Gardening during a Drought

- In established gardens: prioritize! Which plants are worth saving? Eliminate
- "water hogs" if possible!

- Planning a garden: consider a Xeriscape (not necessarily like the one on the right :-)
(outdoor art by Andy Cao and Xavier Perrot at Cornerstone Gardens in Sonoma),
maybe even a Native Plant Xeriscape

- Edible gardens: what provides the most food value for the amount of water needed? Which vegetables are you most likely going to eat?
Are you home at harvest time?

Keeping established Plants Alive:

- **Ornamental Trees**: can often survive with 2 or 3 deep irrigations during spring and summer *for one season*.
  Fruit and Nut Trees: just like mature ornamental trees, they are not easy to replace and worth saving. While they can be kept alive with much less than optimal amounts of water, they should not be allowed to set fruit on this regimen.
  Shrubs: most established shrubs can survive with 2 or 3 deep waterings in the summer *for one season* as well.
  Groundcovers: should be watered at least every 3 – 4 weeks from April through September.
  Lawns: A 1,000 square foot water-wise garden uses only 5,000 to 10,000 gallons of water per year, while a same-size lawn uses more than 22,000 gallons per year.
  Vegetables: are high water use plants, unless you grow them indoors in a recirculating system, such as aquaponics, in which case they will often be high electricity use plants…☺

What about lawns?

While *planting more drought tolerant grasses* (red fescue, buffalo grass, native meadow grasses) can result in a 20% lower water use on your lawn, it won't look lush either. *Reducing the amount of space used by lawns* saves much more water.

Water saving Suggestions:

a)Use lawns only where they serve a purpose (small children's play area ?) and choose a more drought tolerant variety of grass.

b)Where possible, replace with ground covers, mulch or hardscape such as decks, walkways, patios or dry creeks.

Do Kids really need Lawns???

"Kids like big rocks to climb on.
They like bushes to hide under.
They like trees to climb.
They like water to splash in.
They love trying to catch lizards and holding out a sweaty hand to see if a passing butterfly will land for a moment.
They love riding trikes and scooters on circuitous routes through a garden, the junglier the better. They like digging in dirt.
(Pam Penick, garden designer and mother of two)

Photo: Cobb Mtn. School Garden

Photos: ANR Repository

Planning a Garden: analyze your space !

different use areas:

a) children's play area (need not be a lawn)
b) area for entertaining (grown-ups' play area…)
c) ornamental garden (avoid high water use plants!)
d) meditation / rest area (rocks, gravel zen garden, art)
e) vegetable garden (be realistic: what are you able to successfully grow? What do you really like to eat? How much time do you have to invest? Will you be around when it needs to be harvested?)

minimally planted outdoor areas

Left: the Portland Japanese Zen Garden,
(photo by Laura Scudder)

right: a plant free outdoor space for entertaining
(photo by Laura Gaskill)

Drought tolerant Plantings (Xeriscapes)

with rocks, native monkeyflower, toyons and lavender 'Grosso'

Another rocky Xeriscape

with Echium, rockrose, toyon and native oaks in the background, all of it deer tolerant

Help your Soil retain Water

- Break up compaction prior to planting
- Incorporate lots of organic matter (compost)
- Add gypsum to heavy clay soils (vegetable garden)
- Mulch with compost between vegetables, individual perennials and annuals; with wood chips between beds and on informal walkways
- Create rain water collection/storage areas next to ornamental beds (depression filled with wood chips)
- Remove weeds !!!(they outcompete plants for water) In order to prevent weeds, coarse textured mulch needs to be 4 inches thick, fine textured small particle mulch only 2 inches.

MULCH: the great Water Saver and Soil Conditioner

Mulch is a layer of material that covers the soil and

- keeps it cool, protecting plant roots from drying out
- significantly reduces evaporation
- can substantially reduce weed growth by blocking sunlight needed for weed seeds to germinate

Examples of organic mulch are wood chips, shredded wood, shredded bark, dried or composted leaves, lawn clippings, rice straw, pine needles, newspaper, …

Inorganic mulch can be crushed rock, gravel, recycled rubber tires, crushed sea shells, recycled glass, plastic, weed barrier fabric, …

(*use weed barrier fabric under inorganic mulches!*)

Organic Mulch

- Breaks down over time and improves the soil underneath – needs to be replenished 1-2 x yearly
- Should be kept away at least 3 inches from tree trunks to prevent crown rot and keep pathogens insects away from the trunk.

- Keep drip lines under mulch, but check for leaks or plugged up lines occasionally.
- High carbon mulches such as shredded wood can tie up nitrogen temporarily as they break down – so don't use them around your vegetables: use compost to top-dress/ mulch in your vegetable beds instead!

Waterwise Demonstration Garden in front of the UCCE Cooperative Extension Office with California Fuchsia, Santolina, Juniper, Miscanthus sinensis and lots of MULCH…?

Irrigate Efficiently

- Group plants with similar needs together:
  a) high water use: vegetables, fruit trees, containers
  b) medium use: shrubs, perennials, groundcovers
  c) low water use: *established* native and drought tolerant perennials, shrubs and some trees
- Use a drip system rather than sprinklers and change the settings whenever the temperatures change. For extensive information about drip irrigation, go to: http://ucanr.edu/sites/scmg/Drip_Irrigation/
- Remember that even the best drip system requires constant maintenance (plugged lines, leaks, algae build-up, detached from pipes after frost …)

Irrigate Efficiently – continued:

- Water early in the morning – less evaporation
- Less frequent, deep watering encourages deeper root growth, thereby creating a plant that doesn't get water stressed as fast as a shallow rooted plant.
- Prevent runoff into driveways, sidewalks and onto the street (note that this is almost impossible to do with lawns bordering sidewalks, streets, etc., due to typical sprinkler patterns ➔ don't put lawns into areas where water will run off.
  Create Xeriscape borders around your lawn, so that plants in these benefit from sprinkler overspray!

Plants for Xeriscapes

California Fuchsia ('Epilobium canum')

Rockrose ('cistus spp.') and Bearded Iris ('Iridaceae spp.')

Both Drought *AND* Deer Tolerant:

Pride of Madeira ('Echium fastuosum')

Jerusalem sage ('Phlomis fruticosa')

'Euphorbia myrsinites', Yarrow ('Achillea Moonshine'), Mexican sage ('Salvia leucantha'), White sage ('Salvia apiana')

Native Yerba Santa and Field penstemon in bloom on Spruce Grove Road

"Bowles Mauve" wallflower, framed by wild grape and small leafed Jerusalem sage ('Phlomis lanata') with Bearded Iris

Lavender with bunch grasses and two types of rockroses, upright and creeping

Gorgeous Natives:

Manzanita blossom rain, mule's ears and field penstemon

Planting Drought Tolerant Plants in a Container makes them drought intolerant, because their root system is now restricted!

This presentation was created by UCCE Lake County Master Gardener Gabriele ONeill in February of 2014 with information gathered by the Master Gardeners of several California Counties.

Photographs by G. ONeill, unless otherwise noted

Got more questions?

Visit our office on 883 Lakeport Blvd., Lakeport between the hours of 8 am – 5 pm , Mo – Fri

Call or email us at (707) 263 6838 (celake@ucdavis.edu)

More info on drought-related issues at

http://celake.ucanr.edu