Landscape Architecture for Natural Systems

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Natural Systems
• Site Design Factors…
  – Property lines (know where you are!)
  – Existing grades & drainage conditions
  – Existing (healthy) trees
  – Aspect (sun exposure)
...and, of course...

Your customer !!!!
As you already heard, **SOIL MATTERS.**
---beyond the consideration for appropriate soil protection, amendment and management, there is additionally, the matter of holding soil in place…

A single row of rocks…&/or single stones are often used to “make the grade”
Site Design options
...walls, stairs, ramped walkways, etc.
“Step Down”
stones for
safety, maintainability,…
placed with care to protect or “set the stage” for trees ...
...and prevent erosion ...
rocks, 
mulch & jute 
…each has a part to play.
Well BEFORE Planting

BUT…
...with a planting plan Clearly in mind

...i.e. no rocks, mulch, or jute where the customer wants Grass!!
BUT wait a minute…why would anyone choose GRASS???

some do, some don’t …so be sure you know!!
Either way, you can expect plants to be the “star of the show”… … and trees to be the headliner!
Why plant just one…

When there is plenty of room for Three!!

TREES…

...The Backbone of every Natural Systems Project, & every Planting Plan
With a solid Backbone of Trees, the task to select & locate Shrubs, Perennials & groundcover comes naturally, Right??
WELL, NO.

there’s a little more to it.
Colored irrigation Flags come in handy…

to help keep the customer Happy!!!
think outside the box
...like a string line

Doesn't always have to be Straight!
...an entry walk can step aside ....with grace.
and SO

a parade of

colorful

flags

... 

Becomes

a parade of

plants!
Natural Systems
Building Partnerships with Neighborhoods
Practically Easy Landscape Maintenance
A Care Manual for Natural Drainage Systems

Website resources
- Soil and composting (King County) www.metrokc.gov/sols
- Yard and garden topics (King County) http://dnr.metrokc.gov/topics/yard-and-garden
- Water conservation, indoors and outdoors www.savingwater.org
  (206) 684-6464 (884-7283)
- Less toxic gardening and pest control www.govlink.org/hazwaste/house
  Look under “Natural Yard Care”
- Washington State University www.metrokc.gov/Wsu%2520CE
  King County Extension
- Washington State University www.mastergardener.wsu.edu
  Master Gardener Information
- Washington State University www.gardening.wsu.edu
  Master Gardener Program
- Native Plant Information http://cityofseattle.net/salmon
- Salmon Information
- Choosing the right plant for the right place www.greatplantpicks.org
- Washington State Noxious Weed Control Board www.nwcb.wa.gov

Other publications available through websites
- How to be a salmon Friendly Gardener www.seattle.gov/util/Directory/Conservation_Index
- Composting at Home www.seattle.gov/util/Directory/Conservation_Index
- Stop Before You Spray: www.govlink.org/hazwaste/house
  A photo guide to beneficial insects
  Look under “Natural Yard Care – Avoid Pesticides – Beneficial Insects”
- Four Reasons to Kick the Weed and Feed Habit www.govlink.org/hazwaste/house
  Look under “Natural Lawn Care – Avoid weed and feed”
- The Right Tree Book (Seattle City Light, 1988) www.seattle.gov/light/publications
  Look under “Brochures You Can Print”

Plant Identification and Information websites
- Landscape Plants - Images, Identification and Information www.oregonstate.edu/dept/hidplants
  Oregon State University Department of Horticulture
- Plants Database, United States Department of Agriculture http://plants.usda.gov
- Web Resources - Directory of Horticulture Websites University of Washington, Center for Urban Horticulture, Elisabeth C. Miller Library
  http://depts.washington.edu/ Hort_web_sites/hort_web_sites/plant_ids.html
Practically Easy Watering

How much water?
Watering is fun and easy, right? But how often should plants be watered? And how much water do plants really need?

Deeper, infrequent watering that moistens the top 12 to 18 inches of soil is recommended to keep plants alive and healthy and to promote deep roots. Deep roots help plants be drought tolerant.

For the first three years, deeply water plants once every 7 to 14 days in hot, dry weather. Small plants and flowers may need more frequent watering in hot weather - up to twice a week.

Tips: Wash off stressed plants. When leaves wilt and don't perk up overnight, or overgrown needles start to fade, it's time to water!

To know you're giving plants enough water, dig down an hour or so after watering to see if the top 12 to 18 inches of soil is moist. If not, add watering time until at least the top 12 inches is moisturized.

Water twice to three years, plants should be well-established, deep roots and enough coverage, watering established plants then becomes an infrequent task - only needed when plants show signs of stress during hot, dry weather.

Tips: Keep much layer of mulch to save watering and wasting time and money. See "Mulching" on page 6 to learn why and how!

Too much or too little?
Be careful to avoid watering too little or too much.

1) Too Little: Hand spraying water onto leaves and soil surface but doesn't apply enough water to soak soil down to thirsty roots.

2) Too Much: Overwatering; literally roots, invites disease, crowns and starves plants (they can't absorb nutrients from soggy thesis).

Two good ways to water:
Soaker Hoses and Spot Watering

Soaker Hose Watering: Soaker or Leaky hoses slowly release water drops along their length. Place soaker hose through planting area and close to plant trunk or stem. Or space soaker hose 18 inches apart, and pull it to 30 inches apart - cover to 12 inches wide area. Moisture is applied directly and efficiently to the soil and plant root area. Evaporation is minimized, particularly if the hose is covered with 3 to 4 inches of mulch. Start with 40 to 60 minutes and check that water is penetrating 12 to 18 inches deep.

Spot Watering: Spot watering is simply running a hose at the base of a plant - until soil is wet, or watered 2 to 3 gallon bucket with hoses in the bottom. You can use a garden soaker or shower-type wand in a spray Mister or hose. Give the water to spread out the flow and reduce erosion. Turn the hose on slowly or water to the 2 gallon bucket. Water in 1 minute or 30 and let run for 30 seconds to 5 minutes (1 to 16 gallons, depending on the plant type and size). Spot watering takes more time, but evenly helps establish trees and large shrubs, which need more water to reach larger, deeper root systems, or to rescue drought-stressed plants at any time.
Go to [www.seattle.gov/util/naturalsystems](http://www.seattle.gov/util/naturalsystems)
look under Overview / Technical resources / “Practically Easy Landscape Manual” or “Plant ID”
Natural Systems

A palette of nature’s colors...

...an ever-changing canvas
Rain gardens generally have three planting zones characterized by wetness. Select plants according to their water needs and sun exposure for these planting zones.

- **Zone 1** for plants that can tolerate wetter conditions.
- **Zone 2** for plants that can tolerate occasional standing water.
- **Zone 3** for plants that prefer drier conditions.
DIVERSITY
It’s a VERY “good thing”!
TREES

Evergreen
- Height (Tall, Medium, Low)
- Spread (Wide, Medium, Narrow)
- Color (seasonal!)
- Texture
- Habitat Value
- Neighborhood context
- Personal favorite!

Deciduous
- Height (Tall, Medium, Low)
- Spread (Wide, Medium, Narrow)
- Color (seasonal!)
- Texture
- Habitat Value
- Neighborhood context
- Personal favorite!
Japanese Black Pine
Medium/Medium
(slow growth rate)

Hinoki Cypress
Tall/ Narrow

Populus tremuloides
Quaking aspen
Autumn Brilliance Serviceberry

Low / Narrow
Galaxy Magnolia

Low/ Narrow
Purple-Leafed Hazelnut

Low / Wide

Diane Witchhazel

Low / Wide
Pacific Sunset Maple

Medium / Medium
DIVERSITY
It’s a VERY “good thing”!
SHRUBS

Evergreen
• Height (Tall, Medium, Low)
• Spread (Wide, Medium, Narrow)
• Color (seasonal!)
• Texture
• Habitat Value
• Neighborhood context
• Personal favorite!

Deciduous
• Height (Tall, Medium, Low)
• Spread (Wide, Medium, Narrow)
• Color (seasonal!)
• Texture
• Habitat Value
• Neighborhood context
• Personal favorite!
Vine Maple
Smoke Tree
Strawberry Tree
Native Rhododendron
Myrica
Oceanspray
Mahonia
Evergreen Huckleberry
Yellow Twig Dogwood
Red Currant
Escallonia
Mockorange
Stranvaesia
Oakleaf Hydrangea
Hybrid Rhododendrons
Purple Rockrose
White Rockrose
Native & Hybrid Rose
Potentilla

Lavender
Kelsey Dogwood
DIVERSITY

It’s a VERY “good thing”!

Groundcovers and Perennials

Evergreen
• Height (Tall, Medium, Low)
• Spread (Wide, Medium, Narrow)
• Color (seasonal!)
• Texture
• Habitat Value
• Neighborhood context
• Personal favorite!

Perennial
• Height (Tall, Medium, Low)
• Spread (Wide, Medium, Narrow)
• Color (seasonal!)
• Texture
• Habitat Value
• Neighborhood context
• Personal favorite!
Native Groundcovers
Potentilla, Iris and Kinnik-kinnik
Purple Place Heuchera

Coral Bells
Shade

Thuja plicata
Western red cedar
Sun / Shade mix
On nature’s canvas, nothing, but change ... is constant.

more information and examples at [www.seattle.gov/util/naturalsystems](http://www.seattle.gov/util/naturalsystems)