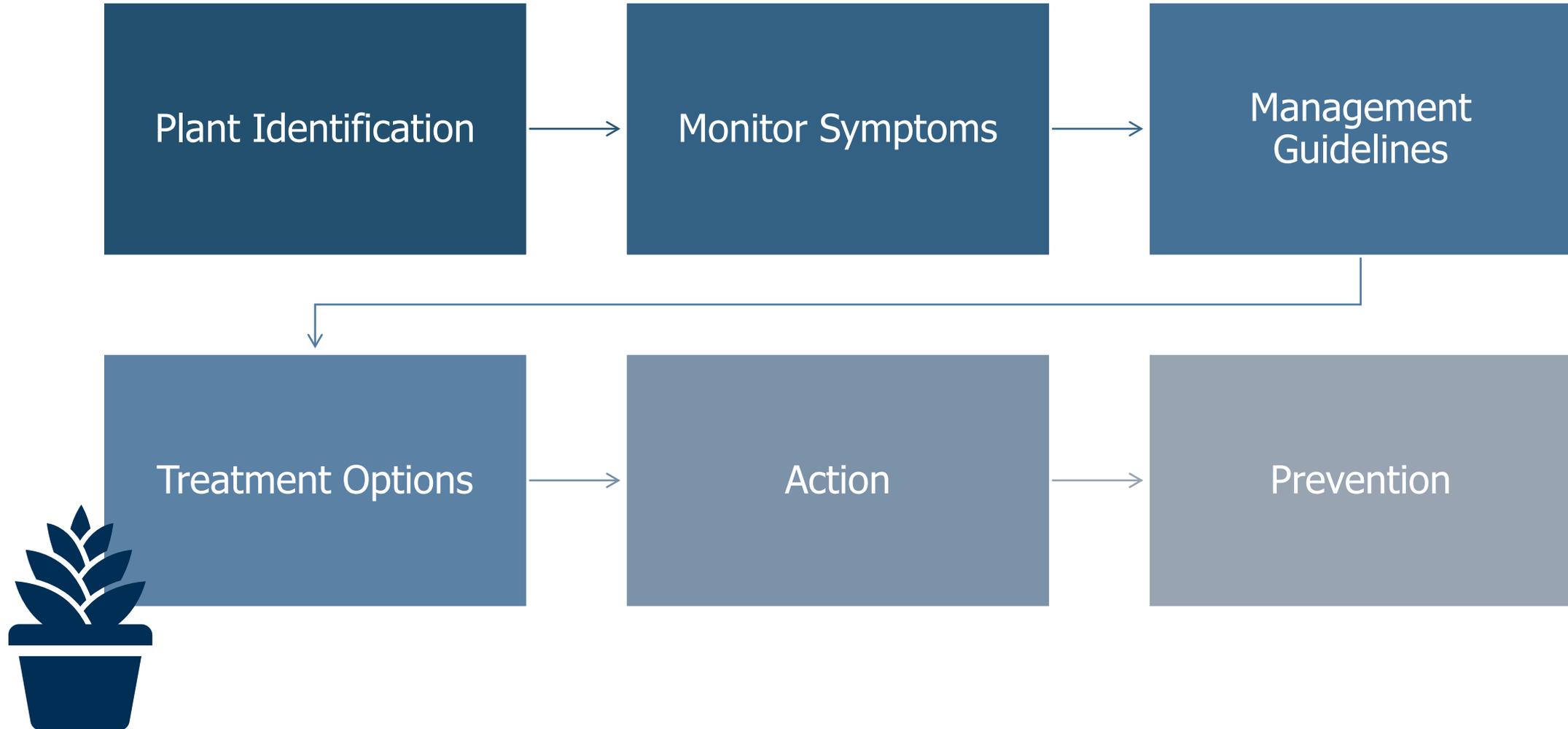
The screenshot shows the UC IPM website interface. At the top, there is a search bar and the UC IPM logo. Below the logo is a navigation menu with items like 'What is IPM?', 'Identify & Manage Pests', 'Research', 'Publications', 'Training & Events', 'Links', 'About Us', 'Contact Us', and 'Subscribe'. The main content area is titled 'Home, garden, turf, and landscape pests' and includes sections for 'Pests of homes, structures, people, and pets', 'Pests in gardens and landscapes', and 'QUICK LINKS'. The 'QUICK LINKS' section lists various resources such as 'Pest Notes', 'Quick Tips', 'Videos', 'Pests in the Urban Landscape', 'Urban & Community IPM', 'Seasonal Landscape IPM Checklist', 'Plant Problem Diagnostic Tool', and 'Wildlife Pest Identification Tool'.



Animal burrow



GARDEN MANAGEMENT: DISEASE / DEFICIENCY CONTROL



GARDEN MANAGEMENT: DISEASE / DEFICIENCY CONTROL

The screenshot shows the UC IPM Plant problem diagnostic tool interface. At the top, the URL is ipm.ucanr.edu and the UC IPM logo is visible. The page title is "Plant problem diagnostic tool" with a "HELP" icon. On the left, there are navigation options: "Plant Names", "Plant Parts", and "Damage". Below these is a "Select plant types for list of results" input field and a "Reset All" button. The main area is titled "Select plant types" and features four categories, each with an "Add to my list" button and a magnifying glass icon: "Flowers" (with a photo of pink flowers), "Fruit trees, nuts, berries, and grapevines" (with a photo of oranges), "Trees and shrubs" (with a photo of trees), and "Vegetables and melons" (with a photo of cherry tomatoes). At the bottom, it says "Agriculture and Natural Resources, University of California" and includes a disclaimer: "For noncommercial purposes only, any Web site may link directly to this page. FOR ALL OTHER USES or more information, read [Legal Notices](#). Unfortunately, we cannot provide individual solutions to specific pest problems. See our [Home page](#), or in the U.S., contact your [local Cooperative Extension office](#) for assistance." There are also links for "Acknowledgements", "Staff-only pages", "Subscribe (RSS)", and "Contact UC IPM".



RESOURCE BOOK

- Available online
 - *English edition*
 - *Spanish edition*

Free Download!
STEP-BY-STEP GUIDE TO CREATING A WATER EFFICIENT LANDSCAPE

SoCal Yard Transformation
A STEP-BY-STEP GUIDE TO GET THE YARD YOU WANT

EASTVALLEYWATER.GOV/TRANSFORMATIONBOOK

RESOURCE WEBSITE

UNIVERSITY OF CALIFORNIA AGRICULTURE & NATURAL RESOURCES

UC IPM

Statewide Integrated Pest Management Program

What is IPM? | Identify & Manage Pests | Research | Publications | Training & Events | Links | About Us | Contact Us | Subscribe

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MAKE A GIFT | Support UC IPM's mission to make integrated pest management the way to manage pests

What's New

- Pest Notes: Invasive Shothole Borers, Feral Cats and Botryosphaeria Canker added
- Ag Pest Management: Floriculture and Ornamental Nurseries revised
- Home & Garden Pest Newsletter: Spring 2023
- Green Bulletin: Spring 2023
- Agriculture: 2022 Fungicides, Bactericides, Biocontrols, and Natural Products for Deciduous Tree Fruit and Nut, Citrus, Strawberry, and Vine Crops in California (PDF)
- Three new videos about the invasive shothole borers' biology, trapping, and management were published
- [More...](#)

QUICK LINKS

Home, Garden, Turf & Landscape Pests

Agricultural Pests

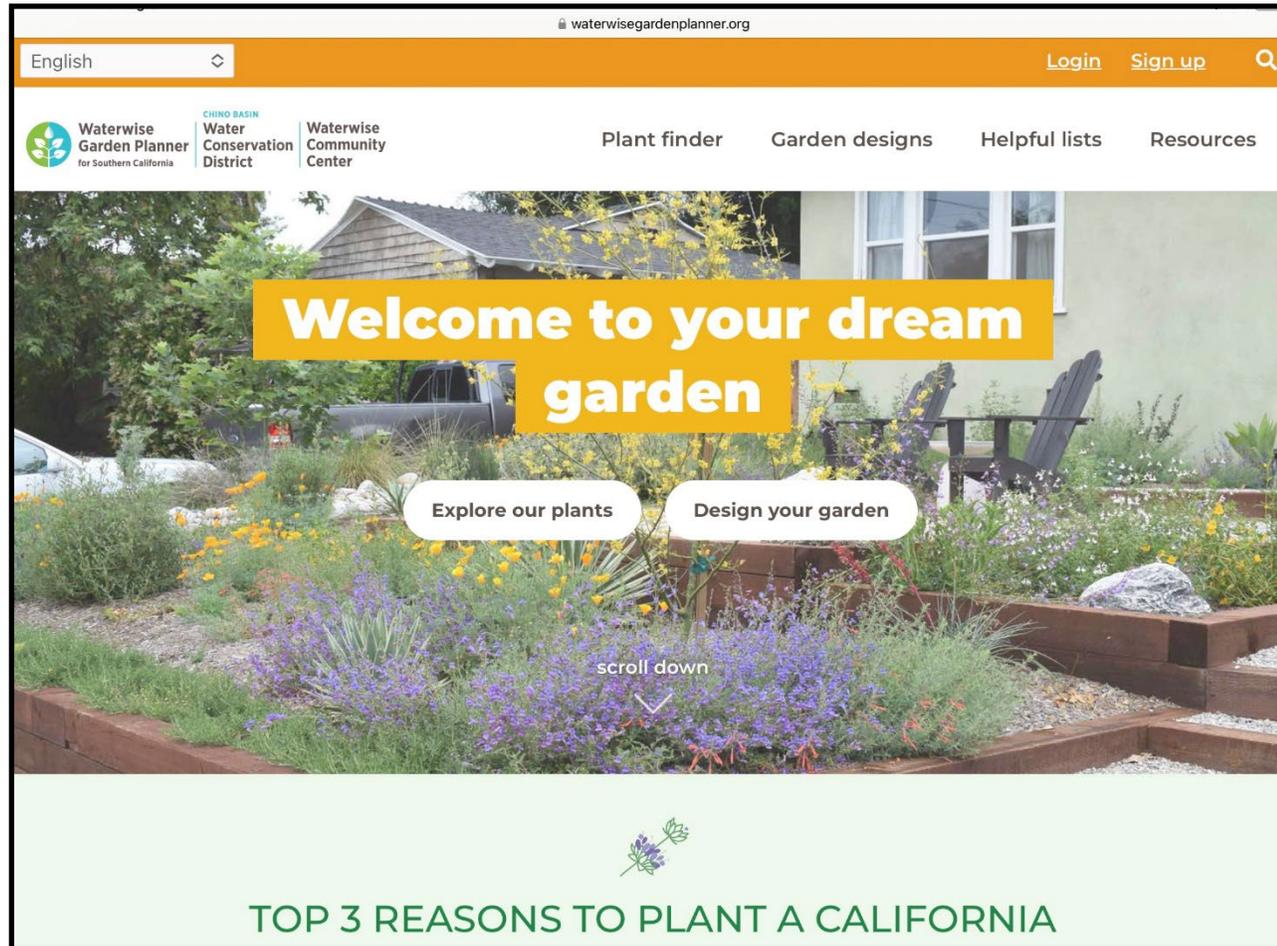
Natural Environment Pests

Exotic & Invasive Pests

www.ipm.ucanr.edu

- Identify and Manage
 - Pest and diseases
- Spanish publications available

RESOURCE WEBSITE



www.waterwisegardenplanner.org

- Plant Finder

- *Search criteria for Inland Empire climates*

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