

Landscaping with Native Plants



Yellow Island Grassland Prairie

Sustainable Landscapes

Landscapes are considered sustainable if they reduce water demand, filter and reduce storm water runoff, provide wildlife habitat, reduce energy consumption, improve air quality, improve human health, and increase outdoor recreation.

www.sustainable sites.org

Gardening with a conscience is the essence of native plant gardens. Not about putting on a show that will dazzle. It's more about a garden that settles into its place. It celebrates its connections, big and small, with its location on this planet. Native plants belong here. They offer a 'sense of place'. We are all attracted to the incredible beauty of the Pacific Northwest. Our native flora is the envy of gardeners in other temperate climate locals such as England. We are more fortunate than England in that we still have an abundance of native plants. In parts of Europe, the movement of people for centuries has resulted in so many introduced plants that they lack our natural botanical treasure. You can have an "anywhere in the U.S." landscape or one that uniquely sings the praises of the Pacific Northwest.

Ladybird Johnson said of native plants, *"Wherever I go in America, I like it when the land speaks its own language in its own regional accent."*

THIS HANDBOOK COVERS:

Getting Started

Planning Map
Locate HIP Project
Site Analysis

Landscape Plan

Eliminate Lawn
Planting Plans
Native Plants

Maintenance

Plant Establishment
Maintenance
Deer



NATIVE PLANTS OFFER MULTIPLE BENEFITS



Native Plants Offer Multiple Benefits

The primary focus of HIP Native Landscaping projects is to protect water quality in Lake Whatcom. However, the benefits will be greater than this one outcome.

Native plants can not only help us manage our watersheds, but they will also increase and improve habitat for our native wildlife and pollinators. Our native animals, insects, and soil organisms have also evolved and are matched with soils and climate. Nurturing native plant gardens, nurtures native species and maintains the food web supporting them.

Native plants and natural areas can also help store carbon.



Studies have shown that even modest increases in the native plant cover on suburban properties increases the number and species of breeding birds, including birds of conservation concern.

*- Douglas Tallamy, author of **Bringing Nature Home***

What Makes Native Plants So Great?

“Plants native to an area have become closely matched with local soils, climate, and wildlife. Over time, they have formed a complex web of relationships with microorganisms, insects, wildlife, and even other plants. This web creates biological diversity that is crucial in a healthy, sustainable environment.”

Using the principle of “right plant, right place”, a landscape filled with natives should be one of the easiest things to maintain on your property. You will also know that you are providing wildlife with the plants that they have evolved with, creating a backyard sanctuary.



Photo Credit: <http://nativeplantspnw.com/>

Don't Native Plants Look Messy?

It is a common misconception that native plants are scraggly and unappealing. In reality, native plants that are not in constant competition with their neighbors in the forest, they will take on a more compact, leafier form and will often produce more blooms.

Make sure to give plants the space they need. Newly installed landscapes may look spacious and empty. But don't be inclined to plant them too closely, they will fill out. Plant smaller, perennials in clusters. Larger clumps of a single species can attract certain pollinators.

Planting canopy layers provides structure needed by wildlife for different activities. It will also provide visual interest for you. Consider your line of sight as well. Don't obscure your view, or your neighbors.

Flowers make it all better. Using a disproportionate numbers of flowers can indicate that a space is designed.

The possibilities are endless.

WATERSHED MANAGEMENT

3 Ways Storm Water Leaves Your Property: Evapotranspiration, Soil Infiltration, and Runoff.

Forests Protect Water Quality

Trees and shrubs have an important management role. 95-98% of storm water is evapotranspired or infiltrated into the soil.

- Multi-layer canopies increase evapotranspiration and slow the velocity of raindrops, reducing erosion.
- Native plants attract soil microbes
- Organic duff feeds soil life and plants
- Roots and soil microbes open channels into the soil, improving infiltration.
- Soil microbes neutralize pollutants in storm water
- Birds, insects, and soil organisms manage plant pests without pesticides

Gardening Is Not A Gentle Activity

Common garden practices are linked to water quality decline.

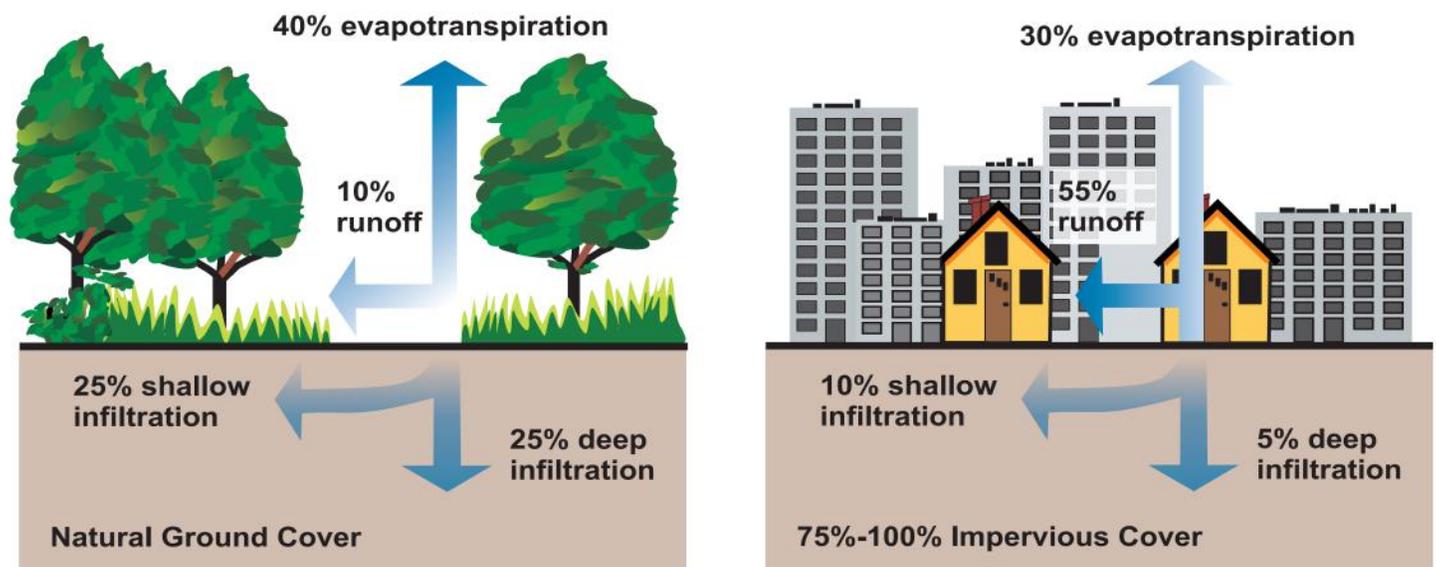
- Lawns do not effectively support evapotranspiration, soil infiltration, or runoff prevention.
- Fertilizers and pesticides, such as 'weed and feed', are contaminating our drinking water.
- Plant debris that feeds soil organisms is often removed from the landscape as part of cleanup chores.

Did you know?

Did you know that because of impervious surfaces like pavement and rooftops, a typical city block generates more than 5 times the volume of runoff than a woodland area of the same size?

This runoff carries sediments, chemicals, and soil nutrients into our drinking water without treatment.

Evapotranspiration is the process by which water is transferred from the land to the atmosphere by evaporation from the soil and other surfaces and by transpiration from plants.



Relationship between impervious cover and surface runoff. Impervious cover in a watershed results in increased surface runoff. As little as 10 percent impervious cover in a watershed can result in stream degradation.

From US Environmental Protection Agency—EPA 841-F-03-003

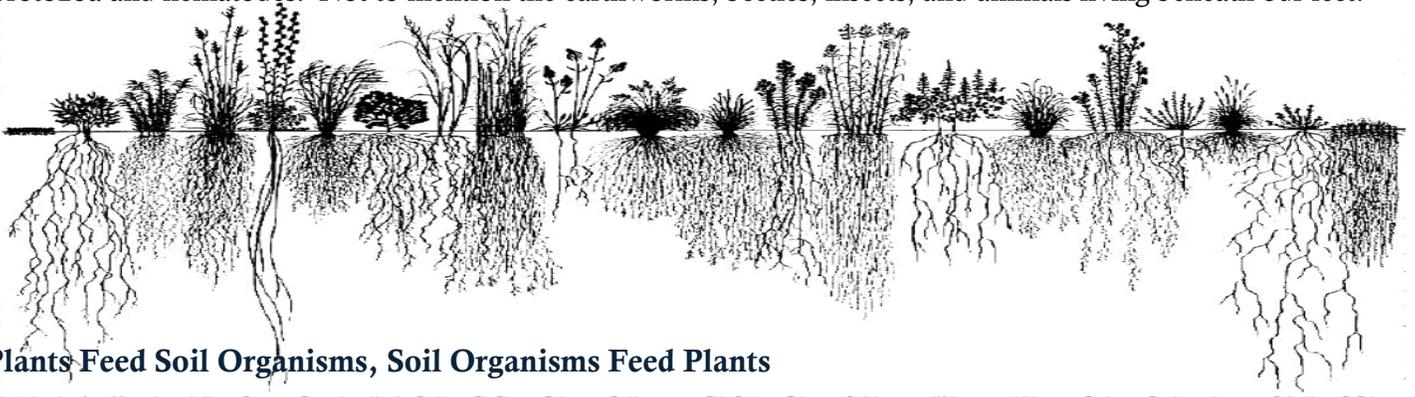
NATIVE PLANTS OFFER MULTIPLE BENEFITS

WATERSHED MANAGEMENT

ALLIES: Native Plants + Soil Organisms

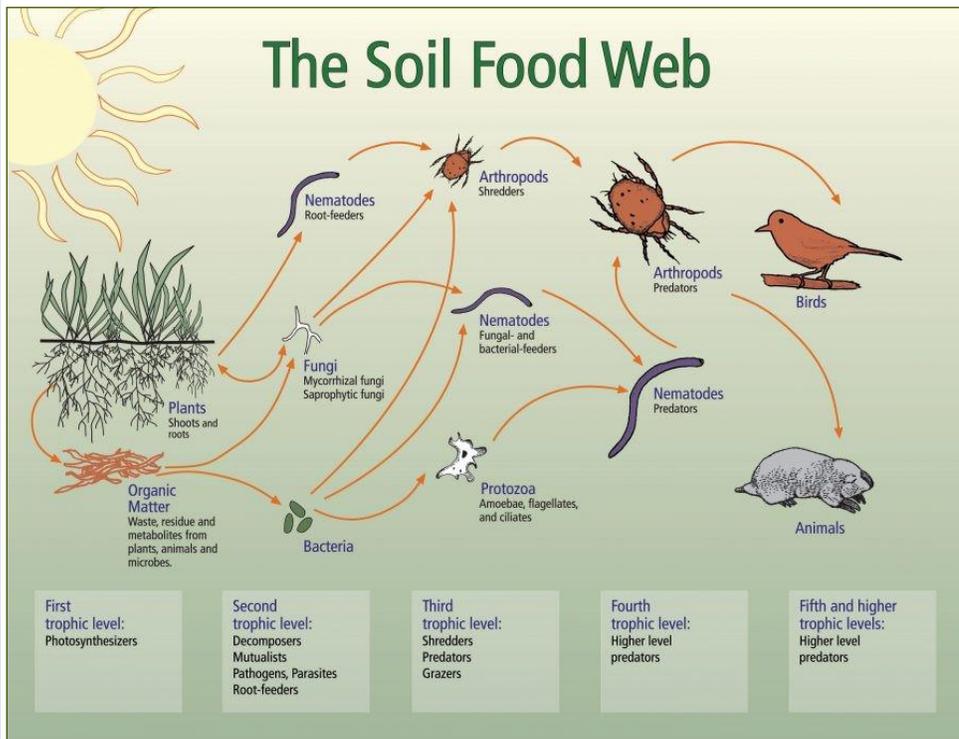
Soil is a Living Thing

Soil is more than just dirt, it is full of life and is said to contain more organisms than there are people on earth. A single teaspoon can contain one billion bacteria, several yards of fungal filaments (mycorrhizae), thousands of protozoa and nematodes. Not to mention the earthworms, beetles, insects, and animals living beneath our feet.



Plants Feed Soil Organisms, Soil Organisms Feed Plants

- Plants remove carbon dioxide from the air, combine it with sunlight, and convert it to carbon sugars.
- Roots release excess sugars to support soil organisms such as mycorrhizal fungi and predator insects.
- Soil organisms process organic material into all 13 nutrients needed by plants. Some nutrients are only available when released from the soil by mycorrhizal fungi.
- Mycorrhizal fungi are like an extension of a plants roots. They support nutrient uptake, better growth, root establishment, drought tolerance, disease resistance, and toxicity resistance.



Feed Your Soil

The mulch applied to your landscape will help soil organisms by adding organic matter to your soil.

The debris, shed by your plants throughout the seasons is best left on the surface to decompose. This will also feed your soil. Beneficial insects and pollinators will appreciate the debris, as they use these places to overwinter and lay eggs in the spring.

Natural ecosystems are self-sustaining because of the mutually beneficial relationships between soil organisms and plants. The use of fertilizers and pesticides can disrupt these relationships. Native plants and low impact maintenance practices can help make your native landscape easy to maintain and ecologically sustainable.

GETTING STARTED: LANDSCAPE EVALUATION

SURVEY YOUR YARD

Landscape Evaluation

Go outside and decide on HIP locations

- Evaluate current landscape conditions and decide what you want to keep as is and consider where you could locate the HIP project.
- Stop storm water runoff from leaving your property by locating your landscaping where it can slow down and hold storm water until it is absorbed into the soil.
- Consider your outdoor recreation needs and plan for seating and activity areas to maximize your enjoyment of all the songbirds and butterflies that will fill your native gardens with life.



Landscape Planning Map of HIP Area

Draw a simple site map to use as your Landscape Planning Map that shows just the areas included in the HIP project.

You are given a set of basemaps in your binder to use for this.

Make multiple copies of the Planning Map to use for notes about:

- Landscape evaluation decisions
- Site analysis results
- Create several schematic drawings of your native landscape layout and design.
- More information on creating a planting plan p.8.

Refer to your HIP manual for submittals needed to meet permit and program requirements.

IDEAS FOR MEETING HIP REQUIREMENTS:

- Add layers of plants to existing landscape beds.
- Expand existing beds to replace lawn with natives.
- Create new landscape beds surrounding existing trees
- Eliminate the lawn where it doesn't grow well.
- Replace lawns on hillsides and slopes that are hard to mow
- Unused lawn areas like narrow side yards.
- Create an inviting entry garden in the front yard
- Locate landscape beds adjacent to impervious surfaces.
- Hedge the property perimeter with a mix of plants.
- Locate landscaping to block cold winter winds/ summer sun.
- Locate landscaping to add privacy.
- Create a backyard habitat with walking paths.

KEY ACTIONS TO MANAGE STORM WATER:

- 2-3 layers of canopy cover above the soil and 2-3 levels of root depths
- A species rich landscape attracts the most soil microbes

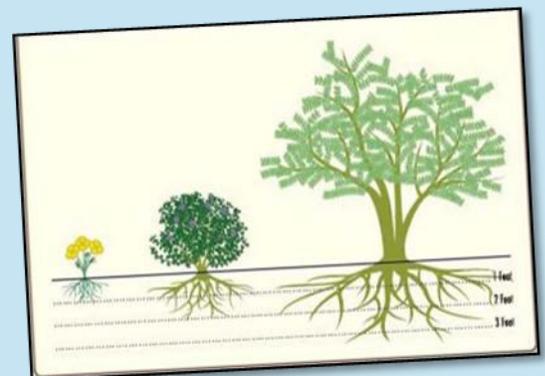
**Conserve Drinking Water
and Save Money**

Irrigate With Storm Water

Collect rooftop storm water in cisterns or a series of rain barrels connected to a drip irrigation system.

CHOOSE 2 OR 3 CANOPY LAYERS

Trees
Shrubs
Ground Covering Plants/
and Perennials



GETTING STARTED: SITE ANALYSIS

SURVEY YOUR YARD

SITE ANALYSIS

Every plant has evolved to be well suited for certain environmental conditions. It may thrive in sun, part sun/shade, or shade and need wet, moist, or well drained soils. When you know site conditions you can select plants that will do well without too much work on your part. Happy plants will have a robust immune and defense system so they can ward off pests and disease, and withstand our precipitation cycle.

The site analysis is more than just an inventory of your property. A truly sustainable landscape works with what nature has to offer. About 75% of plant problems are caused by inappropriate cultural conditions, poor planting techniques, or severe



OBSERVE WATER MOVEMENT ON YOUR PROPERTY

- Trace the flow of water across your property. This will help you locate the best place to locate landscaped areas to stop runoff from leaving your property.
- Figure out where storm water goes as it runs off driveways, walks, and patios. Most hardscape has a slope to encourage water to run off.
- Lay a hose on the impervious surface and note which direction the water flows. Create an adjacent landscape bed to absorb the runoff.

SOIL POROSITY or DRAINAGE

- Dig a hole large enough for a 2-gallon plastic pot with its bottom cut out.
- Backfill around the pot with soil to hold in place.
- Fill with water and measure depth with ruler.
- Set a timer for one hour. Measure water depth.
- If the soil is dry, fill the pot at least 3 times before you time the drainage.
- Repeat the timed test until results become consistent.



DRAINAGE RATE – Select plants that match porosity

1" water / 1 hour: Inadequate drainage for most plants. *Use plants adapted to wet soil.*

2-3" water / 1 hour: Good drainage and moisture retention. *Supports many garden plants.*

4" or more water / 1 hour: Does not retain adequate moisture for most plants. *Use plants adapted to dry soil.*



TRACKING SUN EXPOSURE DURING GROWING SEASON

Plants have specific requirements regarding sun exposure for optimal growth.

At 10:00 – 12:00 – 2:00 – 4:00 mark areas of full sun on separate sheets of tracing paper over your site map. Stack the transparent tracing paper on top of each other. Hold up to a window so you see through all of the layers and mark the areas of:

- **Full sun** 6 or more hours a day
- **Partial Sun** – 4 hours of direct sun
- **Partial Shade** - morning sun and afternoon shade or all day dappled shade
- **Shade** – little to no direct sun

GETTING STARTED: SITE ANALYSIS

SURVEY YOUR YARD

Flycatcher
Crossbills
Swallows
Hawks
Band-tailed pigeons
Siskins

Owls
Jays
Kiglets
Woodpeckers
Chickadees
Nuthatches

Flycatcher
Goldfinches
Juncos
Hummingbirds
Bushtits

Thrushes Wrens
Towhees
Song sparrows



Washington Department of Fish and Wildlife

HABITAT: Food - Water - Shelter - Structural Diversity - Arrangement of Space

Wildlife have basic needs that must be fulfilled by the elements of their habitat.

Birds share habitat by utilizing different niches including vertical layers of the canopy.

The quality of the habitat is enhanced by structural diversity, layering, edges, and native plants.

A natural areas seldom visited by people provides a safe nesting site.

Variable bloom times feed pollinators all season.

Backyard Habitat Requirements

- WATER SOURCES: Birdbaths, Ponds, Puddles
- FOOD SOURCES: Seeds, Berries, Nuts, Nectar, Insects, Suet, Tree Sap
- SHELTER: Different sized vegetation, Conifers, Brush piles, Rock piles, Logs, Snags, Leaf litter, Nest boxes, Roosting boxes
- STRUCTURAL DIVERSITY: Multiple layers of canopy.
- ARRANGEMENT OF SPACE: Shrubs or conifers to escape predators placed next to food and water. Larval host plants near nectar plants.

Ideas for Creating A Backyard Wildlife Sanctuary

Sanctuary space: a little used area for nesting and raising offspring.

Plant diversity: a variety of native plants that bloom over a long season

Multiple canopy layers: mix tall trees, smaller deciduous trees, tall shrubs, medium shrubs, low shrubs, and ground cover of perennials, ferns, and low growing plants.

Create more edge habitat: design curved and irregular borders throughout your landscape. It extends the habitat space in even small yards.



Certify your habitat: Backyard Wildlife Sanctuary Program
wdfw.wa.gov/living-with-wildlife

LANDSCAPE PLANNING: PLANTING PLANS

THE BACKBONE OF YOUR LANDSCAPE

If you are removing a large lawn it can feel daunting to look at that rectangle of grass and try to visualize a landscape design. Make a list of what uses or planting zones you want. Planting zones can be replication of a forest understory, a meadow, a wet garden, etc.

- Locate your zones, decide on their size and draw them on your *Landscape Planning Map*.
- The large lawn is divided and areas to be landscaped are defined, making it feel a little more doable.
- Add paths to connect your zones. This will aid in maintenance and moving about your landscape.
- Border beds and landscaped islands: low growing plants in an island bed allows views throughout. Taller plants in the island beds create walls and block the view into another room.
- Select a mix of plant sizes that support your vision.

Key Concepts

- Select plants whose needs match the site's sun exposure and soil drainage.
- Locate landscape areas to manage storm water runoff
- Plant a species rich landscape for more soil microbes that degrade pollutants
- Pick plants with habitat value that produce seeds, fruits, nuts, or nectar
- You count, too. Locate landscape plants to enhance you use of the property

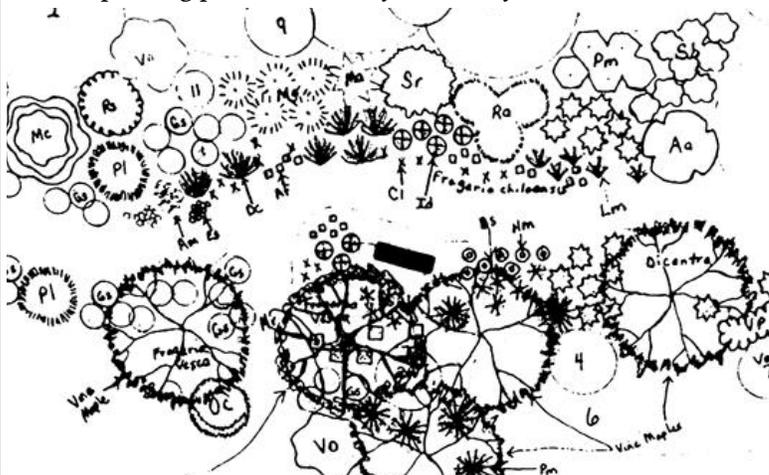
Plan for Maintenance

- Know mature size of plant - avoid pruning for size
- Avoid branches overhanging roof - causes moss build up
- Size bed to catch fallen leaves - eliminate raking leaves
- Hydrozone - group by water needs and don't water entire landscape the same
- Let leaves, twigs, etc stay where they fall for habitat and nutrient cycling

Design Guidelines

- 2-3 layers of plant canopy using both evergreen and deciduous plants
- Rule of 3: 1/3 structural trees and tall shrubs; 1/3 evergreen; 1/3 seasonal interest
- Consider view from decks, windows, on to and off of the property, and etc.
- Plan for continuous bloom from early spring to late fall
- Repeat some plants or groundcovers to create continuity

A planting plan is a bird's eye view of your area.



A scale of 1 inch = 4 feet

A larger scale is easier to write plant names or notes on the plan.

CREATING A PLANTING PLAN

Design one layer at a time. Begin with the canopy layer. Next add the understory shrub layer. Do the ground covering layer last to fill in amongst the trees and shrubs.

Draw plants at mature width to determine how many plants fit into your area when appropriately spaced. Mature height should not impact overhead wires, underground utilities, or structures.

Mark evergreens with green color, fall plants with a red color, and winter interest plants with a blue to make it easy to evaluate the effect their distribution will have in the winter when they will be that season's major garden interest.

LANDSCAPE PLANNING: ELIMINATE THE LAWN

THE MULCHING METHOD

ELIMINATE THE LAWN:

Mulching Method: The purpose is to cut off photosynthesis so the lawn dies.

Please refer to the HIP DIY Materials Purchasing Guide in Appendix D for specific types of mulch approved for use in the Lake Whatcom Watershed.

1. Mow the grass very low.

2. Layout your planting area with spray paint or a hose.

3. Dig a shallow trench along the boundary of your planting area. **Do Not Scalp Lawn or Remove Sod.**

- Prevents grass from growing laterally then out along this border.
- Fill with mulch so this 'dry' area that doesn't support roots.
- Keep the mulch below the level of the sidewalk so it doesn't wash onto the sidewalk during a rain. Use edging to help with this.

4. Follow the HIP guidelines for sheet mulching.

- Cover the lawn with cardboard in flat areas but not on slopes before you mulch. (cardboard is not required but can be especially helpful on particularly weedy sites.)
- Apply a minimum of 4 inches of approved mulch in your planting areas, 6 inches on slopes.
- Mulch should be covered with a tarp if it is stored on impervious surfaces to prevent phosphorus run-off.

5. You can plant anytime. The best time to plant is in the Fall when the winter rains will water for you.



BENEFITS OF WOODY MULCH

Always maintain 4-6" of mulch on all landscape beds and paths.

- Reduces evaporation of soil moisture so you water less frequently.
- Absorbs and slowly releases storm water to the soil and plants.
- Reduces weeding by shading out weed seed germination.
- Feeds your soil as soil organisms process it into nutrients that are taken down into the soil for use by plants.
- Protects soil from compaction caused by walking on moist soil and prevents erosion of soil.
- Let leaves decompose where they fall. They are part of nature's nutrient cycle as are plant debris. Feed your soil!
- Remove any diseased or pest infested plant material from the garden. Bag it and place it in the trash. Do not compost it.

LANDSCAPE PLANNING: CANOPY LAYERS

PLAN FOR TWO OR THREE LAYERS

CANOPY LAYER

Tall plants provide garden structure. Locate the tallest trees along the perimeter. Small trees add more structure.

- Think about the effects of evergreen or deciduous in each location. Conifers can block cold winter winds and provide year-round privacy. Deciduous trees provide summer shade, flowers, and fall color change.
- Develop a smooth transition from the tallest plants to the lowest plants from along pathways.
- The trunks of trees and larger shrubs act as implied walls to separate activity areas or as a screen along the property line.
- Overhead tree branches and canopies give the space human scale.



SHRUB LAYER

Focal plants – Medium to large shrubs draw the eye. They soften the stiff, unchanging conifers.

- Use both deciduous and evergreen shrubs. Consider winter interest as you locate each type.
- Locate focal plants in view of natural sight lines - end of a walkway or the view from a window or door, a patio, or the sidewalk and street.
- To unify the garden design, repeat specific plants at various locations throughout the garden.



GROUND COVER AND PERENNIAL LAYER

Anchor Plants - The massing layer, perennials, ferns, grasses, and groundcovers.

- The ground layer offers seasonal interest. Some of these plants should be evergreen and some deciduous.
- Consider the activities adjacent to the plant beds. Use plants with a neat growth habit next to walkways - sprawling plants will eventually grow into the path.
- Plant perennials in groups of 3 or more for a more filled out look.



LANDSCAPE PLANNING: USE GOOD PLANTING TECHNIQUE

TECHNIQUES FOR SUCCESSFUL PLANT ESTABLISHMENT

FALL - BEST TIME TO PLANT

- Warm soil stimulates root growth
- Winter rains will keep them moist
- Roots will grow all winter

Note:

Bare root seedlings are only available in the early slate winter or early spring. This is also a great time to plant.

Don't worry, plants planted outside of the optimal work window may need additional supplemental watering.

Roots Are The Foundation – Inspect Them for Damage and Protect Them

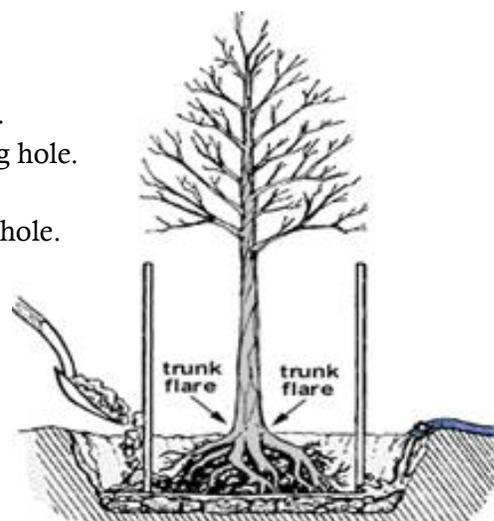
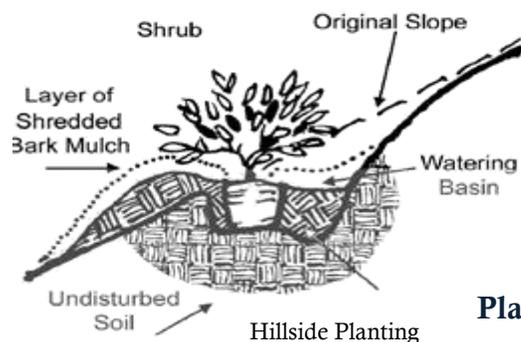
- Remove all foreign materials – burlap, plastic, tags, etc.
- If applicable, remove from pot or burlap ball.
- Spread out and inspect roots.
- Prune dead, damaged or diseased roots. Small, excessively long roots may be shortened.
- Circling roots should be straightened. If the root is too thick to straighten, cut through it so the roots will grow out normally.
- Do not allow the roots to dry out.



Circling roots can cause big problems down the line. The tree will be

Planting Hole Preparation

- Dig a hole no deeper than the root mass, but at least twice as wide.
- Do not loosen or otherwise disturb the soil at the bottom of the hole.
- Remove roots, weeds, large rocks, and other debris from the planting hole.
- Build a soil mound in the middle of the hole to drape roots over.
- Do not add gravel, fertilizers, compost, or other amendments to the hole.



Plant Installation

- Orient the plant so the trunk flare is at or slightly above the soil surface.
- Prune damaged, diseased or dead material. Do not top prune.
- Place the plant atop the center soil mound and spread the roots out evenly.
- Backfill with un-amended native soil.
- Water the plant well to settle the soil; if holes appear fill with native soil.
- Build a soil berm around the planting hole to increase water retention.
- Spread organic mulch like wood chips, but keep 6" away from trunks.

LANDSCAPE PLANNING: USE GOOD PLANTING TECHNIQUE

TECHNIQUES FOR SUCCESSFUL PLANT ESTABLISHMENT

PLANT ESTABLISHMENT – Give extra water during long summer dry season

All newly planted vegetation needs regular watering for the first year. Their roots have not spread out enough to withstand drought. Consider installing a simple drip irrigation system on a timer for the first two years.

First growing season: water several times a week or as needed during dry times.

Second growing season: water weekly or as needed during dry weather.

Third growing season: monitor plants and water as needed.

Maintain 3-4 inches of woody mulch to reduce watering needs and competition from weeds. Woody mulch helps jump start the nutrient cycling that happens in natural ecosystems and attracts soil organisms like earthworms.

TIPS

Rake back the mulch to keep the planting hole clean. It also helps to put the soil you dig out of the hole in a tub or on plastic.

After planting, rake the mulch back but keep it 6 inches from trunks.

These roots look ok, right?

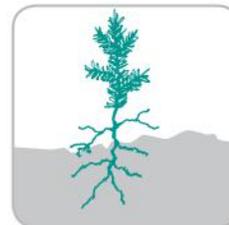
Don't be fooled. As these roots continue to develop, they will not straighten out on their own.

Take care and fluff or cut those roots. To avoid problems down the road.

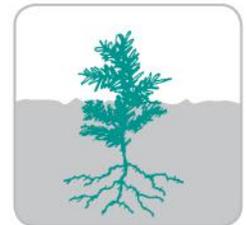


Bare Root Planting: Common Errors

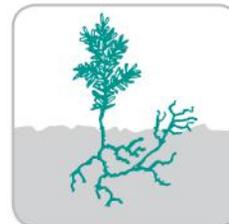
- Make sure to protect the roots.
- The soil level should be equal to the crown (where the trunk meets the roots)
- Don't leave air pockets.



Too shallow



Too deep



Turned up roots



Rock



Tangled roots



Air pocket

TAKE CONTROL OF MAINTENANCE DURING THE PLANNING PROCESS

Establish Maintenance Zones – Don't manage all areas of your landscape the same.

WEEKLY CARE: Provide frequent maintenance in areas you use a lot like near your outdoor dining or patio area and the front entry to your house.

MONTHLY CARE: Habitat areas don't need to be tidied – the small wildlife that live there prefer that you don't deadhead flowers so they can eat the seeds, butterflies and beneficial insects lay their eggs on plant stocks to overwinter. The Pacific tree frog and other creatures need the shelter provided by logs, twigs, and other plant debris on the ground to survive the winter.

ANNUAL CARE: Monitor your forested property for noxious invasive weeds as well as those obnoxious non-native plants that multiply with abandon but haven't yet been listed on the noxious weed list. Otherwise the native forest is self-sustaining.

Manage Weeds

Gardeners can reduce the need to weed by maintaining mulch and restricting water to only the desired plants with a drip irrigation system. Any weed seeds that blow into the landscape will have a difficult time germinating in the mulch. Those that do manage to germinate in will be shallowly rooted and easy to pull.

- Maintain 3-4 inches of mulch cover on all bare soil.
- Use drip irrigation to only water desired plants.
- Cover tough perennial weeds with 5-6" mulch.
- Never let a weed go to seed.
- Pull weeds manually or cut off the top grow, repeatedly, to deprive the roots energy manufactured in the leaves.

Smart Watering

HOW MUCH water plants need depends on growing conditions.

- Areas in full or afternoon sun will dry out faster.
- Beds with multiple canopy layers need less watering.
- Dense plantings shade the soil reducing water needs.
- Mulch cover improves soil absorption and water retention.

HOW LONG to water: Time watering period. Dig down 12" with a narrow tool. Observe if the soil is moist at the root level. Adjust watering time. Automatic hose shut offs are inexpensive and prevent over watering.



Western Tiger Swallowtail



Pacific Chorus Frog

Don't forget:

Wildlife need water too. Birdbaths are a great resources for birds and insects.

WATERING TIPS

- Water early in the morning for less evaporation, reduced risk of foliar disease, and it attracts fewer slugs that evening watering.
- Water slowly, deeply and infrequently to encourage deep roots. Deep roots withstand drought. Shallow watering encourages shallow roots.
- In clay soil, pre-water for 5 minutes. Turn water off and let the pores in the soil open. Resume normal watering in 10-15 minutes.
- Drip irrigation emitters packages state the gallons per hour (gph) and the soil type they are design to be used in (sand/clay/loam).
- Group plants according to water needs. Don't water the entire landscape the same.

LANDSCAPE MAINTENANCE: MANAGING DEER

Maintenance Minimizing Deer Access to your HIP Plantings

Deer are adaptable, curious, and have the ability to learn about new situations.

MANAGING DEER IS A TEST OF YOUR ABILITY TO CONSTANTLY ADAPT

UNDERSTAND LIFECYCLE AND BEHAVIOR TRAITS

- Deer have the ability to learn about new situations.
- Deer rely heavily on their excellent sense of smell for finding and identifying food.
- Deer have superior hearing. They can tell if the dog is barking from inside or outside.
- Deer have outstanding eyesight. They can see your garden from a half-mile away.
- Deer defense against natural predators is to run (35 mph) and jump (about 9 feet high).
- Deer like an open environment with areas of cover.
- Deer are creatures of habit - generally traveling the same trails into your yard.
- Deer get some of their required water from the plants they eat.
- Food preferences are not static but vary by time of year and individual deer.
- Deer can't read the 'Deer Resistant Plant List'.
- Fawns need twice the calories of adults.
- A doe will attack a dog if their fawns are threatened.



DEVELOP STRATEGIES TO MINIMIZE DAMAGE TO YOUR LANDSCAPE

Deer are adaptable, curious creatures.

- Noise or water devices startle them - once or twice.
- They can gauge and learn a chained dogs reach.
- They recall daily dog routines.

Deer travel regular paths.

- Put deer resistant plants near the usual entry.
- Put deer favorites at the entry and hope they get their fill.
- Physically block usual paths.

Deer can jump 9 feet

- Solid fence - limits their view so they won't jump - 6 ft. high.
- Open weave fence they can see through - 10 ft. high.
- Plant cages - 5 ft. tall and wide enough to limit access to plants.

Confuse their sense of smell

- Regularly spray plants with smelly repellents and change repellants with they adjust.
- Surround preferred plants with strongly scented plants.

Deer love succulent new growth

- Don't fertilize- it produces new succulent growth - a deer favorite.
- Limit summer watering *after establishment* to make plants less appealing.

Deer can't read plant lists

- Fawns learn what to eat from watching mom.
- Survey neighborhood for local deer favorites and plants they leave alone.
- In spring, new fawns will taste test just about any plant in your landscape.

Learn more about Living with Washington Wildlife at wdfw.wa.gov/living-with-wildlife



Photo Credit: <http://nativeplantspnw.com/>

RESOURCES: Websites, Books, Native Plant Sources, and More

NATIVE PLANTS:

WEBSITES

Northwest Native Plant Guide - King County

www.green2.kingcounty.gov/gonative/Index.aspx

The Washington Native Plant Society www.wnps.org/

Burke Museum

[www.biology.burke.washington.edu/herbarium/
imagecollectionnew/browse.php](http://www.biology.burke.washington.edu/herbarium/imagecollectionnew/browse.php)

Lady Bird Johnson Wildflower Center

www.wildflower.org/plants/

Hansen's Northwest Native Plant Database

<http://www.nwplants.com/>

Rainyside Gardners

www.rainyside.com/plant_gallery/natives/index.html

Native Plants PNW

www.nativeplantspnw.com/

USDA PLANTS Database

www.plants.usda.gov/java/

BOOKS

Encyclopedia Of Northwest Native Plants For Gardens And Landscapes – Robson, Richter, & Filbert

Landscaping for Wildlife in the Pacific Northwest – Russell Link

(Washington Department of Fish and Wildlife)

Plants of the Pacific Northwest Coast – Pojar & MacKinnon

Wildflower Hikes of Washington– Art Kruckeberg

Wild Berries of Washington & Oregon – Abe Lloyd & Fiona Hamersley Chambers

Pacific Northwest Plants – Mark Turner

Food Plants of Coastal First Peoples – Nancy Turner

Bringing Nature Home – Douglas W. Tallamy

WATER WISE GARDENING

Rainwater Harvesting

City Of Bellingham - Rainwater Harvesting: Guidance Toward a Sustainable Water Future

[www.cob.org./services/environment/conservation.Pages/
rainwater-harvesting.aspx](http://www.cob.org./services/environment/conservation.Pages/rainwater-harvesting.aspx)

Water Wise Landscaping – WNPS

Drip Irrigation Design Guidelines - Low Pressure Irrigation

www.irrigationtutorials.com

Drought Tolerant Landscapes for Washington

www.drought.wsu.edu

LOCAL NATIVE PLANT SOCIETY

Native Plant Society—Koma Kulshan Chapter

www.wnps.org/koma-kulshan

Guided walks, presentations, Native Flora Fair (May)

NATIVE PLANT DEMONSTRATION SITE

Nooksack Salmon Enhancement Association

3057 E. Bakerview Rd., Bellingham 98226

Monday – Friday 9a.m. – 4 p.m.

NATIVE PLANT SOURCES

Plantas Nativa - Retail Nursery

360-715-9655

www.plantasnativa.com

Fourth Corner Nursery – wholesale native plants

360-592-2250

www.fourthcornernurseries.com

Many retail plant nurseries carry a few native plants.