NATURESCAPING

Section 1:

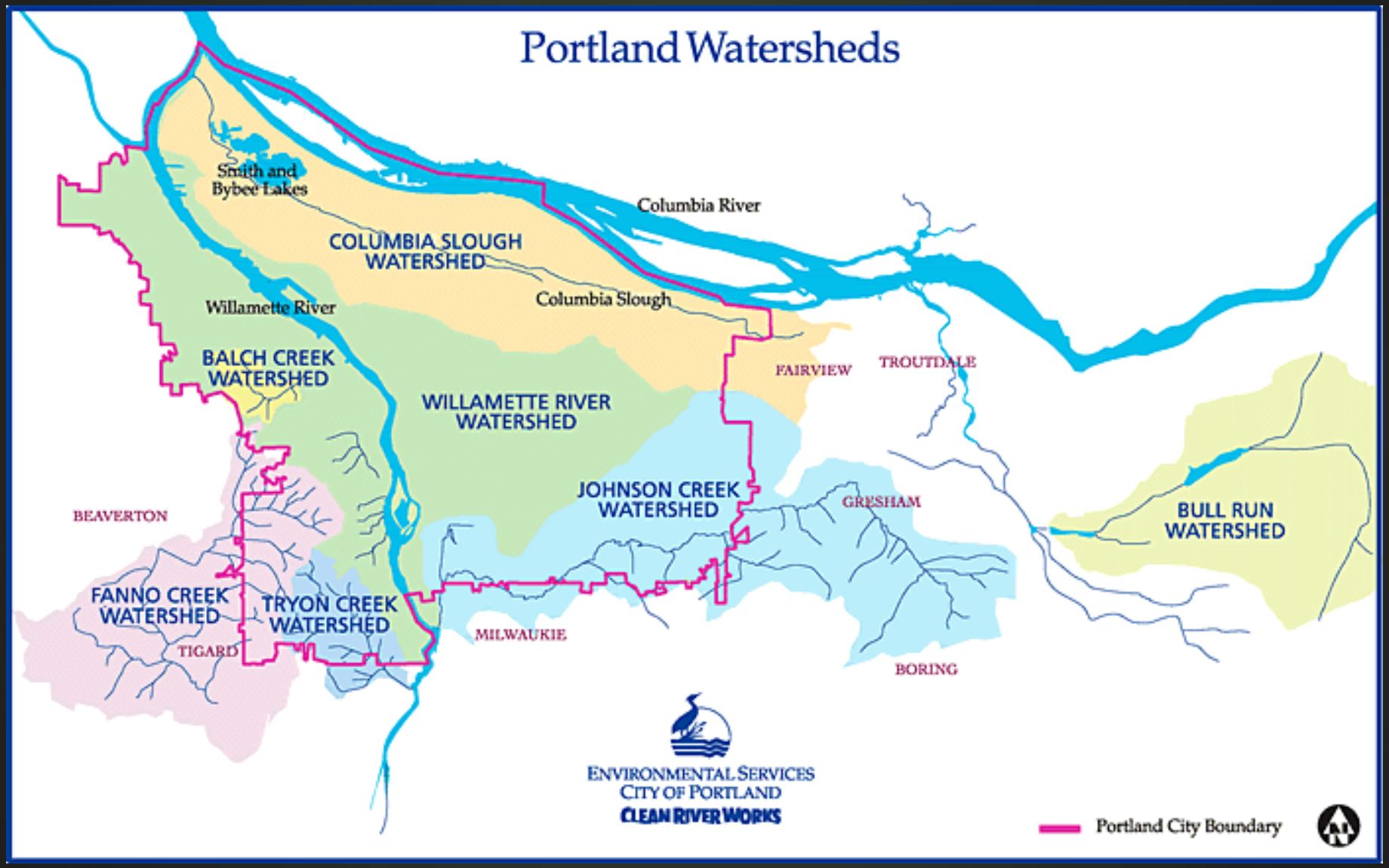
Introduction to Naturescaping

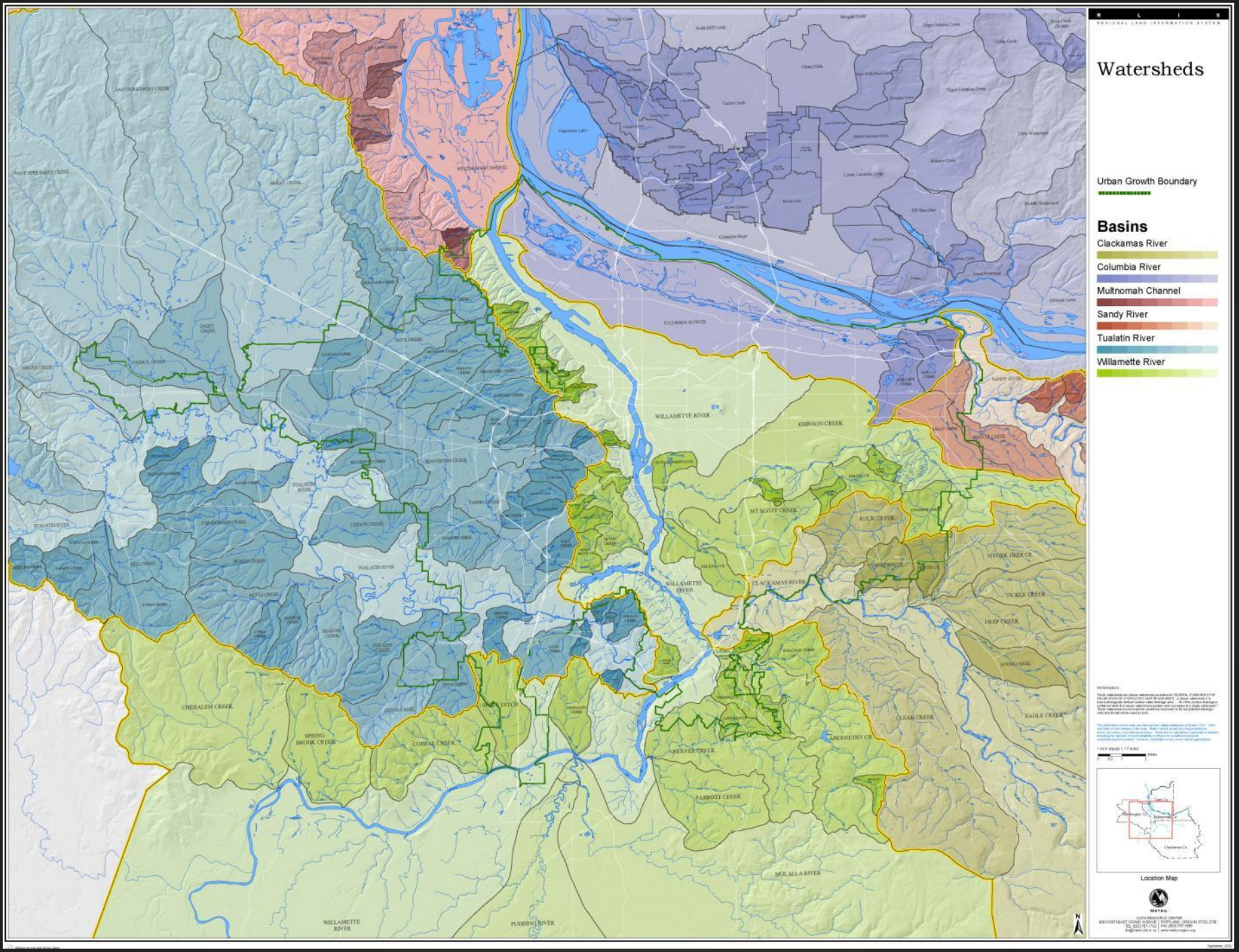
What is Naturescaping?

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




R L I S
REGIONAL LAND INFORMATION SYSTEM
Watersheds
Urban Growth Boundary
Basins
Clackamas River
Columbia River
Multnomah Channel
Sandy River
Tualatin River
Willamette River
WILLAMETTE RIVER
JOHNSON CREEK
MT SCOTT CREEK
ROCK CREEK
CLACKAMAS RIVER
TICKLE CREEK
DEEP CREEK
EAGLE CREEK
CLEAR CREEK
ABERNETHY CR
BEAVER CREEK
PARROTT CREEK
MOLALLA RIVER
CHEHALEM CREEK
SPRING BROOK CREEK
CORNELL CREEK
SHUTE DITCH
PUDDING RIVER
TUALATIN RIVER
BEAVERTON CREEK
COLUMBIA SLOUGH
SANDY RIVER
Location Map
METRO

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

Early Naturescaping

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

Pavers

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

Energy Conservation

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.

Soil Stabilization

Combination of plants with varied root depths stabilize soil.

Typical sloping side lawn

Bank stabilized with rocks & drought tolerant plants

Slope with variety of densely planted vegetation.

Terracing with retaining walls.

Stormwater Solutions

Keeping or using stormwater on site

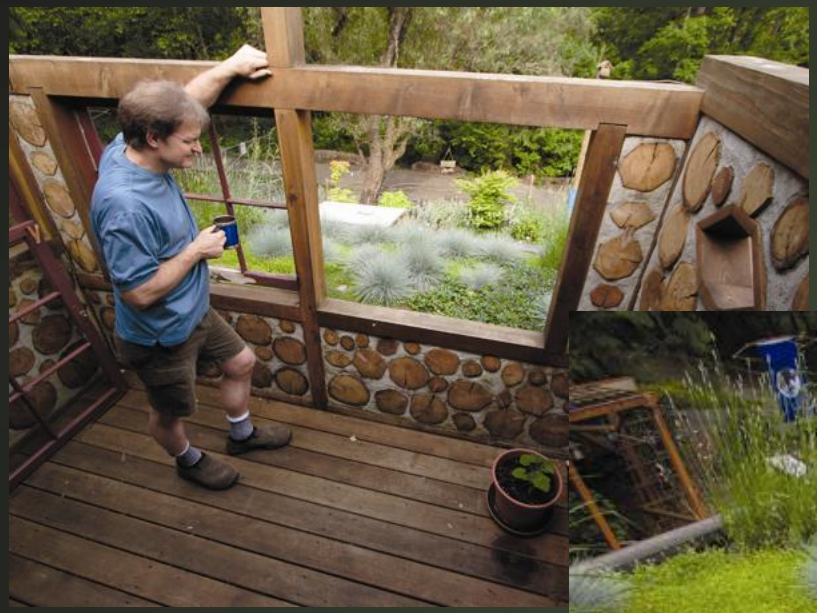
Rain Gardens

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

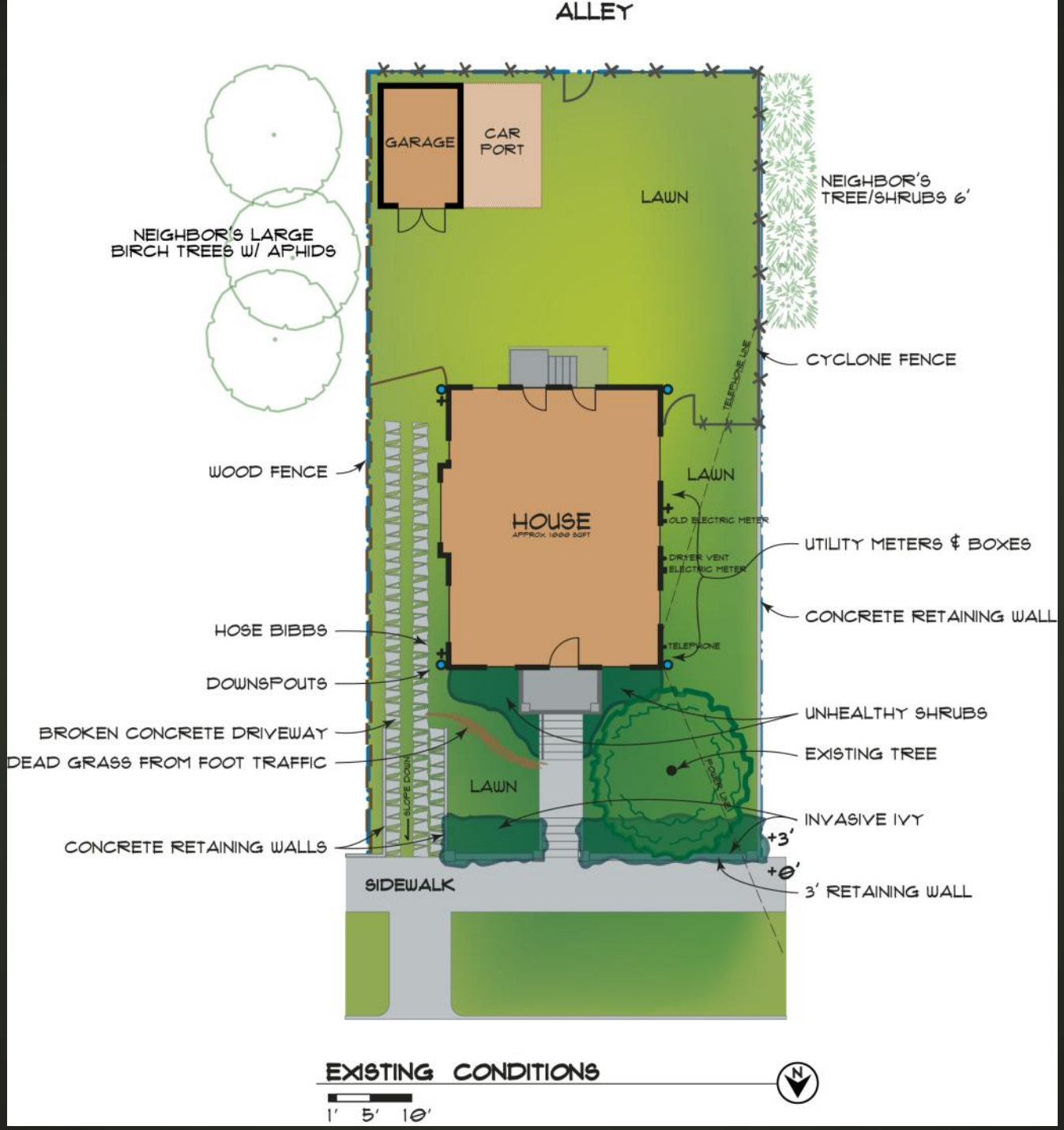
or

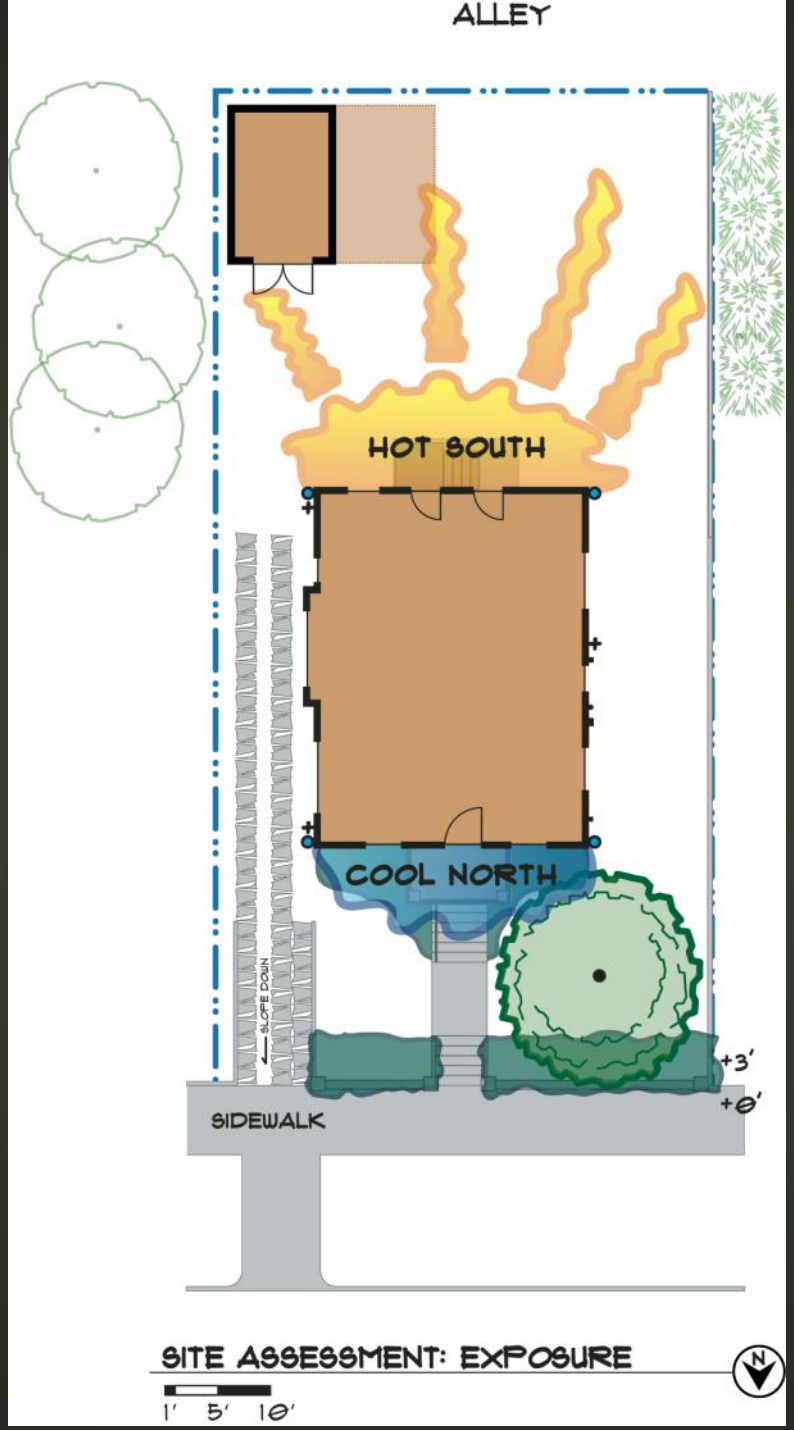
Oregon Utility Notification Center

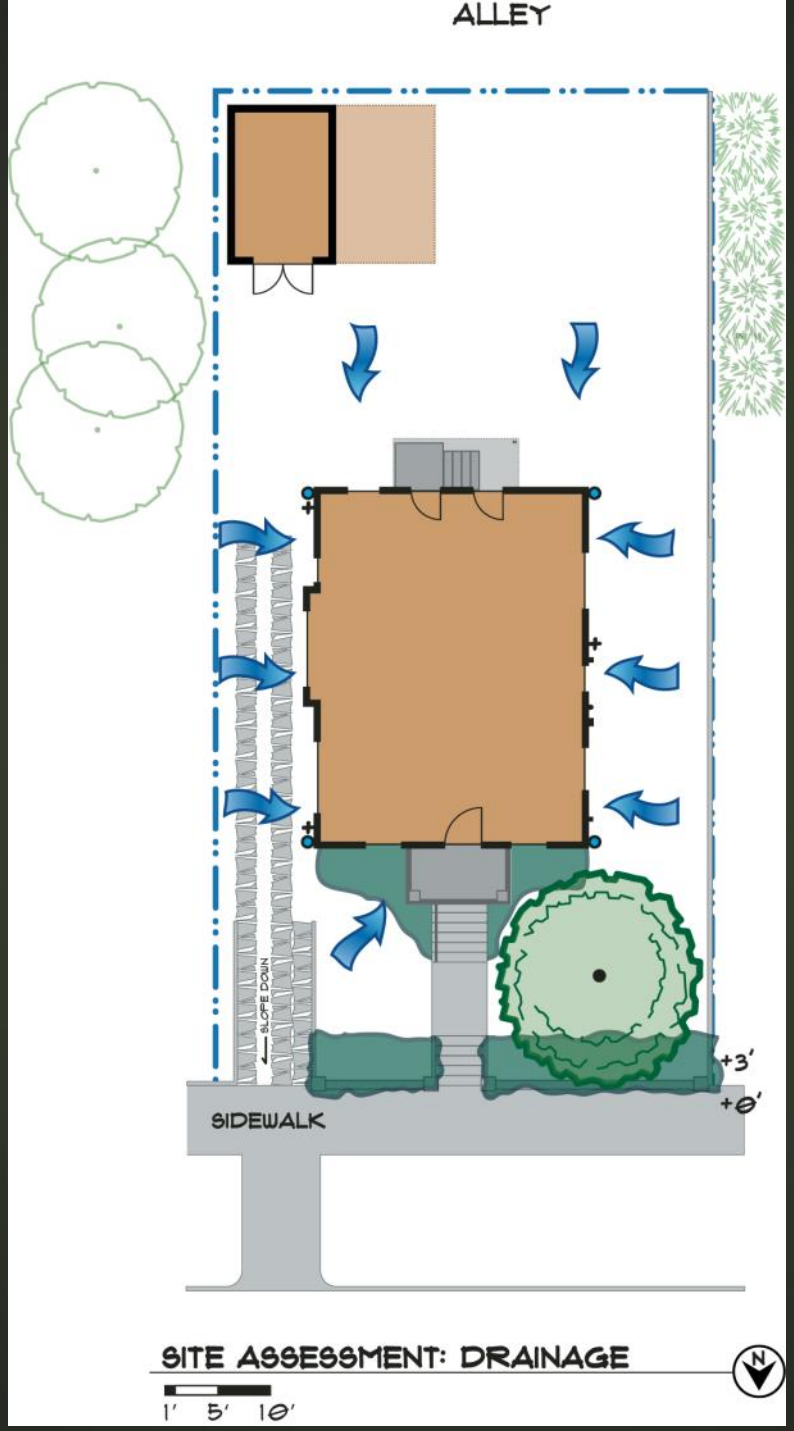
1-800-332-2344

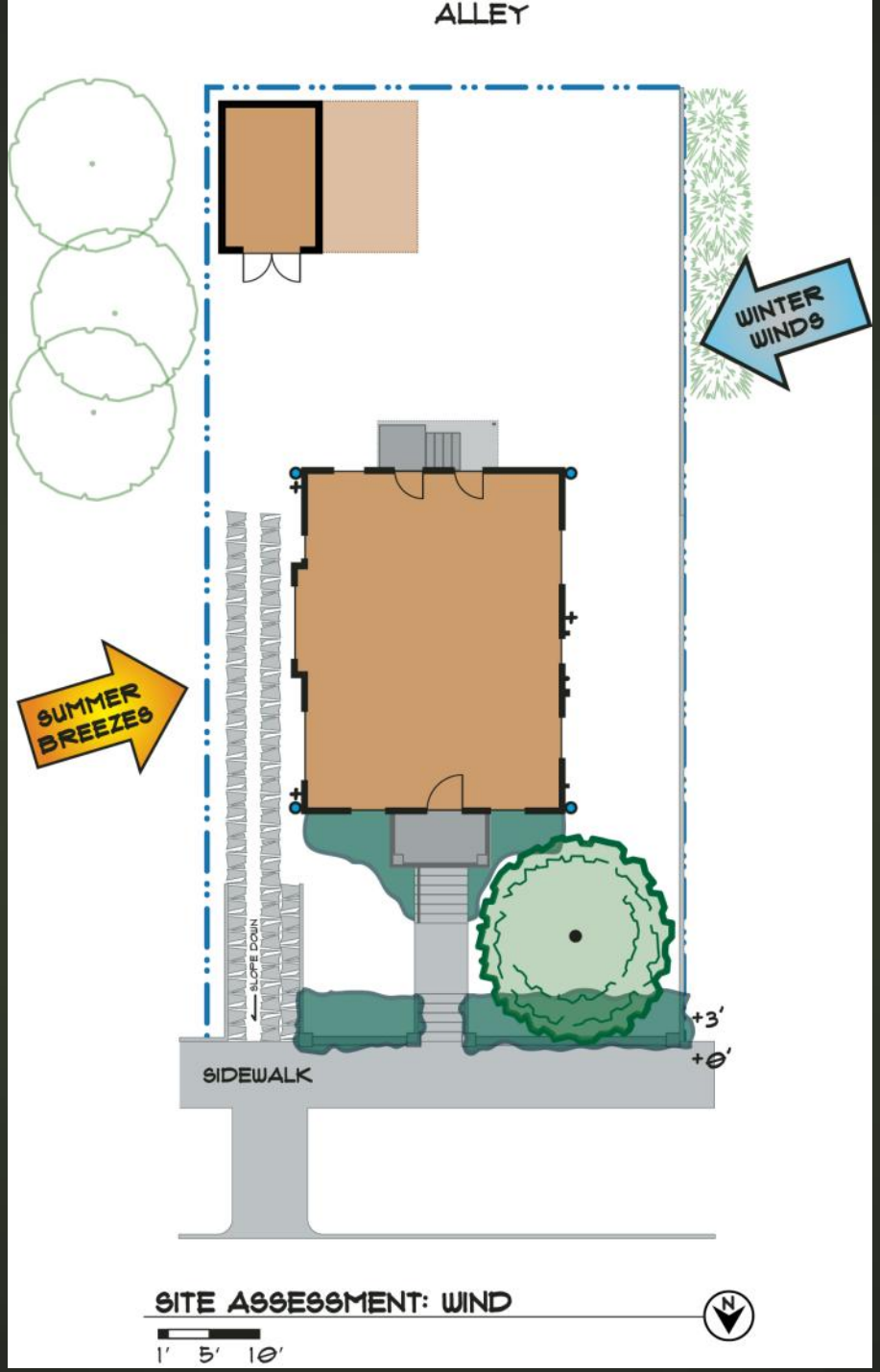
www.digsafelyoregon.com

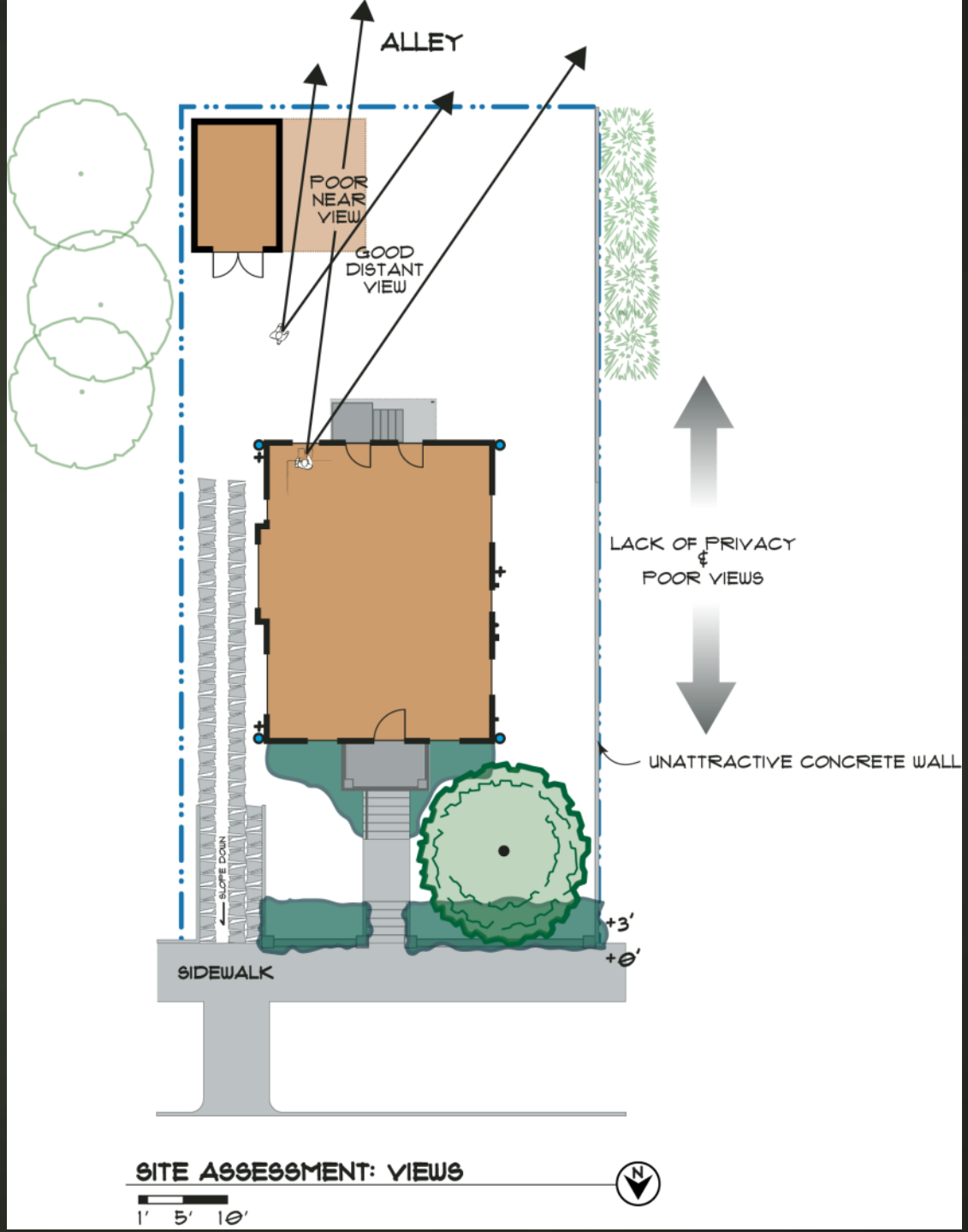
- Available 24 hours/day to process locate requests
- Call **at least 2 business days** before you dig

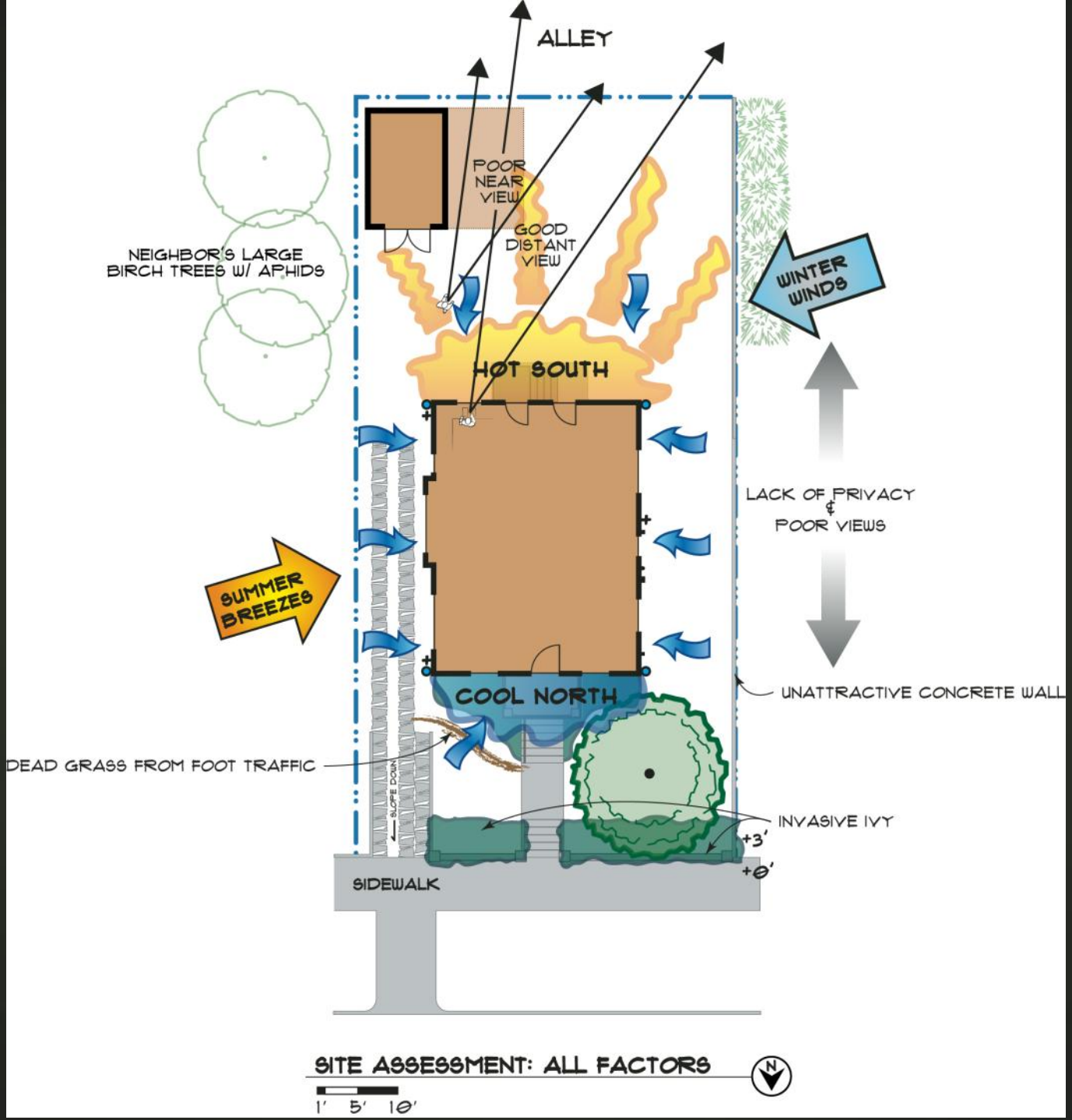

ALLEY
GARAGE
CAR PORT
LAWN
NEIGHBOR'S TREE/SHRUBS 6'
NEIGHBOR'S LARGE BIRCH TREES W/ APHIDS
CYCLONE FENCE
TELEPHONE LINE
WOOD FENCE
LAWN
HOUSE
APPROX 1000 SQFT
OLD ELECTRIC METER
DRYER VENT
ELECTRIC METER
UTILITY METERS & BOXES
CONCRETE RETAINING WALL
HOSE BIBBS
TELEPHONE
DOWNSPOUTS
UNHEALTHY SHRUBS
BROKEN CONCRETE DRIVEWAY
EXISTING TREE
DEAD GRASS FROM FOOT TRAFFIC
SLOPE DOWN
LAWN
POWER LINE
INVASIVE IVY
CONCRETE RETAINING WALLS
+3'
+0'
SIDEWALK
3' RETAINING WALL
EXISTING CONDITIONS
N
1' 5' 10'

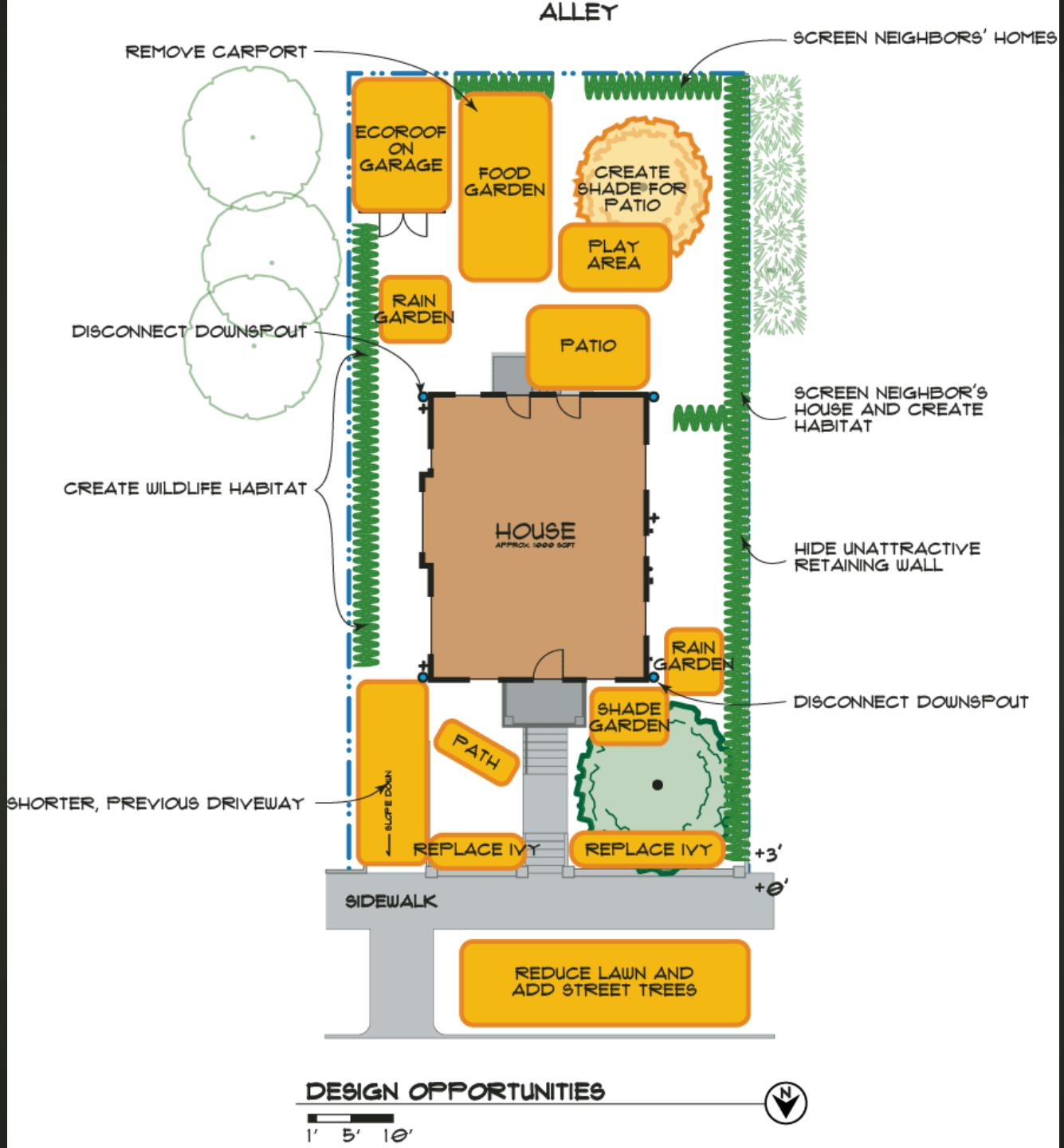

ALLEY
HOT SOUTH
COOL NORTH
SLOPE DOWN
+3'
+0'
SIDEWALK
SITE ASSESSMENT: EXPOSURE
N
1' 5' 10'

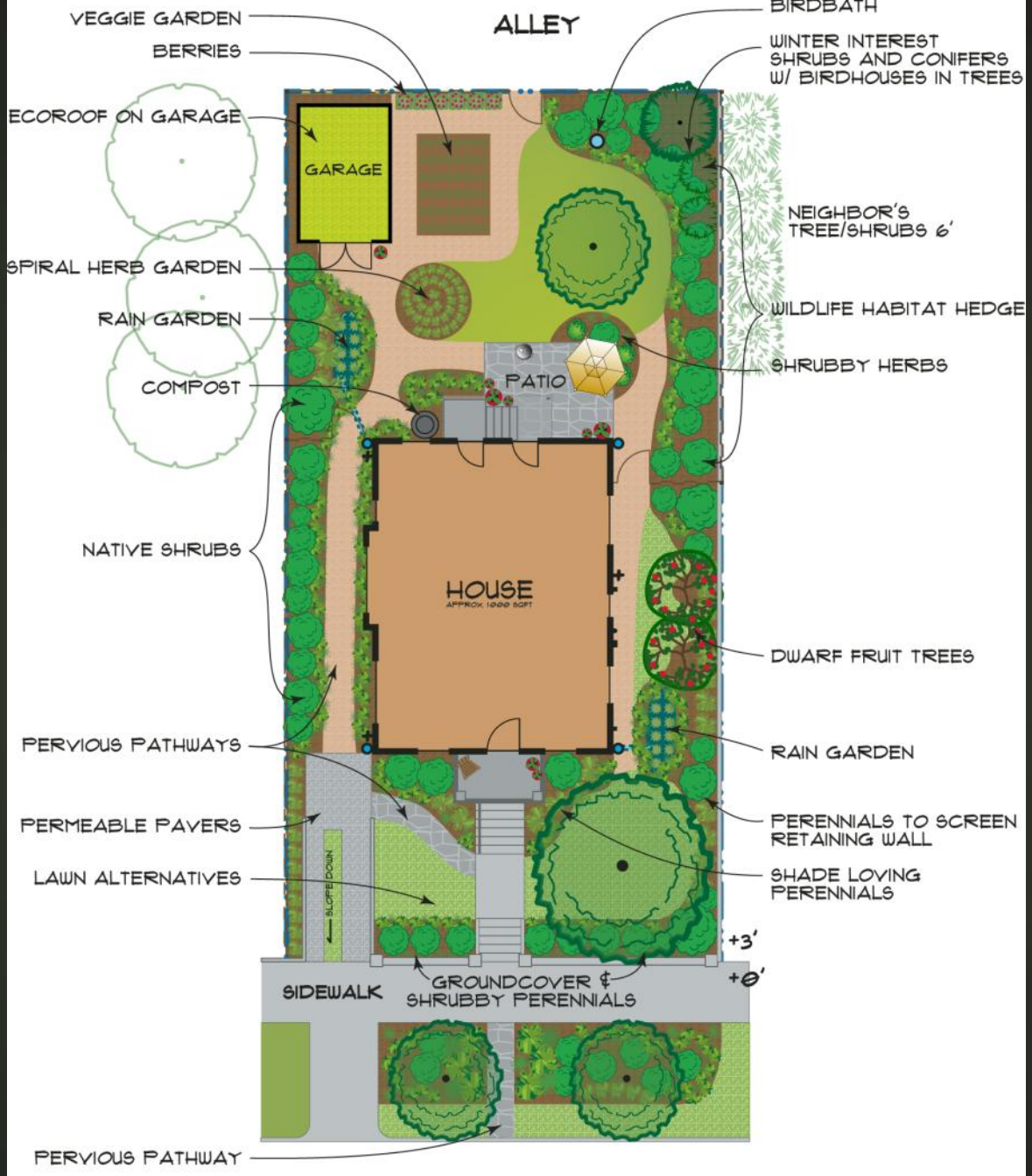

ALLEY
SLOPE DOWN
+3'
+0'
SIDEWALK
SITE ASSESSMENT: DRAINAGE
N
1' 5' 10'


ALLEY
WINTER WINDS
SUMMER BREEZES
SLOPE DOWN
+3'
+0'
SIDEWALK
SITE ASSESSMENT: WIND
N
1' 5' 10'


ALLEY
POOR NEAR VIEW
GOOD DISTANT VIEW
LACK OF PRIVACY & POOR VIEWS
UNATTRACTIVE CONCRETE WALL
SLOPE DOWN
+3'
+0'
SIDEWALK
SITE ASSESSMENT: VIEWS
N
1' 5' 10'


ALLEY
POOR NEAR VIEW
GOOD DISTANT VIEW
NEIGHBOR'S LARGE BIRCH TREES W/ APHIDS
WINTER WINDS
HOT SOUTH
LACK OF PRIVACY & POOR VIEWS
SUMMER BREEZES
COOL NORTH
UNATTRACTIVE CONCRETE WALL
DEAD GRASS FROM FOOT TRAFFIC
SLOPE DOWN
INVASIVE IVY
+3'
+0'
SIDEWALK
SITE ASSESSMENT: ALL FACTORS
N
1' 5' 10'


ALLEY
REMOVE CARPORT
SCREEN NEIGHBORS' HOMES
ECOROOF ON GARAGE
FOOD GARDEN
CREATE SHADE FOR PATIO
PLAY AREA
RAIN GARDEN
DISCONNECT DOWNSPOUT
PATIO
SCREEN NEIGHBOR'S HOUSE AND CREATE HABITAT
CREATE WILDLIFE HABITAT
HOUSE
APPROX 1000 SQFT
HIDE UNATTRACTIVE RETAINING WALL
RAIN GARDEN
DISCONNECT DOWNSPOUT
SHADE GARDEN
PATH
SHORTER, PREVIOUS DRIVEWAY
SLOPE DOWN
REPLACE IVY
REPLACE IVY
+3'
+0'
SIDEWALK
REDUCE LAWN AND ADD STREET TREES
DESIGN OPPORTUNITIES
N
1' 5' 10'



MASTER PLAN

1' 5' 10'

Section 4:

Naturescaping Concepts & Methods

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

Why Pollution Prevention?

Pesticides

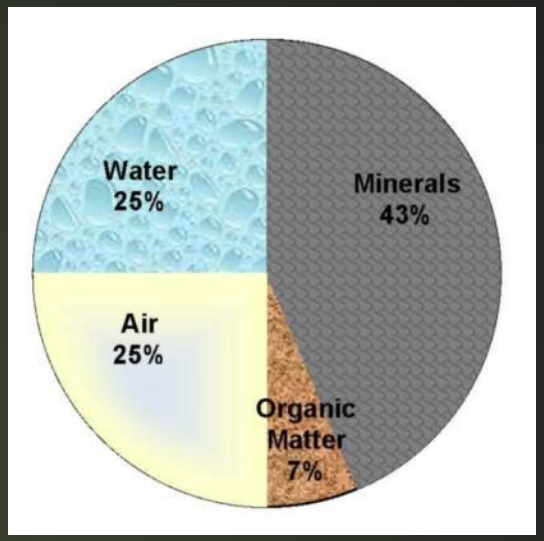
Rain can wash freshly sprayed pesticides into storm drains, streams, rivers, oceans, etc.

Fertilizers

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

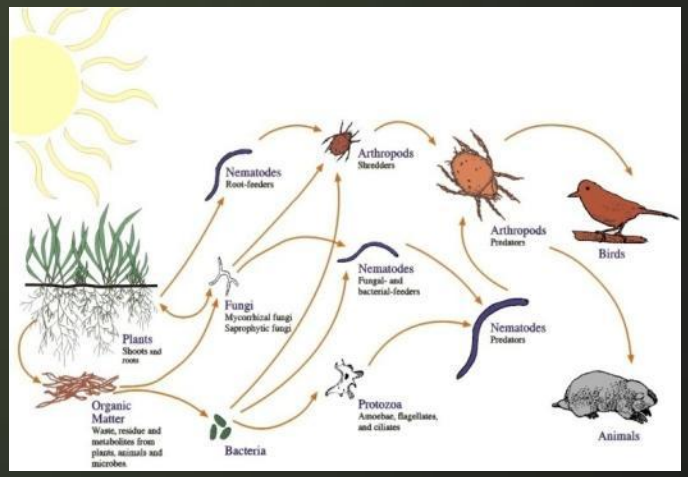
What is Soil

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

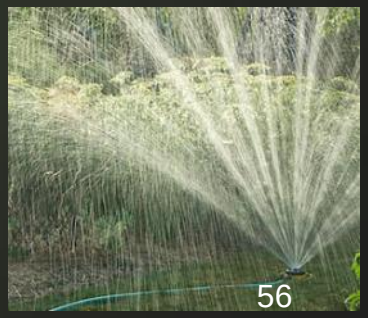
- ✓ Do your project a little bit at a time

- ✓ 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

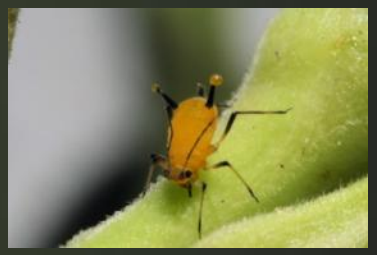
1. Prevention

- 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 <u>only</u> 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 2nd 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

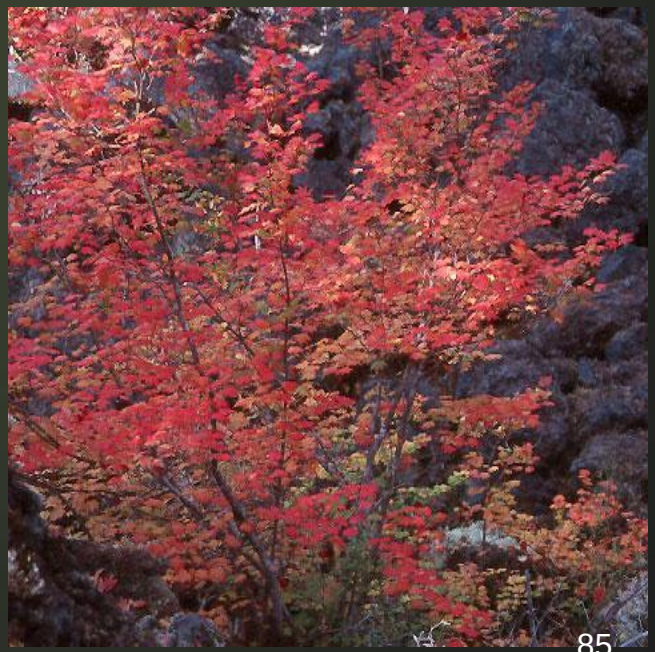
Vine Maple

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.

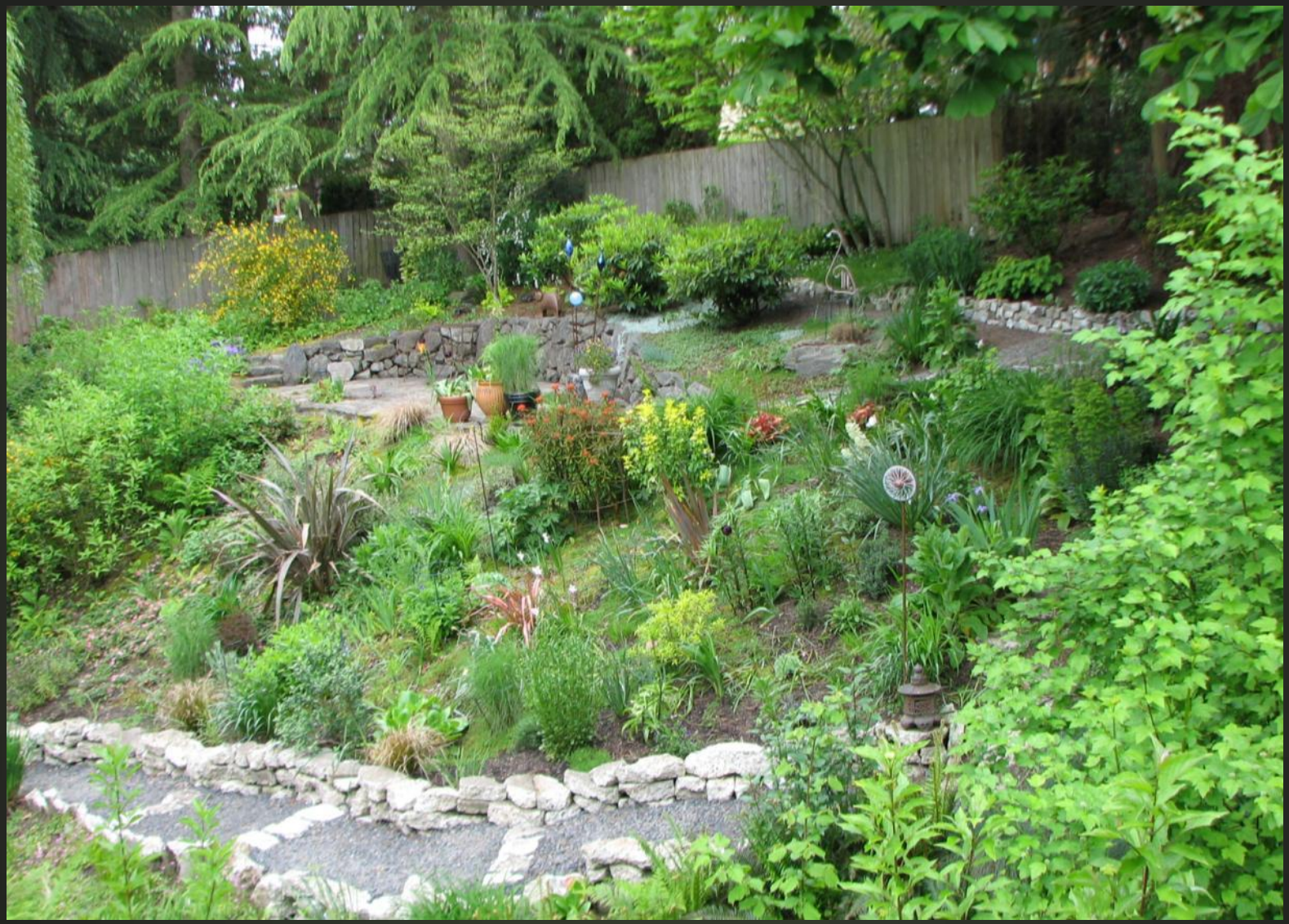
SUN:
Full Sun, Part Sun

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 where you can register online for Site Planning 1.