Natural Landscaping

Session 5
Planting & Maintenance
Special Topics

Clallam Conservation District

Fall 2017

Landscape Design Steps

1. Identify Wants and Needs
2. Inventory and Analyze Site
   - Built Resources
   - Natural Resources
   - Climate and Microclimate
3. Develop Schematic Plan
   - Site Layout – How Site can meet Needs
   - Determine Plant Communities
4. Develop Detailed Designs
   - Select Appropriate Plant Species
5. Develop Implementation Strategy
   - Site Preparation, Planting and Maintenance

Today's Topics

- Site Preparation, Planting & Maintenance
- Landscaping Slopes
- Landscaping Septic Drain Fields
- Rain Gardens & Stormwater Management
- Rain Water Harvesting
- Irrigation Water Management
- Fire Wise Landscaping

Site Preparation Options

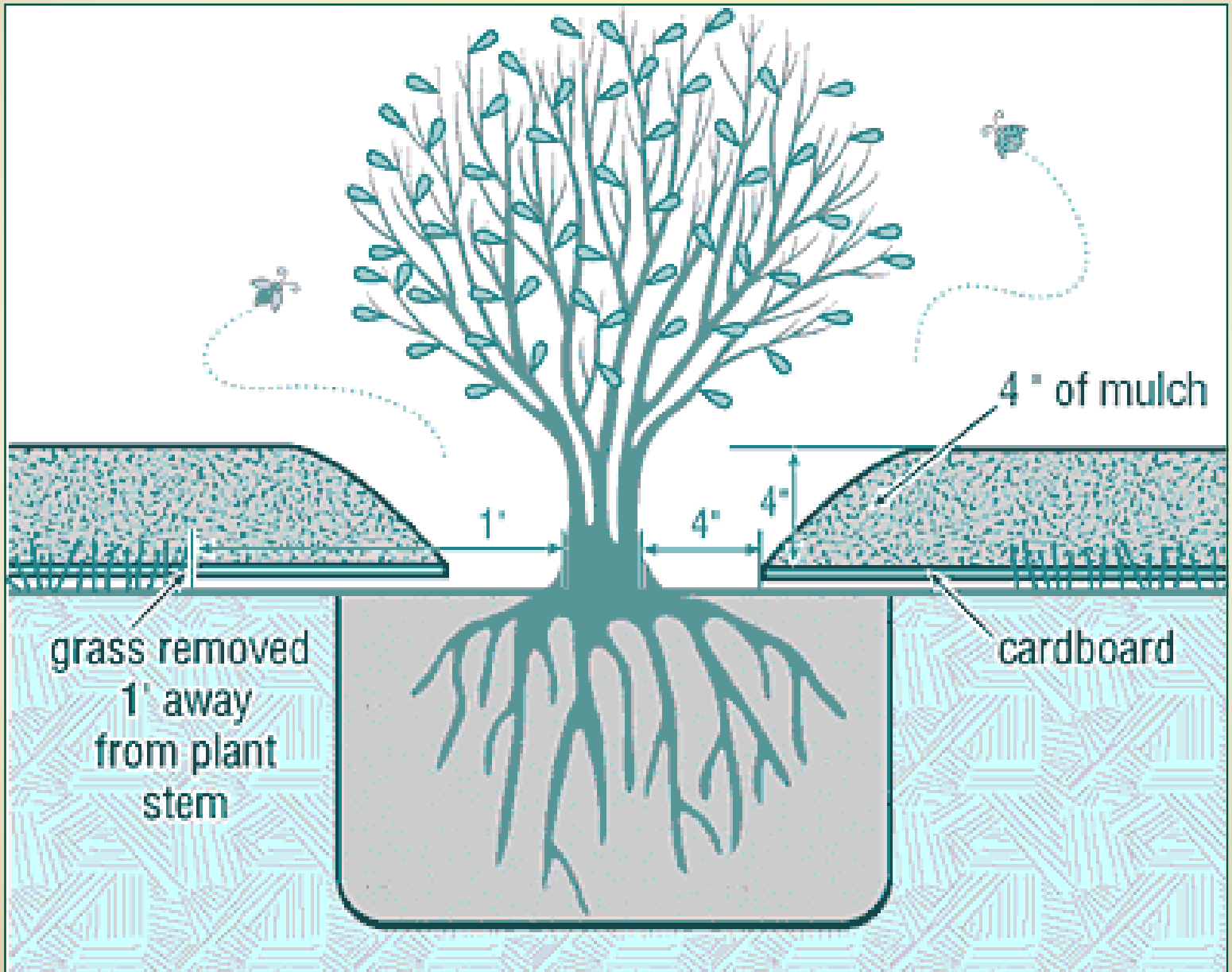
- Hand Scalping
- Cultivating
- Sheet Composting

Sheet Composting
(Lasagna Gardening)

1. Cut vegetation close to ground, roughen surface
2. Sprinkle area with high-nitrogen organic matter
3. Cover with smothering material (cardboard, several layers of newspaper, etc.)
4. Water well
5. Cover with ~3” of high-nitrogen organic matter
6. Cover with ~6” of mulch
7. Water until fairly well soaked

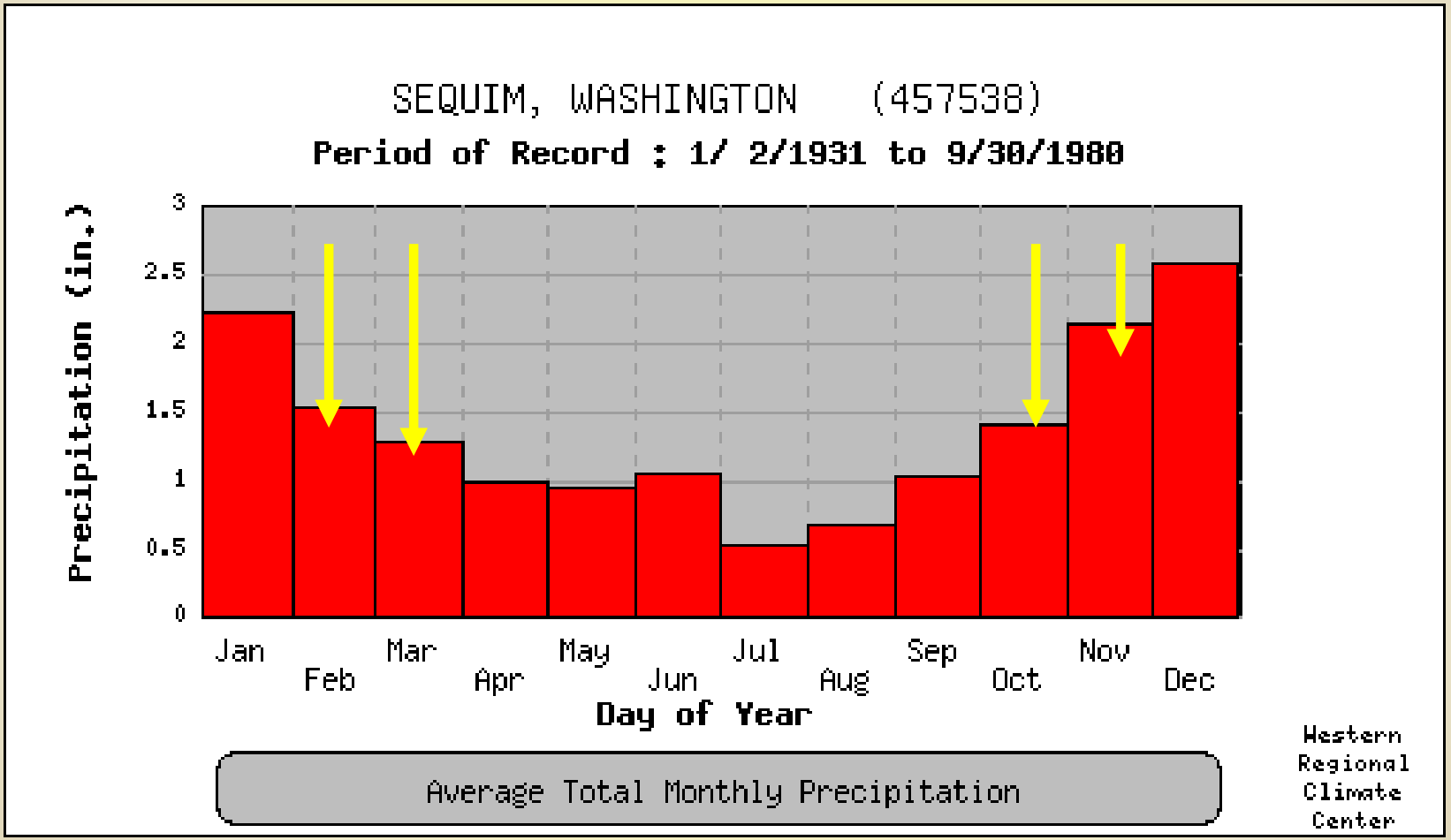
Total cover over smothering layer should be at least 9” but no more than 14”

Sheet Composting



Sheet Composting

Fall Is Best Time To Plant



Plant Material Options

- Bare Root
- Plugs
- Potted
- Ball & Burlap
- Cuttings
- Seed

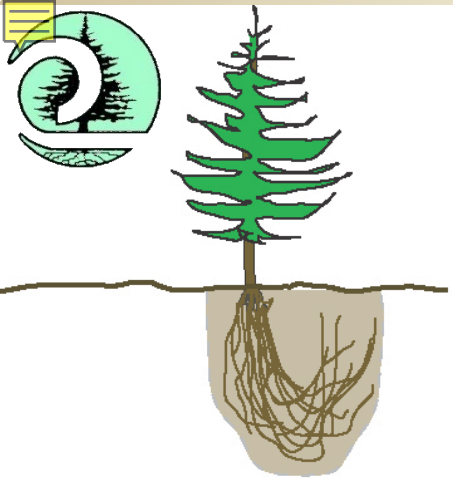
Bare-Root and Plug Stock

- Trees and Shrubs
- Least expensive
- Seasonal availability
- Vulnerable to Desiccation

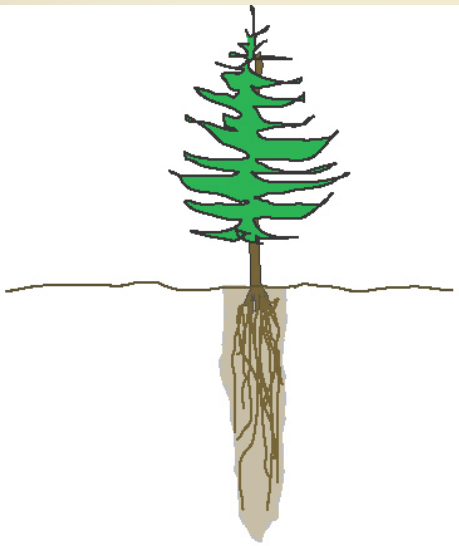
- Plugs have ‘plug’ of soil
- Used in reforestation
- Limited availability

Bare Root Planting

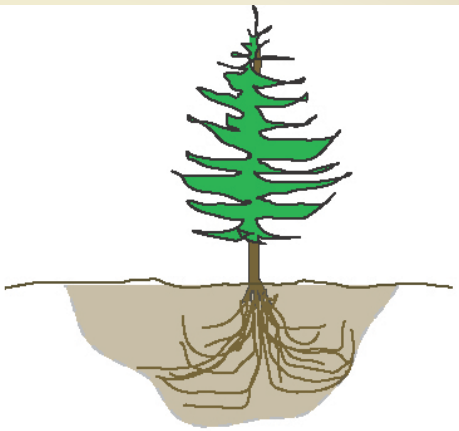
- ✓ Soak in water before planting (<4 hours)
- ✓ Don’t let roots dry out
  - Remove one plant at a time from bucket
- ✓ Dig wide, not deep!
- ✓ Spread roots
  - Prune long roots
- ✓ Backfill (no soil amendments)
- ✓ Plant to proper depth



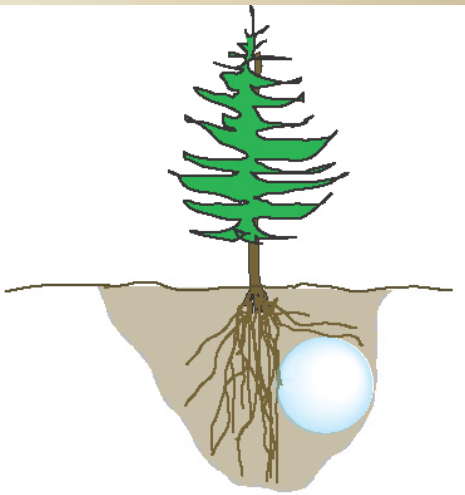
J Roots



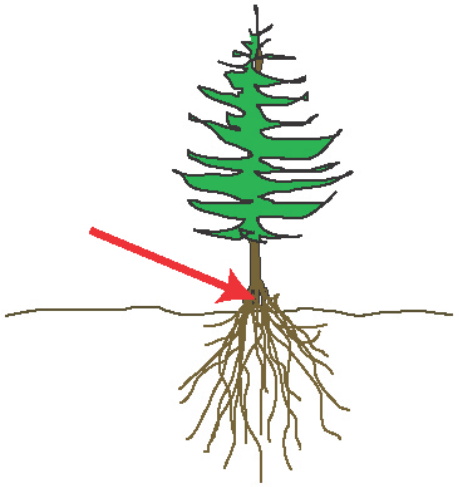
Compacted Roots



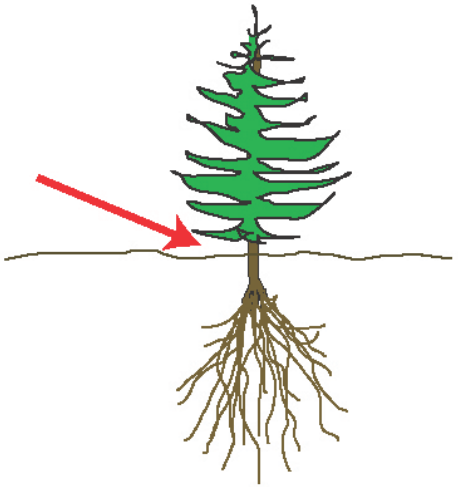
Jammed Roots



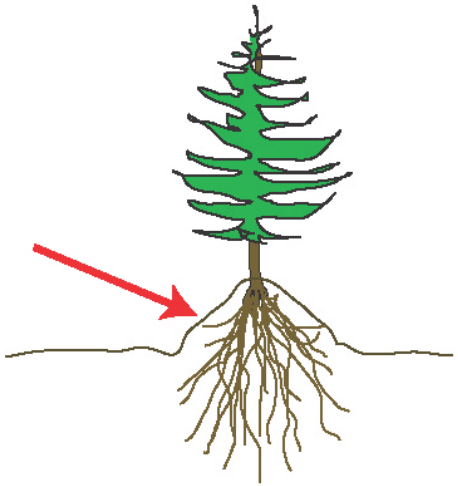
Air Bubble-
Improper tamping



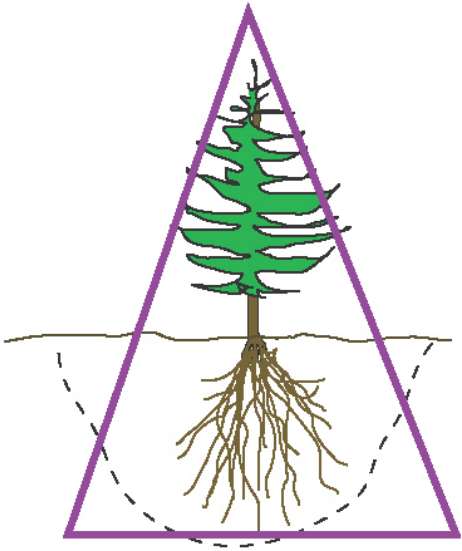
Too Shallow



Too Deep



Mound



SATISFACTORY!

B&B and Container Stock

- No seasonal restrictions
- Lots of variety
- Variable sizes
- Most expensive
- More work to plant
- More susceptible to transplant shock
- Require lots of water

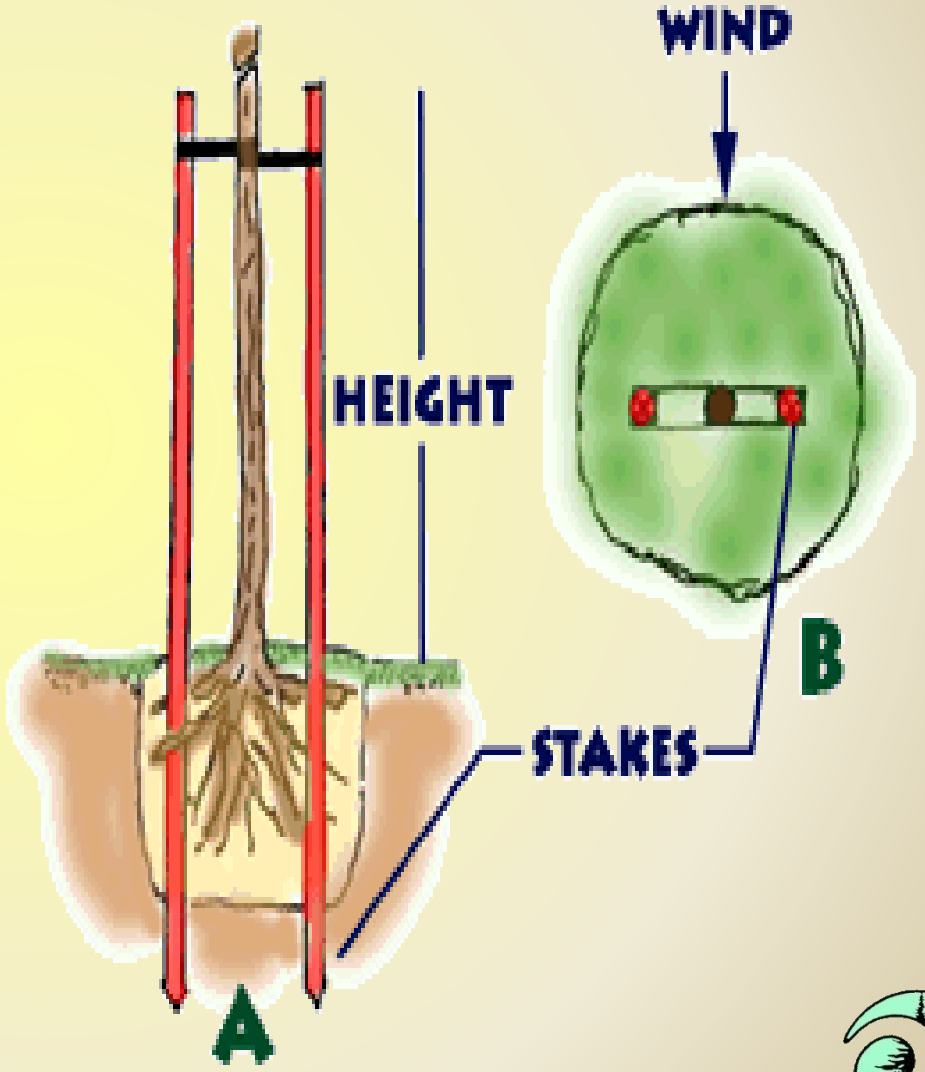
If root ball is <u>not</u> intact, bury with burlap on (but bury <u>completely</u>).

Potted Stock

1. Water night before
2. Tap sides and carefully slide out
3. Butterfly (loosen) roots
4. Plant like B&B trees

Planting and Staking Root Ball & Container Trees

1. Backfill halfway, water to fill air pockets
2. Finish backfill, water again
3. Mulch
4. Stake large trees



Live Staking

Black Cottonwood

Red-Flowering Currant


April 2009


May 2009


09.08.2009, 12:04
September 2009


July 2009

Native Plant Sources

- **Local nurseries – ASK!**
  - **If you don't ask, nurseries won't know there's a demand**
- **Conservation District Plant Sale**

  http://www.clallamcd.org/plant-sale/

  Orders taken in December and January

  Pick-up end of February or early March
- **Fourth Corner Nursery ($100 minimum)**

  http://fourthcornernurseries.com/contact.asp

Mulch

Benefits of Organic Mulches:

- ✓ Conserve moisture
- ✓ Moderate soil temperature
- ✓ Suppress weeds
- ✓ Reduce runoff
- ✓ Promote healthy soil biology
  - ➢ Worms
  - ➢ Microorganisms
  - ➢ Mycorrhizal fungi
- ✓ Supply nutrients

Inorganic mulches do not enhance soil biology or supply nutrients

Composting

- ✓ **30:1 C:N ratio or about 50/50 brown and green**
  - **Brown = C: dried leaves, straw, wood chips**
  - **Green = N: grass clippings, fresh plants, blood meal, manure**
- ✓ **A little topsoil**
- ✓ **Water**
- ✓ **Air**

Tree Protectors

- Rodent barrier
- Locator
- Protection from weeding damage

Septic Drainfields

Series of shallow perforated pipes in trenches that allow effluent to be purified by filtering through the soil, evaporation and plant absorption. To ensure proper function:

- **Minimize soil disturbance**
- **Avoid anything that compacts the soil**
- **No irrigation or other runoff**
- **Growing vegetables is not recommended**
- **No deep-rooted plants**

Set trees and large shrubs back AT LEAST 30 feet

Septic Drainfields

RECOMMENDED

- ✓ Turf grasses & Ecoturf
- ✓ Shallow rooting herbaceous plants
- ✓ Perennial wildflowers
- ✓ Kinnikkinnik
- ✓ Wild strawberry
- ✓ Sword fern
- ✓ Shallow bulbs (e.g. daffodils, crocuses)

NOT RECOMMENDED

- X Water-loving plants
- X Deep-rooted plants
- X Vegetables
- X Plants that require irrigation
- X Mulch

BREAK

Stormwater Management

- ❑ Maintain maximum Vegetative Cover
- ❑ Minimize Impervious Surfaces

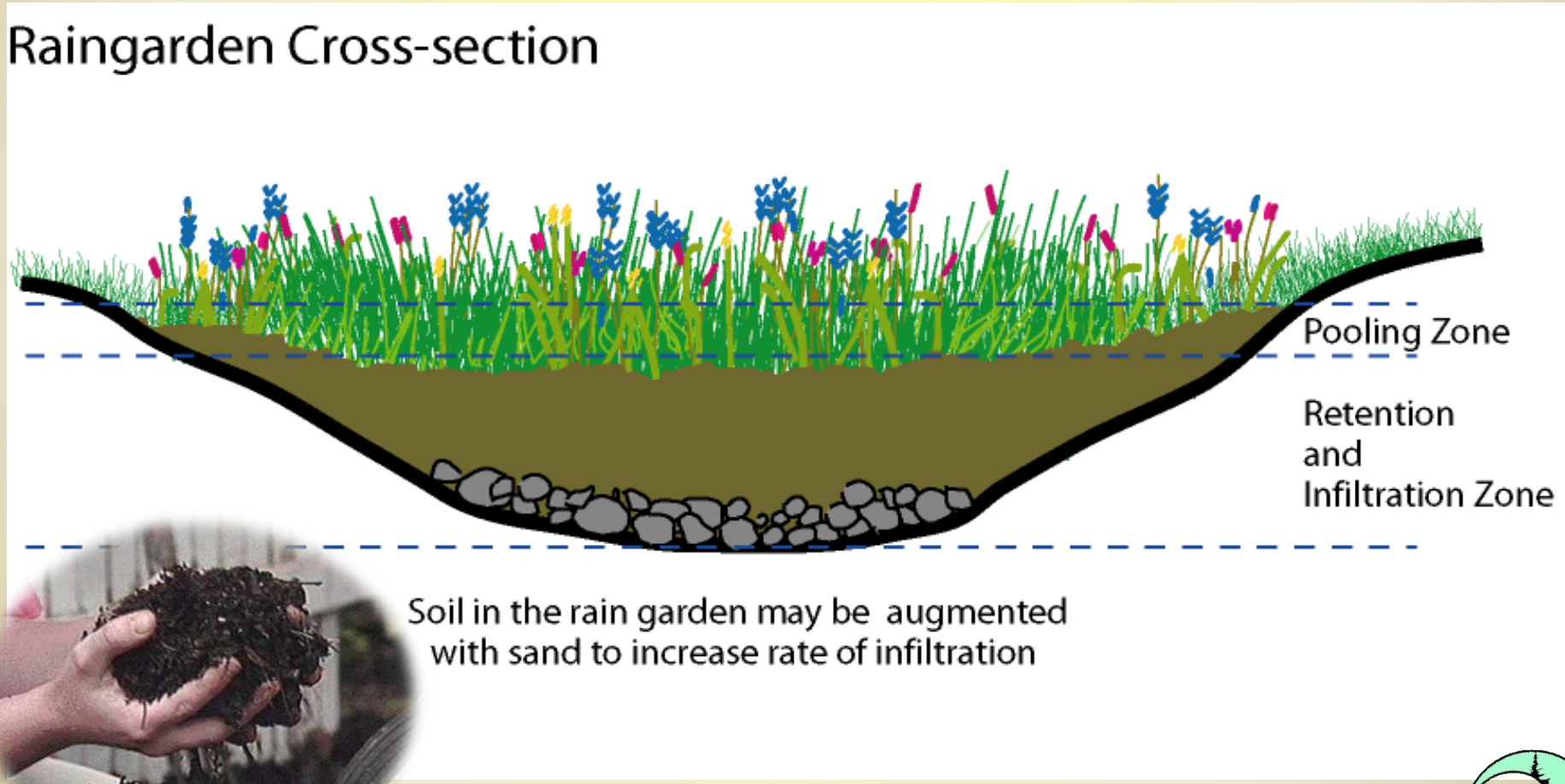
- ❑ Manage Runoff Water
  - ✓ Direct to Rain Gardens
  - ✓ Store for Irrigation

Let the Rain Soak In

Rain Gardens

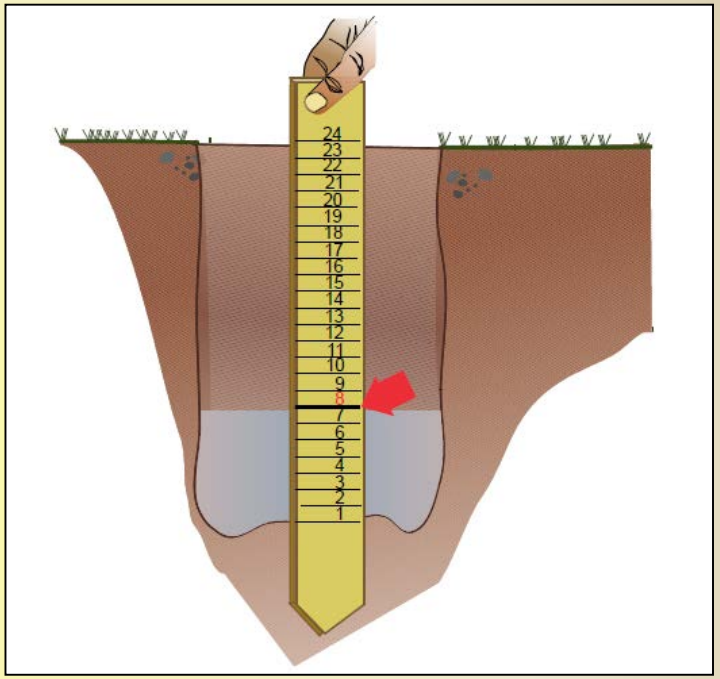
Rain Gardens

Planted depressions in the ground designed to capture, treat, and soak up rainwater.



Rain Gardens Require Good Soil Drainage

1. Dig a hole about 2 feet deep & 1-2 feet in diameter
2. Observe soil texture
3. Fill hole with 8-12 inches of water.
4. Time how long it takes for water to drain completely.
5. Note infiltration rate (inches per hour).



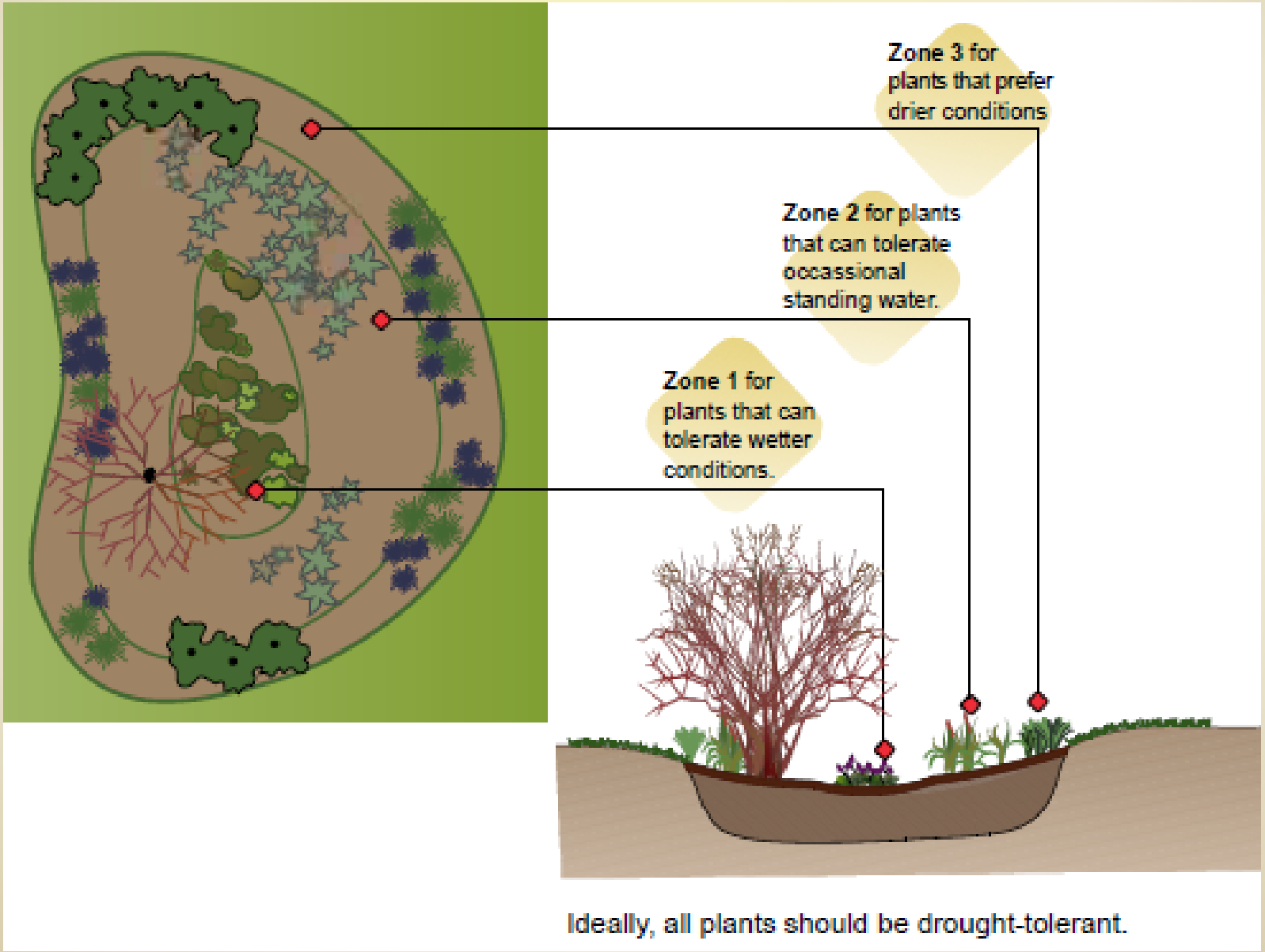
In dry season, repeat 3 times and use results of third test.

<u>1/2 inch per hour</u> or more is best

Consider a different location or contact an engineer if infiltration rate is <u>less than 0.1 inch per hour.</u>

*Adapted from the WSU Pierce County Extension *Rain Garden Handbook for Western Washington Homeowners*

Rain Garden Planting Zones



Rain Garden Shrubs

Pacific Ninebark
Physocarpus capitatus

Black Twinberry
Lonicera involucrata

Red-osier Dogwood
Cornus stolonifera

Rain Garden Plants

Slough Sedge
Carex obnupta

Small-fruited bulrush
Scirpus microcarpus

Lady Fern
Athyrium filix-femina

Rain Water Collection

Roof Area (ft^2) x Rainfall (in) x 0.625 = gallons of water from rooftop

Example

500 sq. ft. roof x 1/4" rain x .625 = 78 gallons of water

LOTS OF WATER!

How Much Water?

Average Monthly Precipitation (inches)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PA	4.00	2.40	2.16	1.34	1.13	0.85	0.55	0.69	0.93	2.66	4.51	4.14
Sequim	2.04	1.24	1.29	1.08	1.25	0.97	0.54	0.59	0.80	1.45	2.66	2.15

Rain Water Collection

- ✓ Divert water using a Downspout Gutter Extension
- ✓ Flush first rain through overflow
- ✓ Keep lid on at all times
- ✓ Put barrels on sturdy, raised stand
- ✓ Direct overflow water away from foundation (to rain garden)
- ✓ Monitor regularly to ensure intake and outflow are not blocked
- ✓ Disconnect in winter
- ✓ <u>DO NOT</u> use for drinking water

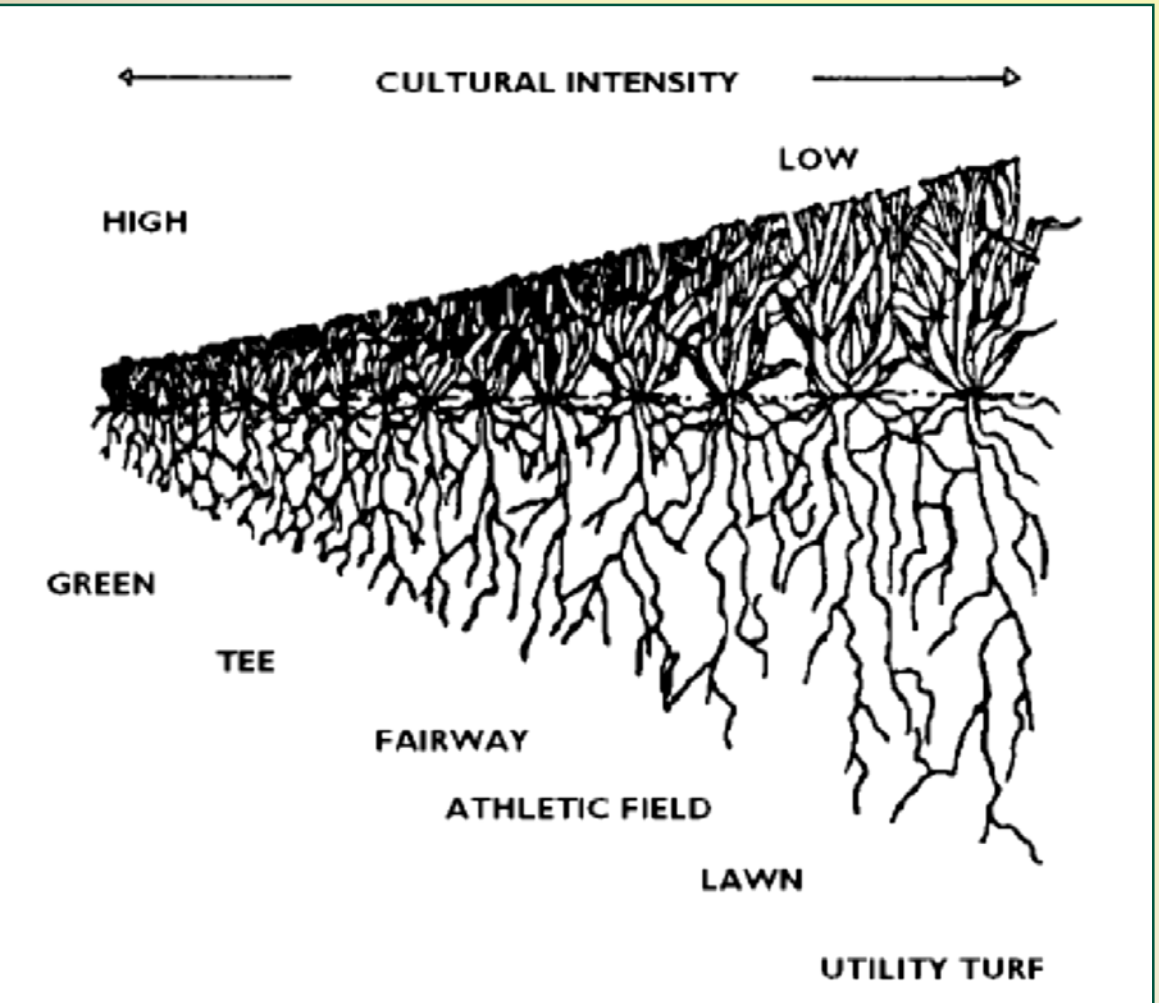
Natural Lawn Care

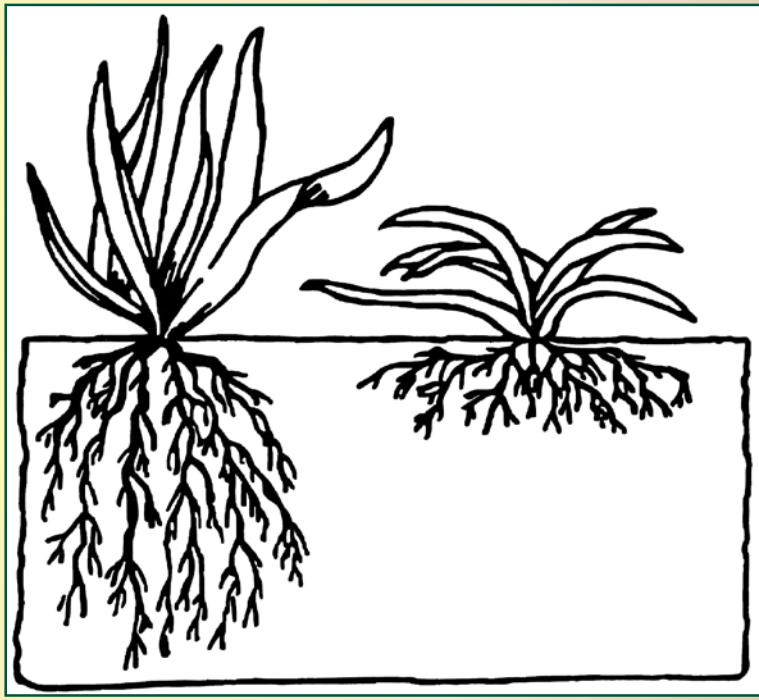
- **Build the Soil**
  - ✓ Grass-cycling
  - ✓ Aeration
- **Strengthen the Roots**
  - ✓ Mow High
  - ✓ Water Deeply and Infrequently
- **Dormancy is Natural**

www.seattle.gov/util/EnvironmentConservation/MyLawnGarden/LawnCare/index.htm

Turf Management

Foliage = Roots = Plant Health





Irrigation Water Management

Irrigate to Meet Plant Needs

Amount and Frequency depends on:

- Plant or Crop requirements
- Climate (rainfall, temperature and wind)
- Soil Texture
  - Coarse textured soils drain rapidly and can’t hold much moisture
  - Fine textured soils don’t percolate well but hold moisture

Irrigation Water Management

Turf in Eastern Clallam County

Turf Rooting Depth = about 1 foot

Water Requirement = about 25 inches/yr

Irrigation Requirement = 15-16 inches*

	May	June	July	Aug	Sept	Oct
Net Irrigation	1.44”	3.5”	4.7”	3.5”	2.23”	0.48”

For MAXIMUM growth*

Turf Irrigation Scheduling

Hoypus Gravelly Sandy Loam

1 foot of soil can hold about 0.6 inches of water.
Apply about one-third inch of water per irrigation.

	May	June	July	Aug	Sept
Irrigate	5 times	12 times	15 times	12 times	7 times
Irrigate about every	6-7 days	2-3 days	2 days	2-3 days	4 days

Agnew Silt Loam

1 foot of soil can hold about 2.28 inches of water.
Apply about 1 inch of water at rate <0.2 inches per hour per irrigation.

	May	June	July	Aug	Sept
Irrigate	once	3-4 times	5 times	3-4 times	twice
Irrigate about every		8-9 days	6-7 days	8-9 days	14 days

Firewise Landscaping

Basic Guidelines:

- **Close to house, grow smaller plants and space them widely.**
- **Plant in small, irregular groups, not large masses.**
- **Break up continuity of vegetation (fuel) with lawn, decorative rock, gravel and stepping stone pathways.**
- **Plant a diversity of species for protection against insects and disease, thus dead and dying vegetation.**
- **During droughts, prioritize the plants to save. Provide supplemental water to those nearest your home.**
- **Mulch to conserve moisture and reduce weed growth. Avoid pine bark, thick layers of pine needles or other materials that catch fire easily.**

Adapted from Colorado State University Extension publication no. 6.305.

Firewise Landscaping - Plants

Plants that are more resistant to wildfire have one or more of the following characteristics:

- **Do not accumulate large amounts of combustible dead branches, needles or leaves.**
- **Have open, loose branches with small amounts of vegetation.**
- **Have low sap or resin content (e.g. deciduous species).**
- **Have high moisture content (e.g. succulents and some herbaceous species).**
- **Grow slowly and need little maintenance (e.g. pruning).**
- **Are short and grow close to the ground.**
- **Re-sprout following fire, thus reducing re-landscaping costs.**

See Oregon State University Extension publication:
Fire-Resistant Plants for Home Landscapes

Visit www.firewise.org for more information.

12 Natural Landscaping Tips

1. Define your objectives.
2. Get to know your site, embrace it and adapt to it.
3. Preserve existing trees & shrubs.
4. Divide landscape into zones and “rooms” according to function, but limit lawn area.
5. Focus efforts on small, high-use, high-visibility areas.
6. Avoid abrupt transitions between natural and cultivated areas – use cues to care.

12 Natural Landscaping Tips

7. Match plants to specific site conditions, including soil and micro-climate.
8. Plant dominant or canopy layer first, add understory and groundcovers last.
9. Plant thickly – entire soil surface should eventually be covered with plants.
10. Leave leaf litter and other natural mulches in place.

#11 - Think Multi-Purpose

- ✓ Define Space
- ✓ Create Privacy
- ✓ Protect from Wind
- ✓ Provide Shade
- ✓ Produce Food
- ✓ Provide Habitat

12. Be patient and seek guidance & inspiration from nature, and

ENJOY YOUR LANDSCAPE!

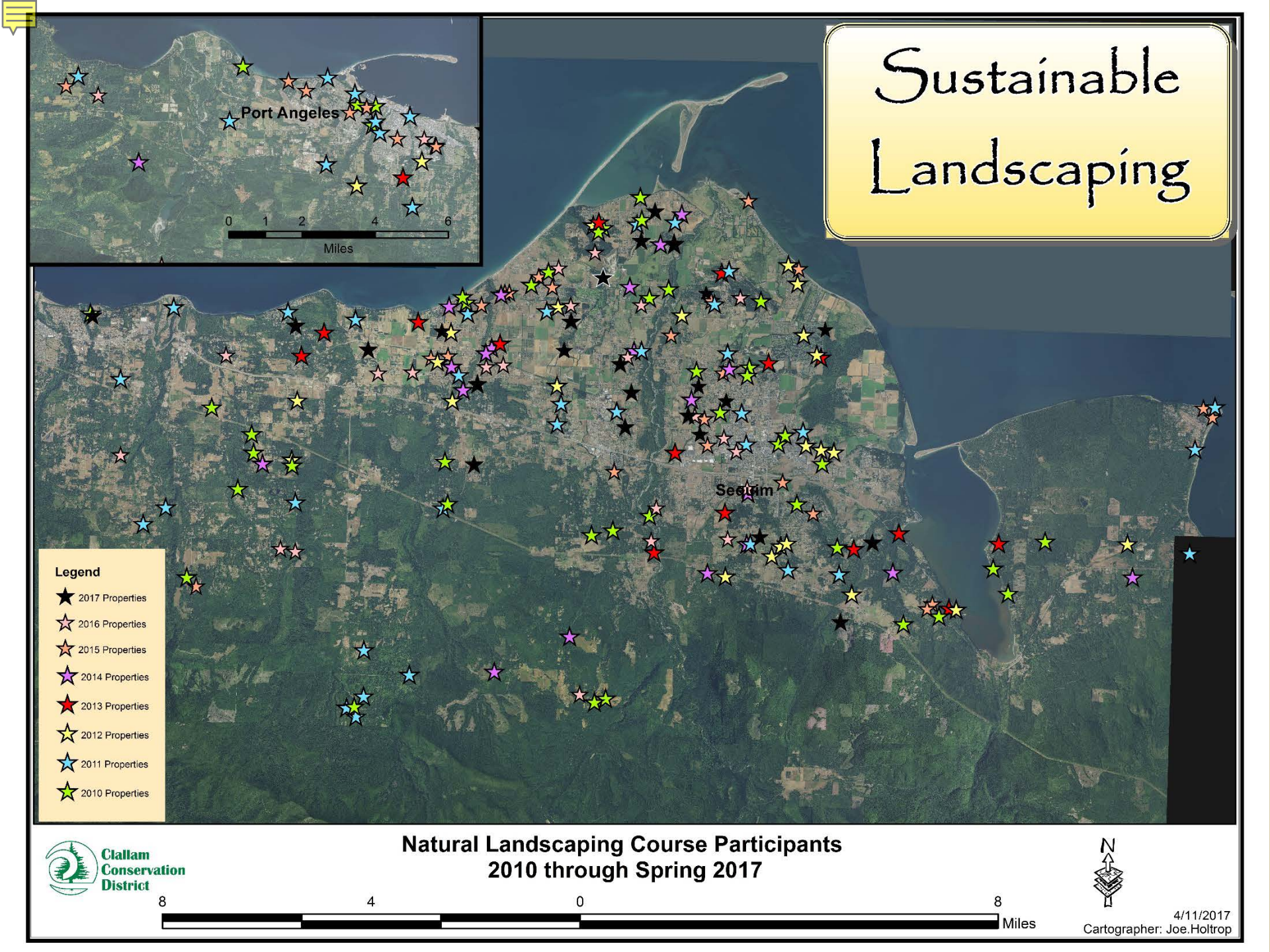
A Landscape should be

a Place to:

- ☑ Grow Food
- ☑ Recreate & Relax
- ☑ Be Inspired by Nature's Beauty

in Harmony with Environment:

- ☑ Fish & Wildlife Habitat
- ☑ Stormwater Management
- ☑ Air Quality


Sustainable Landscaping
Port Angeles
0 1 2 4 6
Miles
Sequim
Legend
2017 Properties
2016 Properties
2015 Properties
2014 Properties
2013 Properties
2012 Properties
2011 Properties
2010 Properties
Clallam Conservation District
Natural Landscaping Course Participants
2010 through Spring 2017
8 4 0 8
Miles
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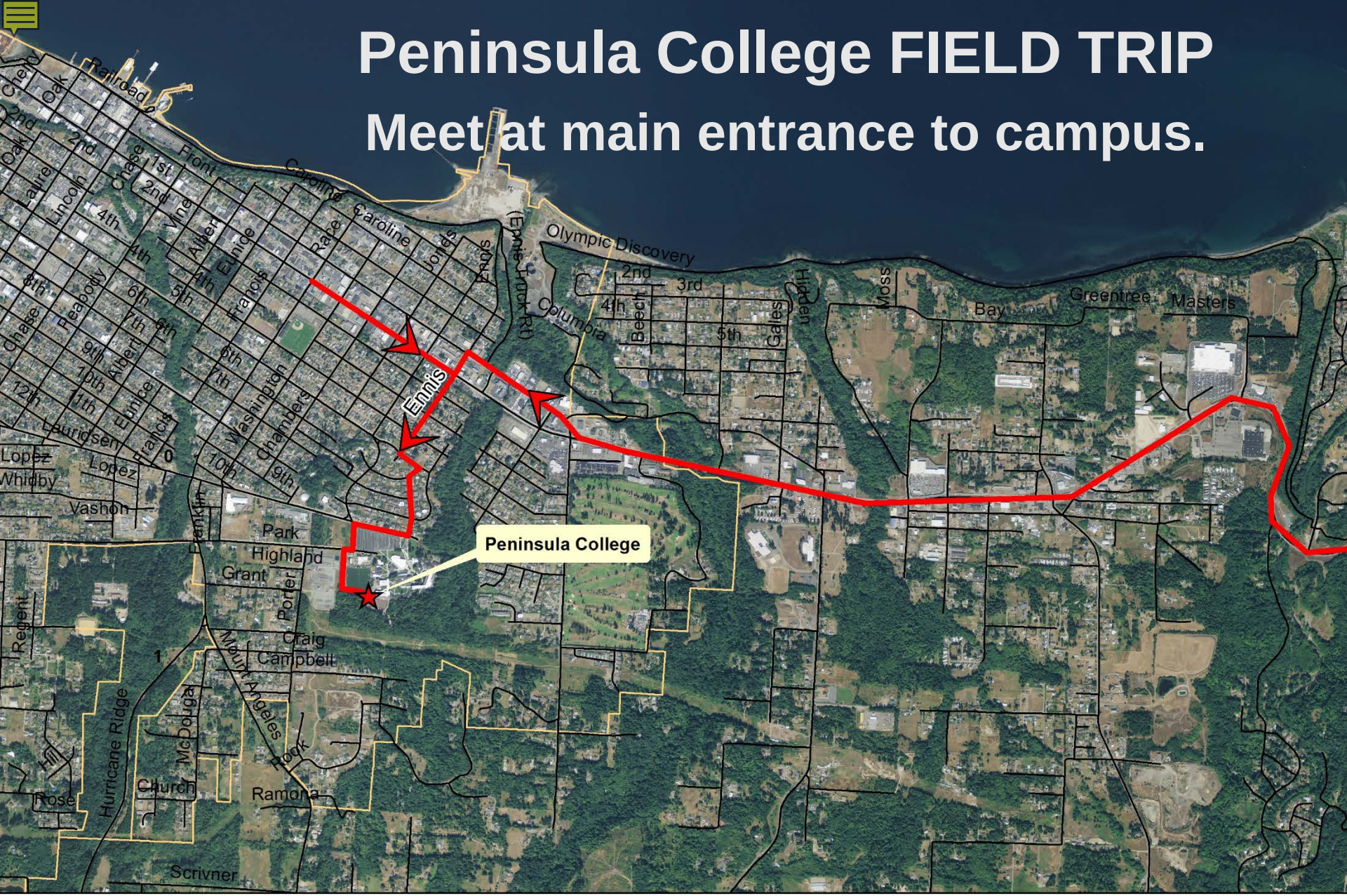
4/11/2017
Cartographer: Joe.Holtrop

No-Till Landscaping

- **Paul Gautschi property**
  - **411 Craig Road on Miller Peninsula**
  - **Open houses Sunday afternoons, June-September**
  - **Back to Eden Film**
    - https://www.youtube.com/watch?v=OiGof48XVCQ

Peninsula College FIELD TRIP

Meet at main entrance to campus.



Clallam Conservation District

January 14, 2015

Cartographer: Joe.Holtrop

Route to Peninsula College

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Miles

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