



Sustainable Maintenance

For shrubs and perennials

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The Basics of Sustainability

1. Regionally appropriate
2. Less to the landfill
3. Protect and build the soil
4. Conserve water and energy
5. Protect water and air quality
6. Protect beneficial wildlife



The Goal of sustainable maintenance

- Healthy plants
- Less labor
- Fewer chemicals
- Less fuel use
- Less green waste
- A new “western” aesthetic

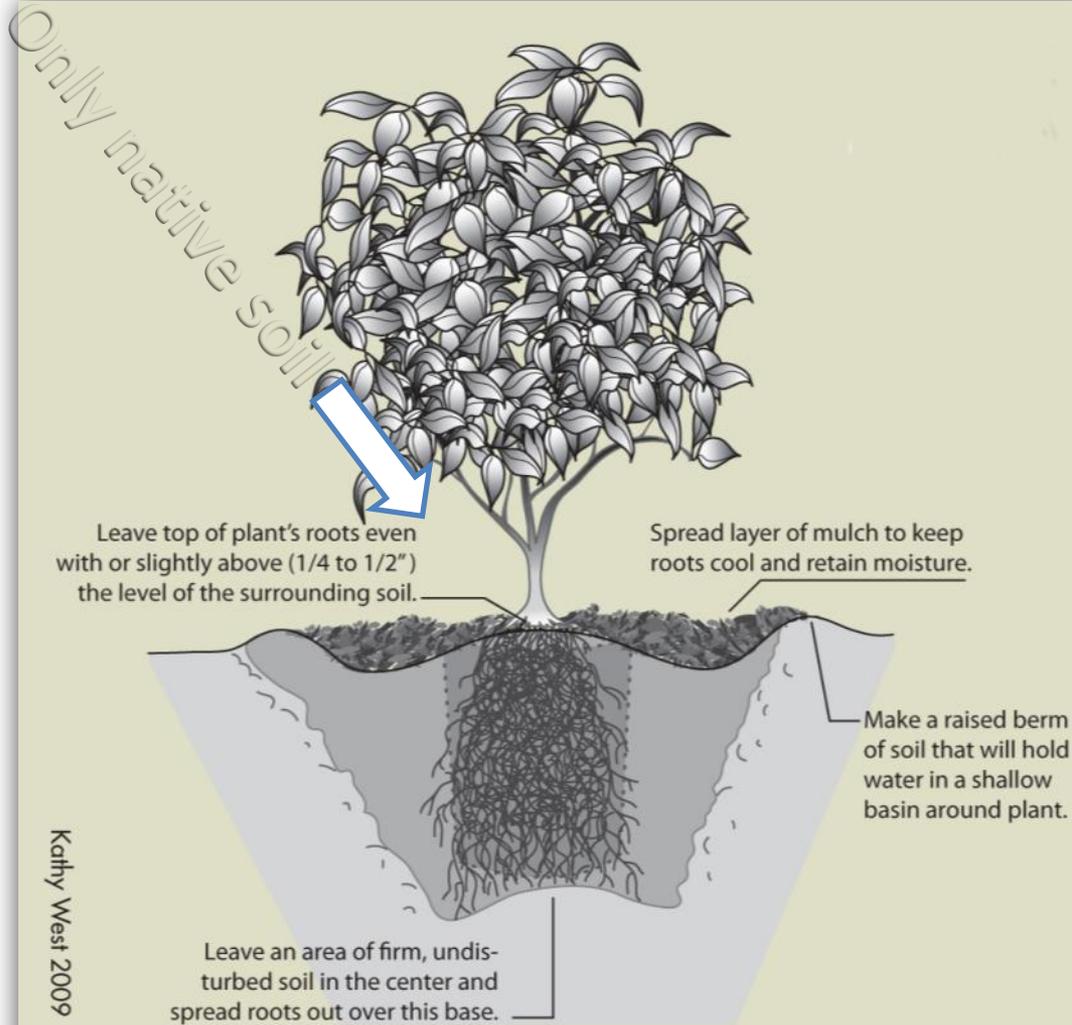




5 Main components

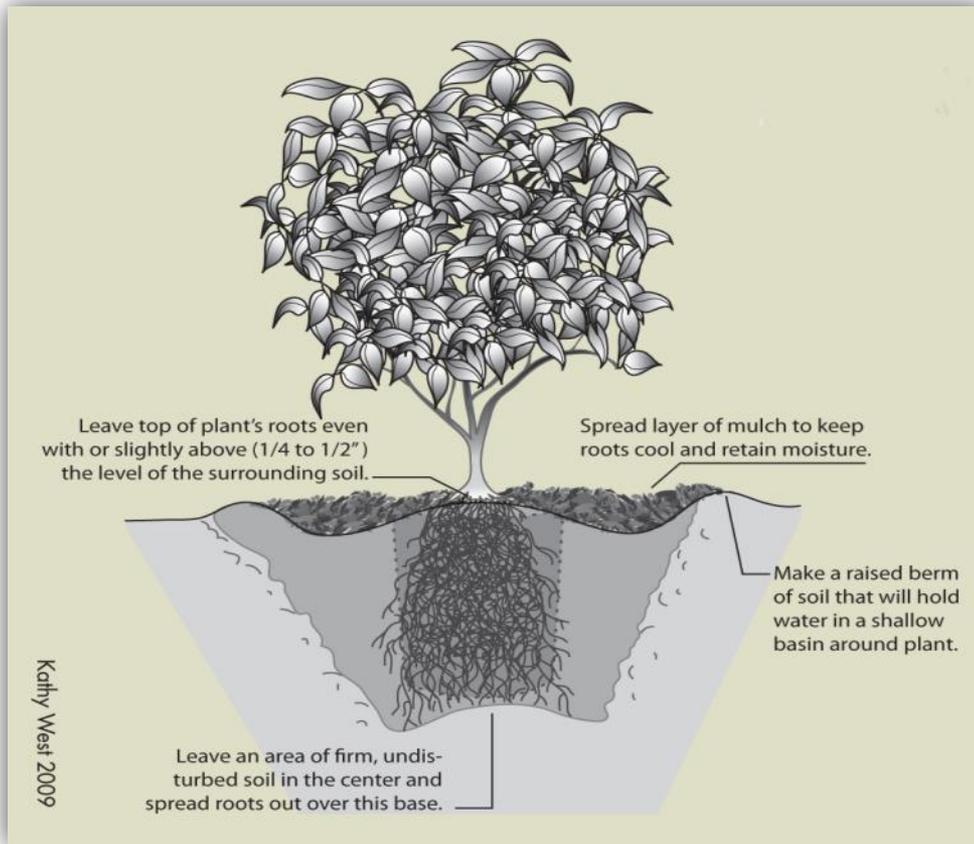
- **Planting**
- **Irrigation**
- **Mulching**
- **Pruning**
- **Pest and weed control**

Planting made simple



- Hole no deeper than root ball- crown slightly above soil level
- Hole 2-3X width of root ball
- Loosen roots
- Return **BROKEN UP** soil - **FIRM IT!**
- Berm and water well.
- **MULCH**

Planting: do it right **ONE** time!



A good head start prevents many problems.

Cutting corners here means fixing things later.

How Do You Fix It?

ADD ORGANIC MATTER



- Improves structure (for H₂O and O₂)
- Lowers and buffers pH
- Adds nutrients

**To amend or not to
amend?**

It depends!

**Whole bed, planting hole,
or under trees?**

NEW BEDS? Yes-maybe

- 1. Add at least 4-6" or more of composted OM and till in to twice the depth**
- 2. Basic soil sulfur will help lower soil pH SLOWLY and for longer**
- 3. Use natural blood meal or bone meal for Nitrogen and Phosphorous**

Slow vs. Fast Gardening

Already planted beds?

How are the plants doing?

- **Add blood meal/ soil sulfur**
- **Top with 1-2" compost**
- **ADD 3-4" MULCH**

Trees-NO

- Trees quickly outgrow planting hole
- Mulch/ compost- but keep 4-6 inches from trunk base
- If planting under-top dress only
 - Plant carefully into holes just big enough to accommodate 2 x the width of plant roots

Irrigation for life



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Irrigation for life

- Provide for adequate water over the life of the plant
- Plan for growth- stub up lines for future
- Irrigate entire root zone - add lines
- Think about spray blockage - use risers
- Use some form of soil level application
- **CONSIDER WHOLE ROOT ZONE**

Irrigation: Make adjustments

- Check sprays for blockages that develop
- Check infiltration depth
 - 12” for lawns
 - 18” for shrubs and trees
- Adjust run-times, delivery rate, convert type
- Shoot for ZERO RUNOFF!



Wean your sites from hedging



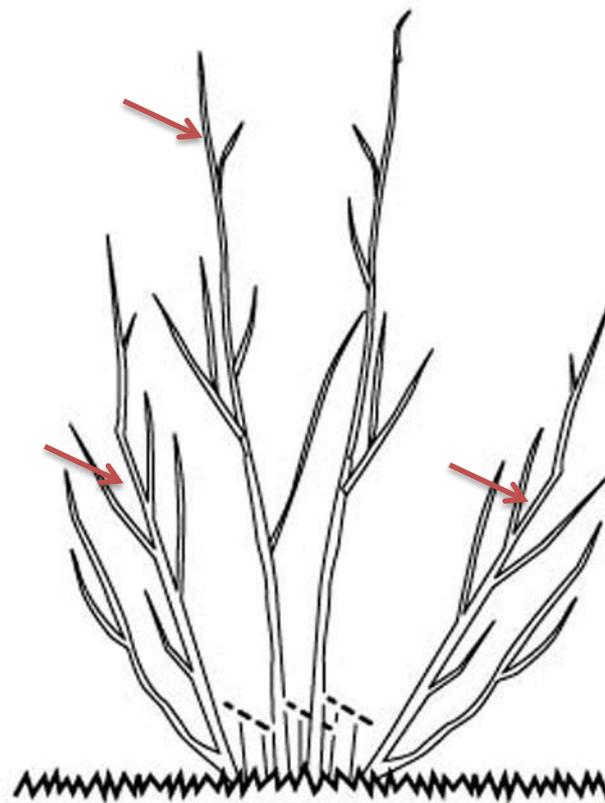
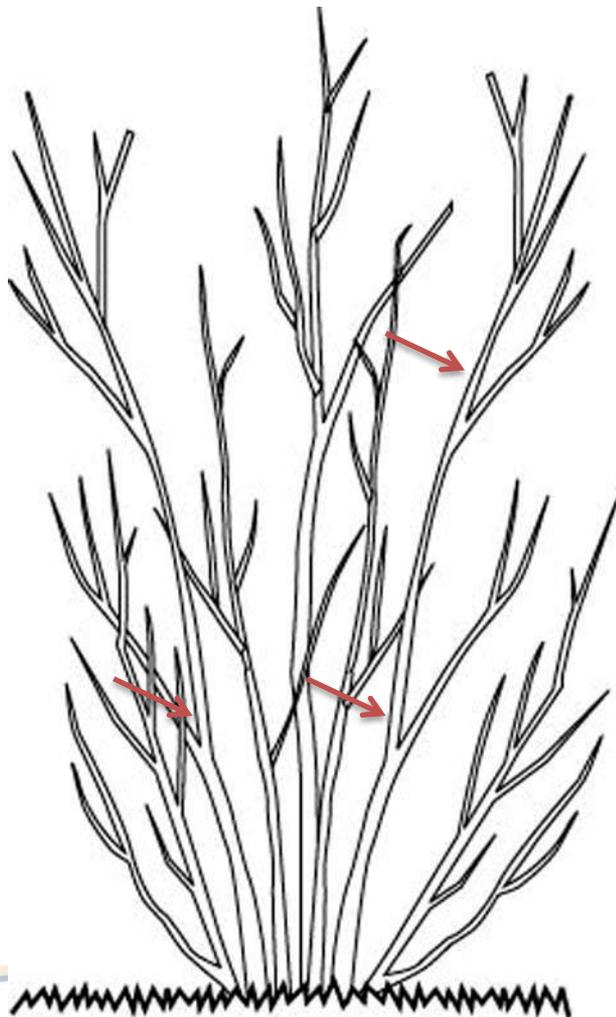




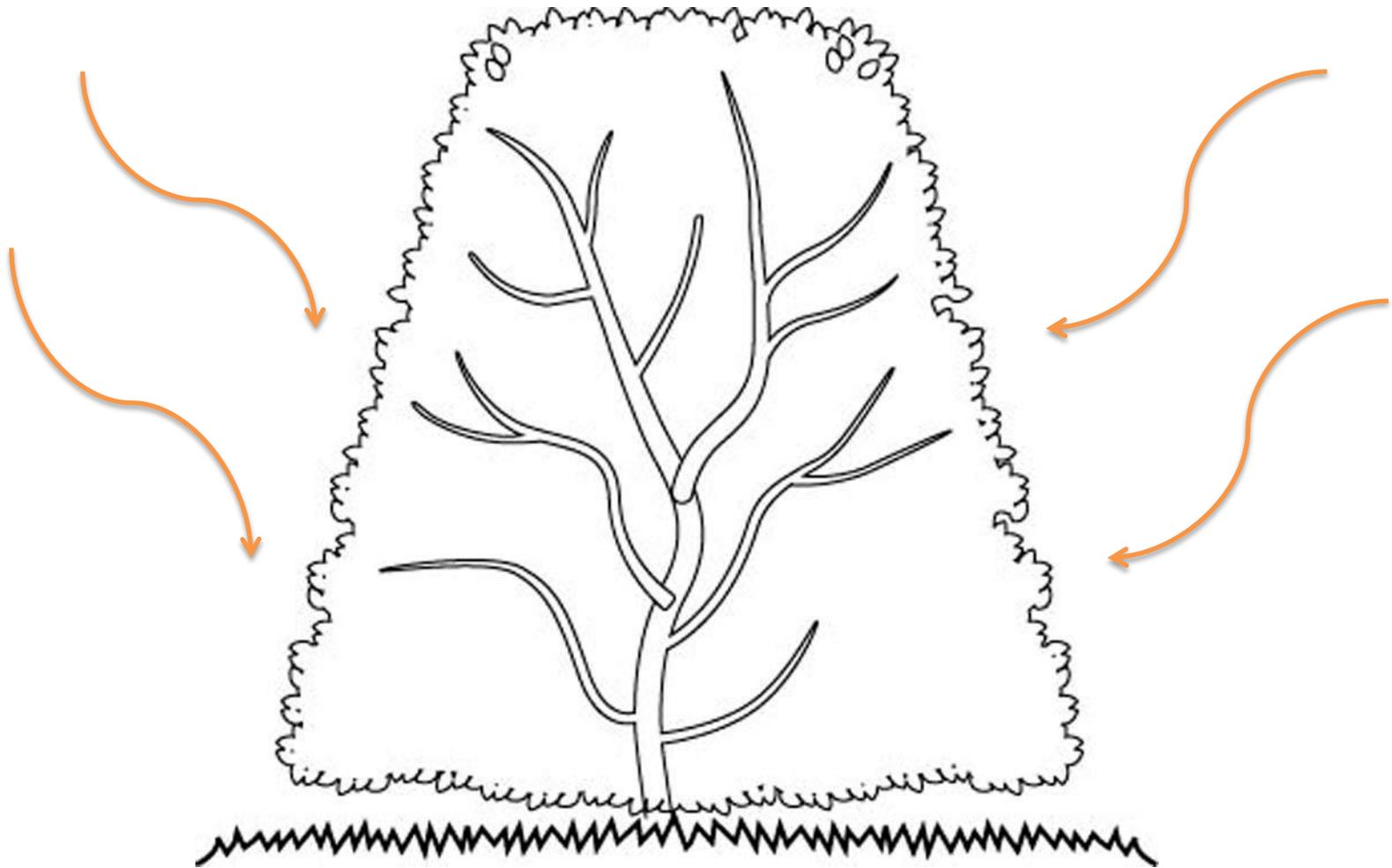




A Word about Pruning



If you must hedge...







Folsom Lake

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**Don't prune iris and New Zealand
Flax like grasses!**

**Reduce size by cutting to base
from the outside**

Reduce greenwaste by optimizing water and fertilizer application

- **Slows plant growth**

Side benefits:

1. **Reduces tender succulent growth**
2. **Less prone to sucking insects**
3. **Less prone to soil borne diseases**
4. **Fewer pollutants for potential runoff**

Questions?

Protect and build the soil

1. **Aerate compacted turf soils regularly**
2. **Use good compost when replanting beds**
3. **Prevent erosion - terrace and mulch**

Issues with Mounds

1. Eroding soil and sliding mulch
2. Uneven irrigation application
3. Water infiltration irregularities
4. Soggy areas at base
5. Uneven fill soils

**Consider terraces or plant material
for height interest**

Additional Strategies to Reduce Greenwaste

- **Grasscycle**
- **Only prune where needed**
- **Use plants that will fill space at maturity with no pruning- replace “hedged” plants (DO COST ANALYSIS)**
- **Where appropriate – use chipped or shredded debris as mulch**
- **Consider leaving leaf “litter”**



Benefits of mulch

- Reduce water loss to evaporation
- Reduces weeds
- Moderate soil temperature: good for roots and microorganisms
- Improves structure
- Reduces runoff
- Builds soil carbon - feeds soil microbes

Cover bare ground!



How much/ How big?

- 2-3” deep
- Fine or small size for perennials
- Medium for under shrubs
- Large bark under trees
- Shred for slopes
- Top off every 3rd year

How much time do you spend controlling weeds?



- Know your weeds
- Use UC IPM website to ID

- **MULCH!!!**
- Use weed cloth
- Control annuals mechanically before flowering
- Control perennials before flowering

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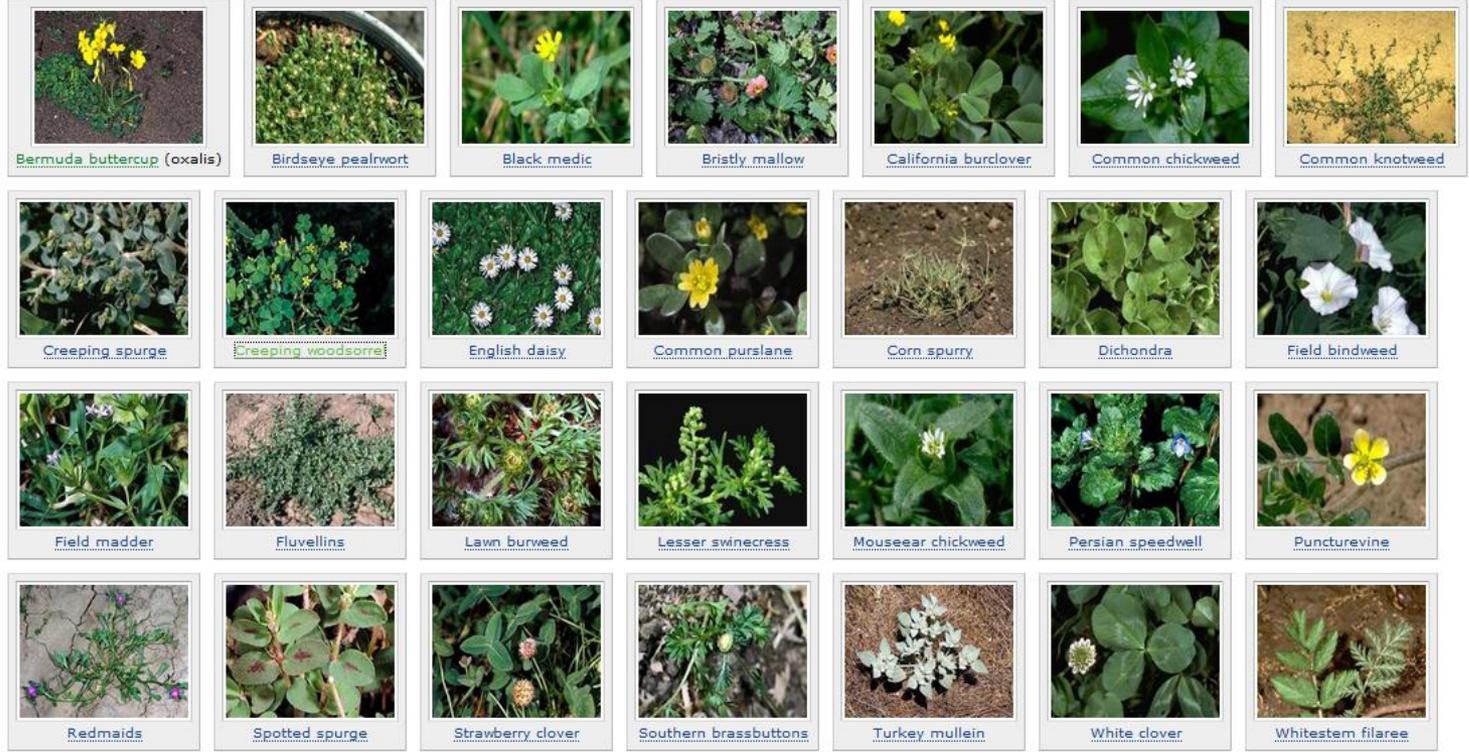
How to Manage Pests

Weed Gallery—Broadleaves

Spreading plants

Roll over photos for more images. Click on the photos for more information on identification and biology.

[View by weed name](#)

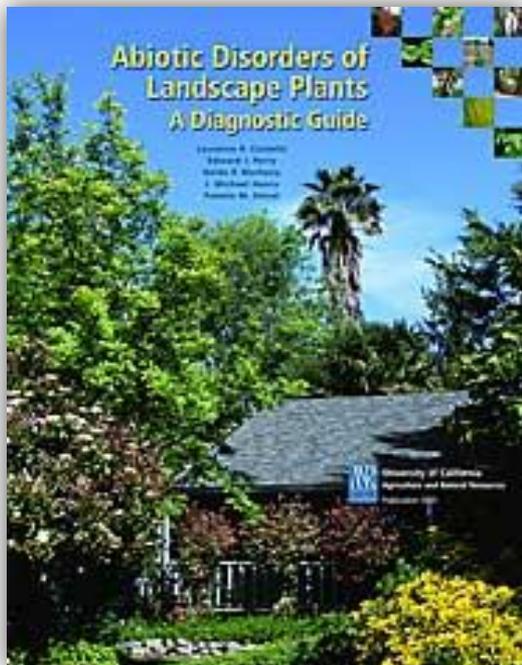


Pest and Disease Control

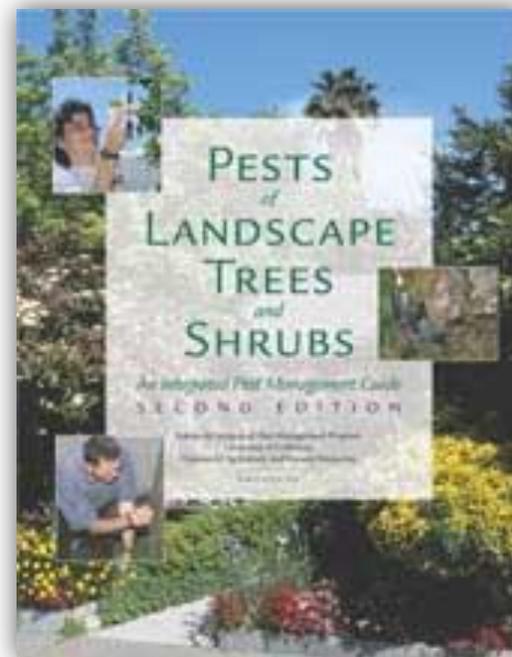
- Establish an IPM Program
- Avoid broad spectrum pesticides - preserve beneficial insects
- Look for cultural solutions first:
 - Irrigation/ Aeration
 - Air circulation
 - Sunlight modification



<http://anrcatalog.ucdavis.edu/>



**Abiotic Disorders of
Landscape Plants**



**Pests of Landscape
Trees and Shrubs**

Questions?