



# Planting a Water Smart Garden



**City of Kirkland - Natural Yard Care**

# Choosing the Right Plants

Setting up your garden to succeed

- ❖ Map Your Garden
- ❖ Imagine Your Garden
- ❖ Make a Plan
- ❖ Start Your Plants Off Right



# Map Your Garden

- Soil conditions
- Sun exposure
- Aspect
- Wind Exposure
- Microclimates
- Maintenance Access



SW

NORTH

# Soil Conditions

- Glacial Till
- Hardpan
- Outwash Soils
- Lake/Marine Bed Soils
- Volcanic Ash
- Mudflows



Lead to clay soil, sandy soil or loam



# Where is Your Sun?



- What causes the shade?
- Is there variable exposure?
- Does the exposure change with the seasons?

# Look Around!

- What buildings are nearby?
- Trees next door?
- Where are your views?
- Where are the slopes in your yard?
- Which direction do they face or drain to?



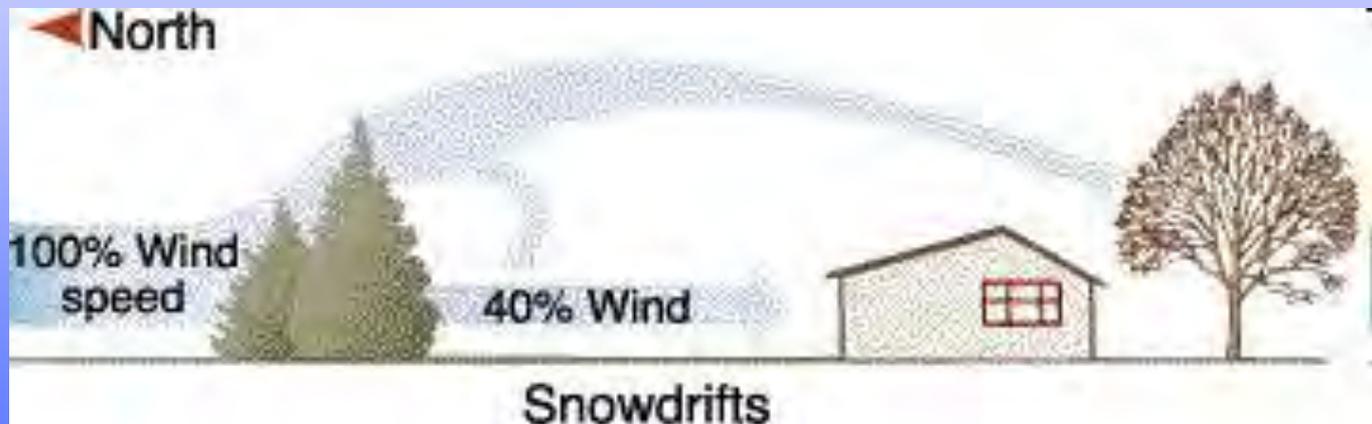
# Which Way the Weather?

- Prevailing winds from southwest or north
- What is exposed and what is protected?
- Reflection from sun off light colored surfaces



# Which Way the Weather?

- Large deciduous trees can shelter houses from summer heat and allow light in through the dark of winter
- Plant groupings can provide efficient windbreaks
- Evergreen plants warm up their environs, creating frost free pockets - microclimates



Courtesy University of Missouri Extension

# Take Advantage of Microclimates

- Sheltered areas – tender plants
- Water features – warm the air
- Brick or rock – radiant heat



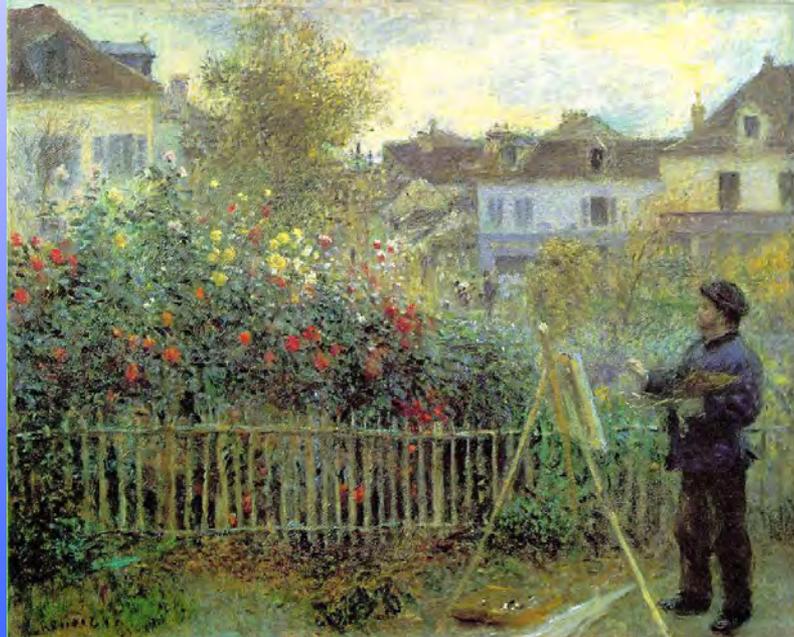
# Provide Access



- For maintaining the garden
- For utilities – meter boxes, moving curbside cans
- For maintaining your house

# Imagine Your Garden

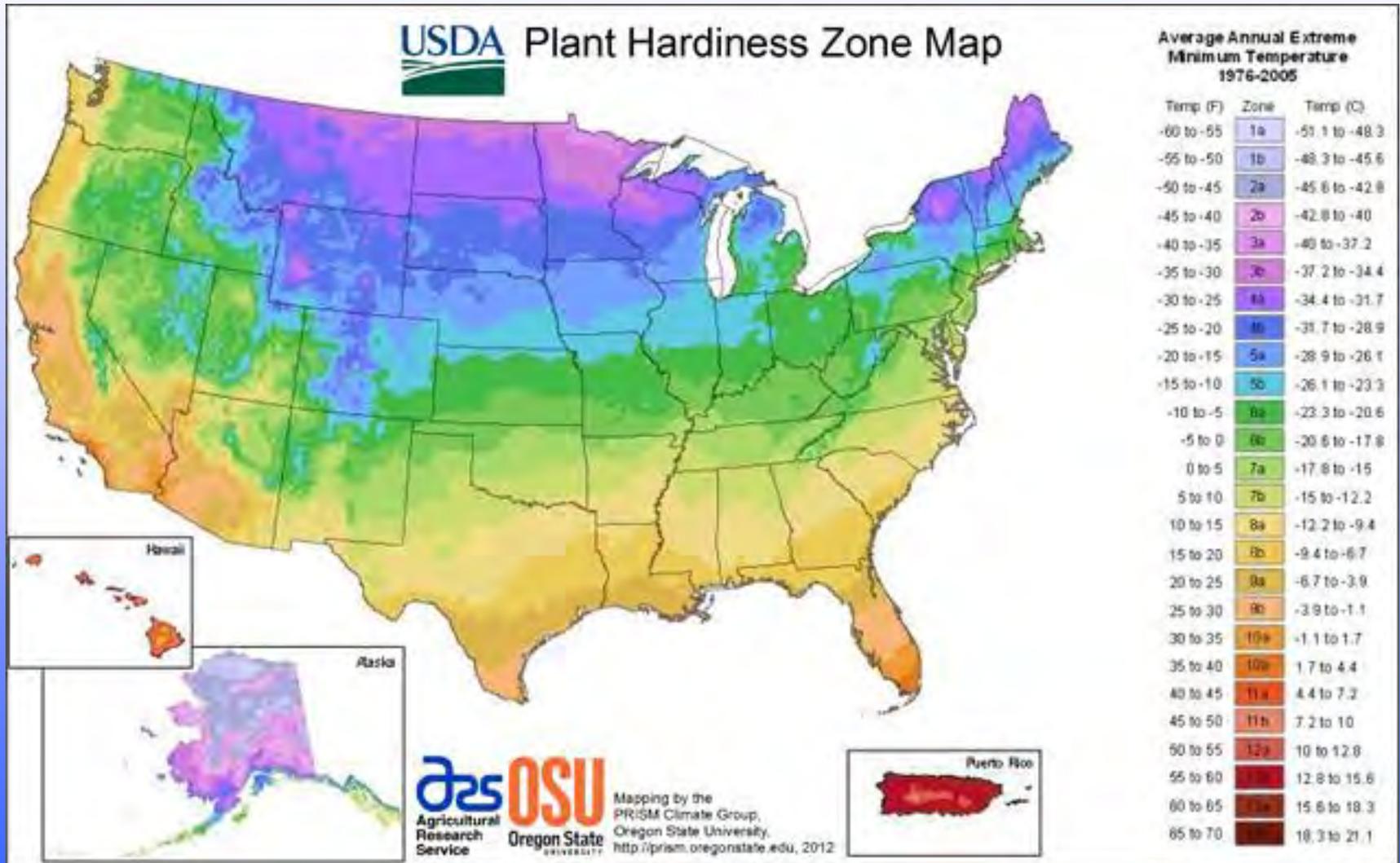
- How will you use your garden?
- How much time and money will you spend?
- What works in your neighborhood?
- Take advantage of local expertise



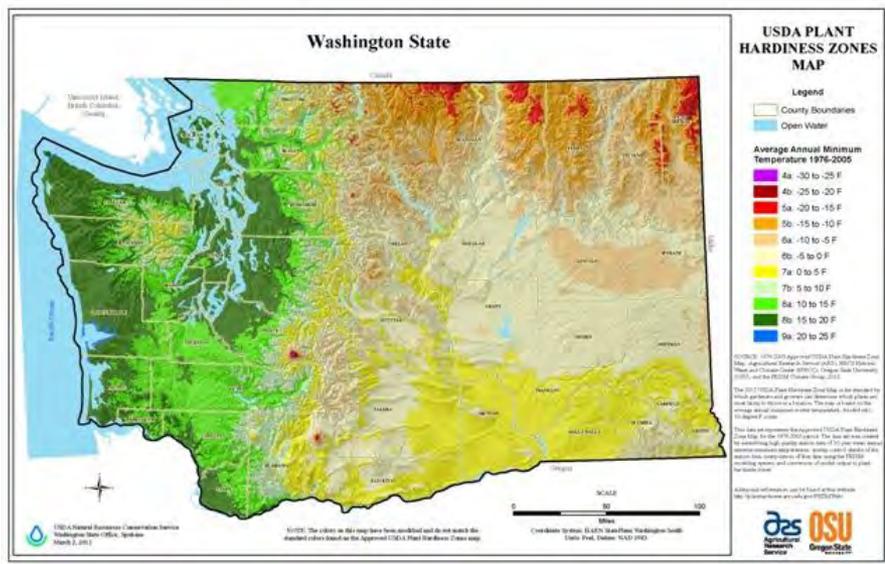
# Make a Plan



# USDA and SUNSET ZONES



# Washington State Zone Maps



# Group Plants with Like Needs

- Drought tolerant plants – Euphorbia, grasses, Sedum, Ceanothus, lavender, sea holly, Russian sage
- Bog plants – Bog rosemary, blueberry, red stemmed dogwood, Carex, Juncus



More efficient to water

Soil conditions are similar

# Choose Low Water Need Plants

Know a plant's origin!

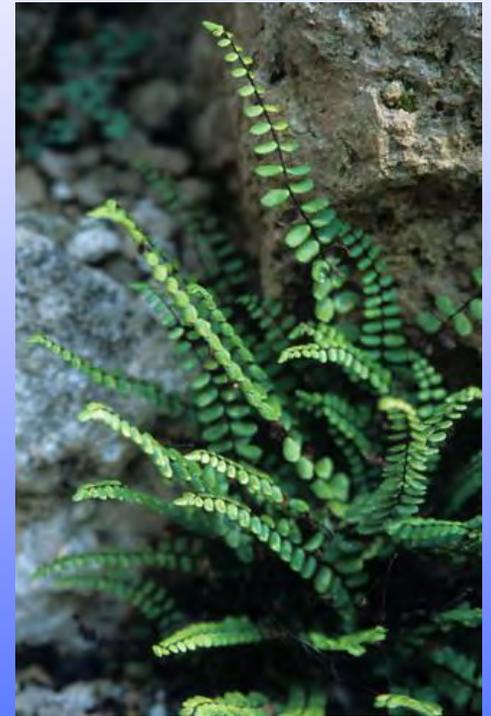
- Washington natives- wet winter, dry summer
- California and Mexico – dry and sunny
- Mediterranean – windy and sunny slopes
- New Zealand – small leaved plants to reduce transpiration



# Washington Natives

–thrive without irrigation and are pest and disease resistant

- **Groundcovers** – Wild Ginger, Sword Fern, Deer Fern, Salal, Vancouveria, Trillium, Oxalis, Low Oregon grape
- **Shrubs** - Red Stemmed Dogwood, Snowberry, Ninebark Tall Oregon Grape, Oceanspray, Evergreen Huckleberry, Mock Orange, Red Flowering Currant, Thimbleberry, Salmonberry, Rhododendron
- **Small Trees** – Serviceberry, Vine Maple, Elderberry
- **Large Trees** – Douglas Fir, Bigleaf Maple, Western Hemlock, Western Red Cedar



# California and Mexico

- Salvia
- Yucca
- Ceanothus
- Manzanita
- Carex
- Fleabane



# Mediterranean

- Lavender
- Rock Rose
- Santolina
- Calendula



# New Zealand

- Libertia
- Euphorbia
- Hebe
- Phormium – New Zealand Flax



# Plan a Diverse Garden

- Provide year round interest – fall color, winter structure, spring bloom, summer fruit
- Attract beneficial wildlife – birds, bees, bats and more!
- Include edibles – plan for water management
- Provide two functions – espalier an apple fence!



# Avoid Noxious Plants!

- **Get to know your local noxious weed board and their list**
- Class A regulated weeds **MUST** be managed by law
- Class B and C are regulated at local levels depending on need
- Non- regulated Noxious Weeds not mandated for control but recognized as a nuisance
- King County Weeds of Concern – not regulated and not on the lists but recognized as being problematic
- Any weed can change status

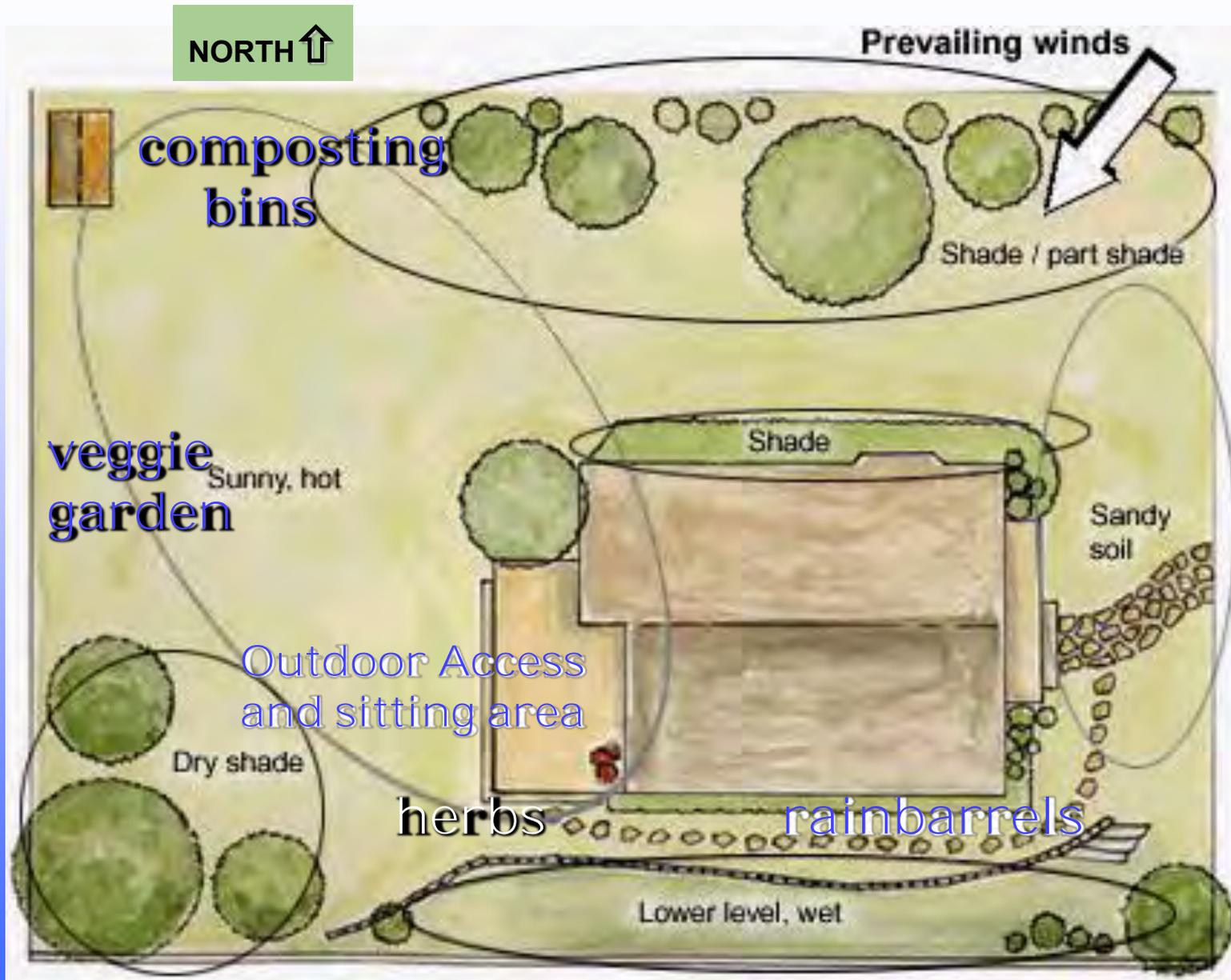


Garlic mustard, a Class A noxious weed



Bishop's Weed – Weed of Concern

# Maintain Access



# Start Your Plants Off Right

- Healthy Soil is key
- Learn how to plant properly
- Mulch your plants
- Establish drought tolerance

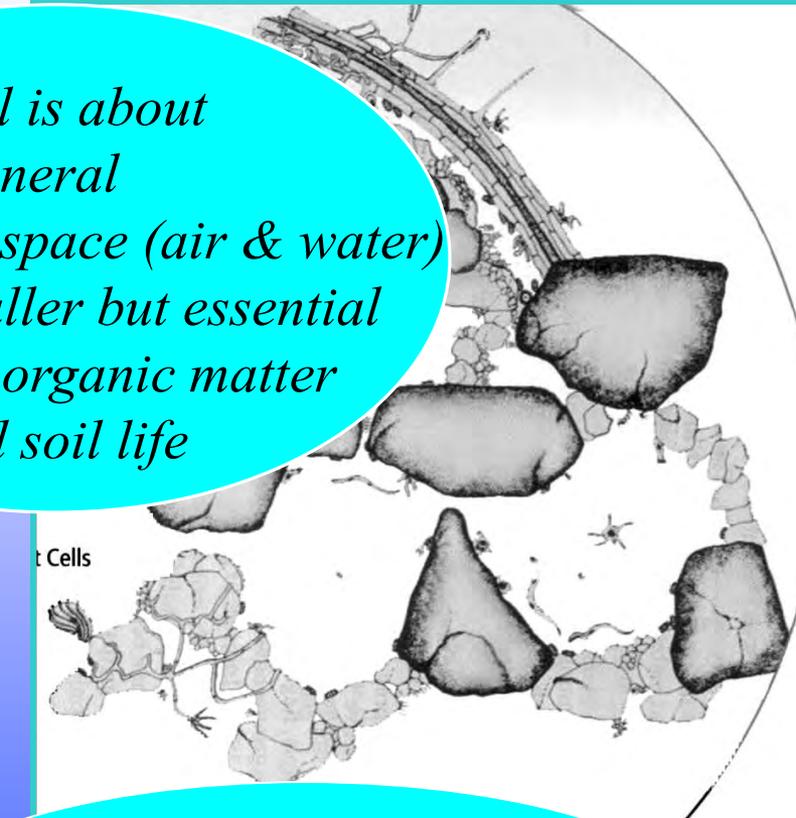


# Soil Components

## Soil Components

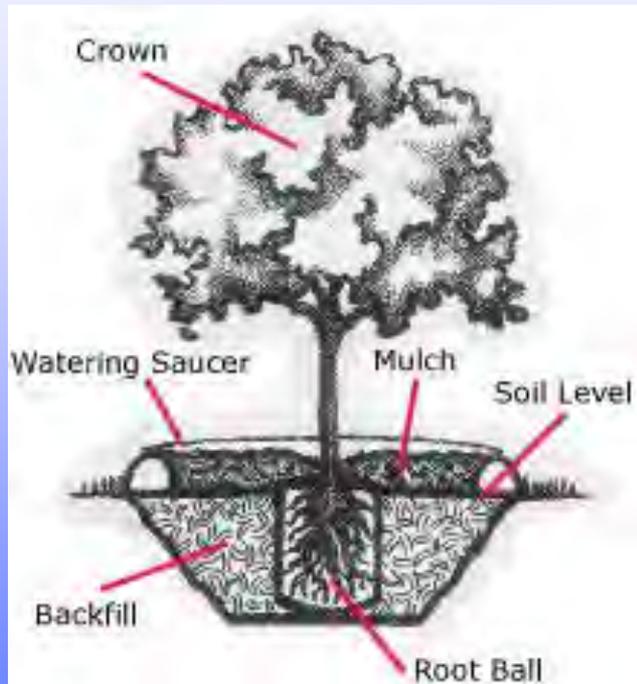
- “The Dirt”  
(mineral particles)
  - sand (0.05 to 2 mm)
  - silt (0.002 to 0.05 mm)
  - clay (<0.002 mm)
- Air and Water (in pore spaces)
- Organic Matter and Soil Life  
(create aggregates & pores)

*Good soil is about*  
*- half mineral*  
*- half pore space (air & water)*  
*- plus a smaller but essential*  
*amount of organic matter*  
*and soil life*



*“Loam” is a mix of*  
*sand, silt, clay and organic,*  
*formed over time by nature*

# Correct Planting Techniques



Trees and shrubs: Minimally amend soil, watch size of planting hole, avoid girdling roots

Perennials: Loosen root ball, watch size of planting hole, amend with compost

Vegetables: Space correctly, amend with compost, fertilize

Lawn: Prepare soil well, avoid compaction, fertilize, stagger ends

# Establishing Drought Tolerance



## Year One

Spring – fall, when weather is dry.

- **When planting** - Soak
- **Week 1** - Daily or every other day
- **Week 2 onward** - 2-3 times per week unless extremely dry
- Water until fall rains begin

## Year Two

- Water deeply 1-2 times per week in summer or when rain is sparse
- How long and often will depend on soil and weather

## Year Three

- Should be established and need no supplemental water
- In extreme heat/drought, consider deeply watering 1 time per month

# Choose the Right Mulch

**Conserve moisture, moderate soil temperature, keep weeds down**

Wood Chips: perennials, tree and shrub beds, groundcovers, paths

Compost: vegetable gardens, annual beds

Leaves: All of the above!

Straw: veggie gardens, perennials

Commercial Mixes: manure and wood products for all areas

Gravel: paths



# Smart Watering

## Setting Up Your Garden to Succeed

- ❖ Provide Healthy Soil
- ❖ Use Plants Adapted to Your Soil
- ❖ Group Plants According to Needs
- ❖ Site Lawns Appropriately
- ❖ Choose Your Irrigation Method



# Lawns

- Made up of many individual plants
- They are grasses that like to grow tall
- They are good competitors when healthy
- Can be permeable when healthy
- They are Hungry!
- They are Thirsty! - **America's lawns now cover an area three times larger than any irrigated crop in the U.S.**



# Lawns in the Wrong Place

- **Slopes** - No more than 12% grade – avoid runoff, hard to mow – use groundcovers instead
- **Ponding** – Indicates compaction or high water table – assess for and correct or plant adapted plantings
- **Under Conifers** – Shade, tree roots, needles, ground water – substitute with shade loving perennials, ferns or groundcovers.
- **Shady Garden** – Lawns need 6 – 8 hours of sun daily Substitute with shade loving plants and natives.



# Smart Watering Practices

## Irrigation Options

- ❖ Automatic Irrigation Systems
- ❖ Drip Irrigation
- ❖ Soaker Hoses
- ❖ Hand Watering



# Irrigation Options

## Automatic Irrigation Systems – must be set up right

- Good for large yards with different watering zones
- Use a smart timer that will shut off on rainy days
- Water early in the morning when water pressure is best
- Observe sprinkler head patterns so you don't waste water
- Short cycle followed by longer cycle for better absorption



# Irrigation Options

## Drip Systems – efficient systems

- Use the right emitter for the right situation
- Attach to a timer
- Good for containers in groups
- Good for raised beds



# Irrigation Options

## Soaker Hoses – let drip in slowly unattended

- Bury under mulch to reduce evaporation
- Do not run more than 100 feet of continuous hose
- Start uphill and run down
- Good for raised beds
- Needs to be attached to a hose



# Irrigation Options

## Hand Watering – target your watering

- Use the right tool for the right space
- Long handled wands for ease of reach
- Shut off on wand to avoid wasting water
- Multiple spray pattern heads
- Watering cans to pinpoint water



# Smart Watering Practices

- Time and measure water being delivered – tuna can test
- Allow water to soak in slowly to avoid loss of water from evaporation and wind
- Allow water to soak in deeply – this will establish a more robust and deep root system capable of tolerating drought
- Water in the morning to avoid evaporation, and avoid leaves staying wet through the night – less disease



# How Much Water Does Your Plant Need?

- Root depth is variable – know your plants so you can deliver water to their root zone
- Know your plant's native environment – bog, desert, woodland
- Feel the soil to determine moisture content!
- Soil should feel cool and moist to the touch two inches deep
- Trees and shrubs once acclimated should only need water in hot months of July and August - with some exceptions
- Lawns need 1 inch of water per week during summer – includes rain
- Containers will need checking more often, especially wood and terra cotta



# Resources

- Garden Hotline – 206-633-0224 – [www.gardenhotline.org](http://www.gardenhotline.org)
- Seattle Tilth - [www.seattletilth.org](http://www.seattletilth.org)
- Cascade Water Alliance - [www.cascadewater.org](http://www.cascadewater.org)

**Please join us next for:**

**❖ Pollinator Savvy Plant Care - June 4**

**Attend all three classes!  
Be eligible for the drawing  
for a garden consultation  
with ~Lisa Taylor~**

