Part II

Planting your shoreline

Source: MCD Karin Streloff
Planting Projects: 4 Phases

I. Planning & Choosing Plants
II. Site Preparation
III. Planting
IV. Adaptive Management
DESIGN FRAMEWORK

1. Understand that landscape is infrastructure, and design with - not against it.
   site first | design second

2. When planting, use native species as the foundation; integrate non-native ornamentals as highlights

3. Keep the “big picture” in mind:
   design for human use and habitat and Puget Sound health
I. Start with a simple plan

Scale?

Goals?
Sketch & Inventory

• Buildings
• Paths
• Activities
• Soils
• Light
• Drainage
• Existing plants

Base Map and Existing Conditions
(http://wdfw.wa.gov/wlm/backyard/landscape-design_landscape.htm)
Consider Site Exposure

Southern & Western (hot, dry?)
Eastern and Northern (cooler, shady)?
Existing tree cover?
Work with Your Site

Site Soils:
• Clay? Loam? Gravelly/sand?
• Glacial till? Bedrock?
• Topography?

Influences plant selection & soil amendment
Prioritize Native Plants. Use multiple species.
Design for vertical + horizontal diversity

Dramstad et al., Landscape Ecology Principles in Landscape Architecture and Land Use Planning
Consider Diversity

- Plant species
- Plant Heights
- Evergreen vs. deciduous broadleaf trees

Little variety... means fewer benefits

(http://wdfw.wa.gov/wlm/backyard/landscape-design_landscape.htm)

Images: Google earth, street view
High diversity means better stormwater management and soil stabilization services . . and benefits wildlife.

(http://wdfw.wa.gov/wlm/backyard/landscape-design_landscape.htm)
Designing to support habitat

• Avoid fragmentation or isolation of habitat areas
• Preserve or create large PATCHES that provide interior and edge habitat
• Create CORRIDORS and STEPPING STONES

Dramstad et al., *Landscape Ecology Principles in Landscape Architecture and Land Use Planning*

Habitat value increases
Design Views from the Inside Out

“Frame” key views with strategic pruning and planting.
Finish your plan – select the “Right Plant for the Right Place”
Choosing Native Shoreline Plants
Shore Pine  (Pinus contorta var. contorta)
Pacific Madrone (*Arbutus menziesii*)
Oregon White Oak  
*(Quercus garryana)*
Sitka Spruce  (*Picea sitchensis*)

*Sitka Spruce*

*Picea sitchensis*  
(to ~230 feet)
Douglas Fir \( (Pseudotsuga menziesii) \)
Western Red Cedar (*Thuja plicata*)
Scoulers + Hookers Willow

(Salix hookeriana / scouleriana)
Snowberry *(Symphoricarpos albus)*

SNOWBERRY
Symphoricarpos albus  *(to ~5+ feet)*

*Image: K. Streloff*
Nootka & Baldhip Roses

(Rosa nutkana)
(Rosa gymnocarpa)

Images at right: B. Legler,
Bottom left: B. Erhardt, Latah SWCD
Pacific Wax Myrtle  \textit{(Morella (Myrica) californica)}

\textbf{PACIFIC WAX MYRTLE}  
\textit{Myrica californica}  
\textit{(to ~15+ feet)}
Oceanspray  (*Holodiscus discolor*)

**OCEANSPRAY**  
*Holodiscus discolor*  
(to ~15 feet)

**Image:** K. Strelkeff
Vine Maple *(Acer circinatum)*
Red-Flowering Currant  *(Ribes sanguineum)*

**RED-FLOWERING CURRANT**
*Ribes sanguineum*  *(to ~10 feet)*
*(Critical for migrating hummingbirds)*
Salal (Gaultheria shallon)
Earth Sanctuary - Whidbey Island Nature Reserve
(photographer unknown)
Evergreen Huckleberry (Vaccinium ovatum)
Tall Oregon Grape  (*Mahonia aquifolium*)

*TALL OREGON GRAPE*

*Mahonia (Berberis) aquifolium*  (to ~10 feet)
Low Oregon Grape  (*Mahonia nervosa*)

**DULL (LOW) OREGON GRAPE**
*Mahonia (Berberis) nervosa*  
(to ~3 feet, evergreen, shade/part-shade)

Images: K. Streljoff

Images: K. Hibler

Images: K. Streljoff
Hairy Manzanita (Arctostaphylos columbiana)

Hairy Manzanita
Arctostaphylos columbiana
(to ~10 feet / sunny, dry sites)
Sandy Beaches, Spits, Backshore
Pickleweed *(Salicornia virginica)*

*Images: K. Streloff*

**PICKLEWEED | AMERICAN GLASSWORT**

*Salicornia virginica* (*S. pacifica*)

(coastal salt marshes, tidelands, beaches)
Dune Grass (Leymus (Elymus) mollis)
Seaside saltgrass

(Distichlis spicata)
Lyngby’s Sedge  

*Carex lyngbyei*

**LYNGBY’S SEDGE**

*Carex lyngbyei*

sandy/gravely beaches, salt marshes
Silver Burweed  
(Ambrosia chamissonis)

Silver Burweed | Heath Bursage
Ambrosia chamissonis
(coastal dunes, sandy/gravelly beaches)
Coastal Gumweed

(Grindelia integrifolia)

COASTAL (ENTIRE-LEAVED) GUMWEED
Grindelia integrifolia
(saltwater shorelines, marshes, sun)
Douglas Aster  

*(Aster suspicatus (douglasii))*

DOUGLAS ASTER

*Aster suspicatus (A. douglasii)*

salt marsh plant; supports pollinators
Yarrow  
(Achillea millefolium)

Yarrow  
(Achillea millefolium) in coastal tidal marshes, gravelly shorelines

Image: K. Streuff

Image: K. Streuff
Coastal Strawberry  
(Fragaria chiloensis)
II. Site Preparation

Timing = typically summer or late fall

Tasks:
• Choose an achievable project size to start
• Remove invasive weeds or lawn
• Purchase and place compost or soil if appropriate
• Install erosion control fabric or mulch to protect bare/disturbed ground if needed
• Locate and order plants for fall/winter delivery and planting
Invasive plants to avoid (& remove)

Readily available and easy to establish, these plants are monsters.

- Take over your landscape
- Hide problems with slope stability or erosion
- Destroy native habitat, creating a “diversity desert”.
- Many have berries that are easily distributed by wildlife.
- Cost a lot to remove – if it’s possible

Guidance: Invasive Plants

- Seattle Urban Nature / King County DNR / WA Invasive Species Council
English Ivy

*(Hedera helix)*
Cotoneaster *(Cotoneaster sp.)*

Image Source: [https://davisla.wordpress.com/2013/11/20/cotoneaster-moupinensis/](https://davisla.wordpress.com/2013/11/20/cotoneaster-moupinensis/)

Periwinkle *(Vinca minor)*

Image Source: [http://www.warrenphotographic.co.uk/200823-cotoneaster-berries](http://www.warrenphotographic.co.uk/200823-cotoneaster-berries)
St. John’s Wort

(Hypericum sp.)

English Holly

(Ilex aquifolium)
Japanese Knotweed  (*Fallopia japonica*)
Bay/English Laurel

(*Prunus laurocerasus*)
Bamboo sp.  
(*Phyllostachys sp.*)

Heavenly Bamboo  
(*Nandina domestica*)

Left - Right: Guzhengman, Source: Flickr
III. Planting

Tasks:

• Purchase plants

• Stage plants where you want them (potted plants only)

• Plant using appropriate strategy for the plant
Buying Plants

1. Plant name
   Common / Scientific (Genus species)

2. Quantity / spacing
   Trees 8-20’ “on center”
   Shrubs 2 - 4’ OC
   Groundcovers 1-2’
   Live Stakes 1-3’ OC

3. Size (container or material type)
   Sound Native Plants plant quantity “calculator”
Types of native plant stock

CONTAINER STOCK (POTTED PLANTS)

- Easy to transplant (but heavy)
- Can leave in the pot (needs watering)
- Available all year
- Best time to plant: Fall
- Higher cost per plant
- Lower mortality
- Most species available
- Medium mortality
- Medium aftercare
- Larger root systems
  = big holes

Image – Scott Moore
BARE ROOT PLANTS

• Inexpensive
• Easy to handle
• Light weight
• Smaller root systems

• Dormant (~February)
• Need to plant quickly
• Store in cool, moist site or heeled in
• Roots must stay moist
BARE ROOT PLANTING TIPS:

- Soak plants in water overnight
- Dig hole deeper than root length
- Mound soil in bottom of hole
- Spread roots over mound
- Backfill with original soil
- Water well
- Mulch with woodchips or bark
PLUGS

• Easy to handle
• Tiny!!!
• Low cost per plant
• Low handling cost
• Lower mortality
• Limited species
• Medium planting skill
• Low - Medium mortality
• Less readily available
PLUGS - Dune grass planting

Images – Scott Moore
CUTTINGS:
piece of stem, branch, or root, separated from a host plant and used to create a new plant.

WILLOW STAKES
RED OSIER DOGWOOD
SNOWBERRY
LIVE STAKES

- Inexpensive
- Easy to handle
- Lightweight
- Easy to install
- Pointed end “in”
- Successful near seeps/moist slopes
- Low maintenance
- Limited availability ~Oct-Dec
- “clones” – limited genetic diversity
- High mortality

SIZES

Live stakes: .5 – 1.5” dia 2-4 ft long

Whips: soil bioengineering: fascines, brush mats, etc. .25-1.5” dia. 4-6ft long

Poles: 1.5 – 3” dia 4 - 8ft long

Images – Scott Moore
Live Stakes and Fascines

Images – S. Moore
III. Planting - Timing

(Oct - Dec)
Late fall planting = potted plants, live stakes, plugs

(Feb - March)
Winter planting = bare root, potted

(Mar-April)
Spring planting = potted, plugs

Expect to water
Plant Protectors / Deer Fence
Mulch
(avoid slope edges/faces)
Water

• Watering will be critical for the first 2-3 summers
• Spot water individual plants
• Permanent sprinklers and soaker hoses are not recommended on bluffs

Image Source: hawkmountain.org
lv. Adaptive Management

The first year they SLEEP
The second year they CREEP
The third year they LEAP

Tasks:
• Weeding
• Watering
• Replacing plants as needed
• Adjusting as desired
• Working with an arborist

Planting, 1st year

Planting at ~ 2 years
First Year – Dune grass
Second Year
FREE Online Guidance, Resources

Shore Friendly Mason

www.masoncd.org
SHORE FRIENDLY MASON:
A PROGRAM FOR MARINE WATERFRONT HOMEOWNERS

Our Shore Friendly Mason Program connects Mason County waterfront residents with the technical support and resources to make informed, cost-effective and environmentally-friendly decisions about shoreline management. We offer free, non-regulatory site visits and erosion assessments to help you identify problems or opportunities specific to your stretch of the shoreline. Our goal is to help you manage your land with confidence, so that the generations to come will enjoy it as much as you do.

AS A WATERFRONT HOMEOWNER, YOU ARE DEEPLY CONNECTED TO THE PUGET SOUND...
QUESTIONS?

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THANK YOU!