Section 1:

Introduction to Naturescaping
What is Naturescaping?

Naturescaping is the practice of designing (or redesigning) a landscape so that it reduces water use, stormwater runoff, and pollution without sacrificing splendor. It also saves you time money and energy – all while providing beautiful habitat for wildlife and you.

The practice of Naturescaping focuses primarily on native plants, and selecting “the right plant for the right place”.
Naturescaping = Healthier Watersheds
Section 2:
Naturescaping Examples &
Introduction to Design Principles
Naturescaping Examples

Before Naturescaping
After Naturescaping

- Removed most of lawn, kept a small patch for sitting
- Right plant right place: high water use plants near lawn
Before Naturescaping
After Naturescaping – 5 years later

- Lawn removal & installation of perennials and paths
- Multiple layers, variety of species & feeders provide wildlife habitat
After Naturescaping – 1 year later

- Plant placement provides privacy & helps block view of fences
- Edging separates beds from gravel pathway
Before:

Large expanse of lawn required a lot of watering

Problem with cars driving over the sharp corner
During:

Replaced lawn with boulders & drought tolerant plants
After:

Beneficial perennials & native ground covers add beauty to the church & also resolve traffic problem.
Before Naturescaping
During

- Yard immediately after lawn removal & initial planting
- Did not mulch to protect from erosion and weeds
One year later...

- Nature fills a vacuum = lots of weeds!
- Anticipate maintenance
Naturescaping Design Principles

- Alternatives to Lawn & Grass
- Layering of Vegetation
- Seasonal Interest
- Planting for Energy Conservation
- Creating Wildlife Habitat
- Low Maintenance Landscapes
- Water Conservation Practices
- Incorporating Native Plants
- Stormwater Solutions
Lawn Alternatives

Groundcover
Lawn removal from slope

- was difficult to mow and not used
- Replaced lawn with deeper rooted plants
Groundcover, woodchip pathways & vegetable beds
Layering of Vegetation

Creates Habitat
Year-round Features
Using trees & plants for shade, windbreaks, etc.
Wildlife Habitat

Food, Water, Shelter
Honeybees
Water Source
Nesting opportunities for native pollinators
Snags and woody debris for shelter, nesting & perches.
Variety of flowering & fruiting plants provide food throughout the year and invite pollinators.
Combination of plants with varied root depths stabilize soil.
Bank stabilized with rocks & drought tolerant plants

Typical sloping side lawn
Slope with variety of densely planted vegetation.
Terracing with retaining walls.
Stormwater Solutions

Keeping or using stormwater on site

Rain Gardens

Stormwater Planters

Rainwater Harvesting
Pervious Surfaces – Parking Lots, Driveways & Pathways
Eco – Roofs / Green Roofs
Section 3:

Site Analysis & Design Process
Protect yourself from injury & prevent damages to underground utility lines, pipes and cables. Always call before you dig!

811 or Oregon Utility Notification Center
1-800-332-2344
www.digsafelyoregon.com

- Available 24 hours/day to process locate requests
- Call at least 2 business days before you dig
SITE ASSESSMENT: EXPOSURE

ALLEY

HOT SOUTH

COOL NORTH

SIDEWALK

1' 5' 10'
SITE ASSESSMENT: VIEWS

- ALLEY
- POOR NEAR VIEW
- GOOD DISTANT VIEW
- LACK OF PRIVACY & POOR VIEWS
- UNATTRACTIVE CONCRETE WALL

Legend:
- 1' 5' 10'
Section 4:
Naturescaping
Concepts & Methods

Pollution Prevention
Soil Health
Water Conservation
Lawn Alternatives & Removal
Pest Management
Why Pollution Prevention?

Pesticides
Rain can wash freshly sprayed pesticides into storm drains, streams, rivers, oceans, etc.

Fertilizers
Fertilizer nutrients that are unused by plants attach to soil particles and get washed into storm drains and into local streams and rivers.
What is Soil

**SOIL** is made up of minerals, water, air & organic material. Life in the soil includes earthworms, bacteria, algae, fungi and protozoa.

**TEXTURE:** the relative proportion (%) of sand, silt and clay size particles in a sample of soil.

**STRUCTURE:** how soil particles are arranged.
Create Healthy Soil - add Organic Matter!

✓ Living organisms break down the soil’s existing minerals & nutrients – making them available to plants

✓ Compost helps retain water, suppress weeds and reduces erosion

✓ Organic matter balances soil structure:
  • helps clay soils soak up water
  • helps sandy soils retain water
  • adds nutrients to soil
Protect Your Soil - Erosion Prevention

✓ Do your project a little bit at a time

✓ Cover planting beds with mulch top dressings

✓ Plant slopes with a mixture of species. A variety of complex root systems hold soil in place.
Water Conservation

✓ Plan ahead
  - Learn the micro-climates in your yard. Select & place plants accordingly.
  - Add organic matter to increase infiltration and water holding capacity
  - Understand your soil type to know which irrigation method, frequency & duration are best.
Water Wise Tips

✓ Right plant, right place – grouping plants with similar water needs together

✓ Time watering to reduce evaporation
  ▪ Cool temperature + still air = low evaporation
  ▪ Be aware of moisture / mold relationship
✔ Drip / Soaker hoses deliver water right to the root system ( = minimal evaporation)

✔ Maintain for water efficiency:
  - Plant densely, prune and weed regularly
  - Use mulch to discourage weeds & retain moisture
  - Check drip system for proper function and coverage
✓ Allow lawn to go dormant during dry months

✓ Plant drought tolerant/native plants and lawn mixes

✓ Remove your lawn!
Lawn Removal

• Cut a small v-shaped trench along new bed lines
• Place 10-15 sheets newspaper (overlapping edges) over area you wish to remove
• Wet paper thoroughly
• Place 3-6 inches of organic material on top
Pest Management

and alternatives to chemicals

Be willing to tolerate and accept imperfections!

Remember, small populations of some pests help build populations of the beneficial insects that eat them.
3 Steps to Solve Pest & Disease Problems

1. Prevention

- Soil Preparation - encourages strong plants that ward off pests & diseases
- Mulch - suppresses weeds and helps to retain moisture
- Wise Plant Choices - right plant, right place & companion planting
- Be water wise!
2. Identify the Problem

- Positively identify the pest.

- Contact Master Gardeners, Metro, or a local natural garden store for help with identification.

- Learn its life cycle. This helps in finding out best control method for that species.
3. Controls – Always try safest method first

A) Mechanical
- Use barriers, traps, hose spray or remove by hand

B) Biological
- Encourage natural predators such as nematodes and beneficial insects (ladybugs eat aphids), spiders, bats, dragonflies & birds.
3. Controls – Always try safest method first

C) Chemical

- Use only as a last resort! Start by choosing an organic product best for the identified problem:
  - Understand the pest/disease life cycle and apply product at the right time
  - Read label and follow directions exactly
  - Apply carefully and judiciously

**Note:** Just because a product may be labeled “organic” doesn’t necessarily mean “safe”. Products can still be harmful if directions are not precisely followed.
Section 5:

Plant Selection Tips
Trees in the Landscape
Invasive Plants
English Ivy
*Hedera helix*

- Spreads both vegetatively (sprouts from stumps, roots, leaves), also by birds spreading seeds

- Cut from base of trees and dig out roots, or cut flowers to prevent fruiting
Herb Robert
*Geranium robertianum*

- Spreads entirely by seeds that are capable of being ejected 15-20 feet
- Hand pull before it flowers and seeds

★ Be sure not to confuse it with Bleeding Heart – a local native with similar foliage but a different flower
Butterfly Bush
*Buddleia davidii*

- Spreads primarily by prolific seeding
- Cut back repeatedly
- Hand pick seedlings and establish a ground cover *(Binggeli 1998)*

★ *It may be possible to dig plants up, but disturbance encourages seedling growth and should be avoided if possible.*
Tree of Heaven
*Ailanthus altissima*

- Spreads vegetatively (sprouts from stumps, roots, leaves), also through prolific seeding
- Small plants should be pulled once large enough to grasp, & before they produce seeds
- Larger trees should be cut and entire rootstock removed
Pokeweed
Phytolacca americana

- Spreads by seed – birds eat berries and deposit
- Pull up young shoots making sure to get the tap root
- Cut before it flowers and produces seed
- Dig out very large taproot to eliminate
Japanese Knotweed
*Polygonum cuspidatum*

• Spreads vegetatively when root fragments are transported to new locations

• Cut back canes repeatedly throughout growing season to deplete root reserves

• Dig out EXTENSIVE root system only if you can make sure you remove ALL of the root fragments

• Package up root fragments and remove from site to dispose. DO NOT let fragments enter the waterway!

★ Contact your county weed agency for help in controlling this extremely invasive weed.
Garlic Mustard
*Alliaria petiolata*

- Cool season herb spreads by prolific seeding
- Biennial = blooms 2\textsuperscript{nd} year, then comes back by seed
- Pull by hand removing all root fragments
- If large infestation, cut to ground repeatedly
Traveler’s Joy
*Clematis vitalba*

- Spreads both vegetatively and by seeds dispersed by wind and animals
- Cut vine at base, dig out root if possible
- Vines break easily – make several small tugs to remove from plants
- Retrieve as many seeds as possible and dispose of them in trash (bagged)
Native Plants
Native plants are adapted to our soil and climate so they need little to no watering, fertilizing, or care once established.

They are also less susceptible to common garden pests and diseases, and they attract a variety of native birds & butterflies by providing food & shelter.
Choose native plants that are appropriate for your yard.

Putting the “Right Plant in the Right Place” is vital to the health of your plants.

All plants are suited to certain “micro-climates”:

• Some are suited for shady, well-drained conditions
• Others like it moist and sunny
• And still others like it sunny and dry

Douglas Spiraea
Vine Maple
Acer circinatum

SUN:
Full Sun, Part Shade, Full Shade

WATER:
Dry - Moist

HEIGHT x WIDTH:
25’ x 20’
Red Elderberry
*Sambucus racemosa*

**SUN:**
Full Sun, Part Shade

**WATER:**
Prefers Moist, Drought Tolerant

**HEIGHT x WIDTH:**
20’ x 10’
Blue Elderberry
*Sambucus cerulea*

**SUN:**
Full Sun, Part Shade

**WATER:**
Moist

**HEIGHT x WIDTH:**
20’ x 10’
Red-Osier Dogwood

*Cornus sericea*

**SUN:**
Full Sun, Part Shade

**WATER:**
Moist, Seasonally Wet, Perennially Wet

**HEIGHT x WIDTH:**
18’ x 10’
Serviceberry
Amelanchier alnifolia

SUN:
Full Sun, Part Shade

WATER:
Moist, Seasonally Wet

HEIGHT x WIDTH:
15’ x 7’
Oceanspray
Holodiscus discolor

SUN:
Full Sun, Part Shade

WATER:
Dry, Moist

HEIGHT x WIDTH:
12’ x 12’
Mock-orange

*Philadelphus lewisii*

**SUN:**
Full Sun, Part Shade, Full Shade

**WATER:**
Dry, Moist

**HEIGHT x WIDTH:**
12’ x 10’
Nootka Rose
*Rosa nutkana*

**SUN:**
Full Sun, Part Shade

**WATER:**
Dry, Moist, Seasonally Wet

**HEIGHT x WIDTH:**
12’ x 8’
Red-flowering Currant
Ribes sanguineum

SUN:
Full Sun, Part Shade, Full Shade

WATER:
Dry, Moist

HEIGHT x WIDTH:
9’ x 9’
Evergreen Huckleberry

Vaccinium ovatum

SUN:
Full Sun, Part Shade, Full Shade

WATER:
Dry, Moist, Seasonally Wet

HEIGHT x WIDTH:
8’ x 8’
Douglas Spiraea
*Spiraea douglasii*

**SUN:**
Full Sun, Part Shade

**WATER:**
Dry, Moist

**HEIGHT x WIDTH:**
6’ x 3’
Salal

_Gaultheria shallon_

SUN:
Part Shade, Full Shade

WATER:
Dry, Moist

HEIGHT x WIDTH:
6’ x 3’
Lupine
*Lupinus* *spp.*

**SUN:**
Full Sun

**WATER:**
Moist, Seasonally Wet

**HEIGHT x WIDTH:**
5’ x 3’
Thimbleberry
*Rubus parviflorus*

**SUN:**
Full Sun to Full Shade

**WATER:**
Dry, Moist, Seasonally Wet

**HEIGHT x WIDTH:**
4’ x 4’
Sword Fern

*Polystichum munitum*

**SUN:**
Full Sun, Full Shade

**WATER:**
Dry, Seasonally Moist

**HEIGHT x WIDTH:**
3’ x 3’
Dull Oregon-Grape
*Mahonia (Berberis) nervosa*

**SUN:**
Part Shade, Full Shade

**WATER:**
Partially Moist, Dry

**HEIGHT x WIDTH:**
3’ x 2’
Common Snowberry
*Symphoricarpos albus*

**SUN:**
Full Sun, Part Shade, Full Shade

**WATER:**
Dry, Moist, Seasonally Wet

**HEIGHT x WIDTH:**
3’ x 3’
Red Columbine
Aquilegia formosa

SUN: Full Sun, Part Shade

WATER: Moist

HEIGHT x WIDTH: 2’ x 1’
Bleeding Heart

*Dicentra formosa*

**SUN:**
Part Shade, Full Shade

**WATER:**
Prefers Moist

**HEIGHT x WIDTH:**
2’ x 1’
Common Camas
*Camassia quamash*

**SUN:**
Full Sun, Part Sun

**WATER:**
Moist, Seasonally Wet

**HEIGHT x WIDTH:**
1-2’ x 1’
Piggyback or Youth-on-Age

_Tolmiea menziesii_

**SUN:**
Part Shade, Full Shade

**WATER:**
Moist, Seasonally Wet

**HEIGHT x WIDTH:**
1’ x 2’
Western trillium

*Trillium ovatum*

**SUN:**
Part Shade, Full Shade

**WATER:**
Dry to Seasonally Moist

**HEIGHT x WIDTH:**
4” x 1’
Oregon Sedum
Sedum oreganum

SUN:
Full Sun, Part Sun

WATER:
Dry

HEIGHT x WIDTH:
1’ x 1’
Wild Ginger
Asarum caudatum

SUN:
Full Shade

WATER:
Prefers Moist

HEIGHT x WIDTH:
3-6” x 1’
Rush

*Juncus ensofolius*

**SUN:**
Full Sun

**WATER:**
Moist, Seasonally Wet

**HEIGHT x WIDTH:**
2’ x 1’
Sedge

*Carex spp.*

**SUN:**
Full Sun, Part Sun

**WATER:**
Moist, Seasonally Wet
Perennially Wet

**HEIGHT x WIDTH:**
1’ x 3’
Summary:
Examples of Design Principles in the Landscape
Terracing with retaining walls helps to stabilize soil
Pathways allow access; maximizing use of garden space
Mixture of native plant communities layered throughout landscape
- Wide pathway provides easy access to & from wood stack
- Varying layers of vegetation and shade community under Cedar tree
- Combination of rocks and plants help stabilize soil.
- Water feature, multiple blooming species attract wildlife
- Layering of vegetation
- Bird houses, snags and woody debris throughout landscape provide habitat
- Variety of pathways
- Large flowerbeds with lawn as the pathway
- Layering
- Wildlife Habitat
- Pathway provides opportunity to enjoy space from many perspectives
- Multiple layers
- Variety of blooming species, feeders and bird bath attract wildlife
We value your feedback!

Please fill out the blue evaluation form to let us know what you think.

*Thank you!*

Visit [www.emswcd.org](http://www.emswcd.org) where you can register online for Site Planning 1.