City of Seattle

Department of Planning and Development (DPD)

Environmentally Critical Areas Standard Mitigation Plan

Updated May 25, 2006

INSTRUCTIONS: Complete all white areas as directed. Use "N/A" if not applicable.

APPLICANT INFORMATION

Name of Applicant: _____

Phone: _____

Email: _____

Project Address or Location: _____

_____

Project Number, if applicable: _____

Date of Submittal: _____

BACKGROUND

This document is designed to help landowners or contractors meet the requirements for mitigation under the City of Seattle's Critical Areas Ordinance. Individuals undertaking voluntary restoration projects may submit this plan or the form accompanying Client Assistance Memo (CAM) 331, *ECA Tree & Vegetation Removal Permits*. CAM 331 also provides comprehensive step-by-step instructions to undertaking restoration and may be consulted by individuals undertaking required mitigation for additional resources including considerations for creating habitat and links to technical assistance.

Under Regulations for Environmentally Critical Areas (Seattle Municipal Code Chapter 25.09), development within a designated critical area buffer requires mitigation in the form of native plantings in order to create a vegetated strip that will help protect these sensitive habitats. Approval and execution of a planting plan as laid out in this form has been designated to meet the requirements of this ordinance.

INSTRUCTIONS

1. **Survey your site** – Look over your site to record soil and light conditions and take measurements of the mitigation area. It is often helpful to draw a simple map recording the size of different habitat types (i.e. areas with particular soil and light conditions). Using the site and light categories outlined in the Plant List section will simplify this process. Noxious or invasive weeds such as Himalayan blackberry, reed canary grass, evergreen blackberry, Scots broom, English ivy, morning glory, and Japanese knotweed should also be identified as these plants will need to be removed to prevent choking out new plantings. Information on how to identify and control noxious or invasive weeds can be found at King County's Weed Management website.

2. **Determine the number and species of plants needed** – Use the plant selection form on the right to determine the minimum number of plants needed and to select appropriate species. If you will be planting on a saltwater shoreline, you should contact the Department of Planning and Development for additional help as high winds or salt spray may complicate planting. When planting in designated steep slope areas, it is also critical to use plants identified specifically as "appropriate for steep slopes" by the plant list.

3. **Draw the planting plan** – The final planting plan should be drawn in the space indicated on this paper or attached as a separate document if created as an architectural plan. If the plan is attached, make sure to reference its location in this document. The planting plan may be drawn in either of two formats as shown in the sample planting plans section and described below:
   a. A plan depicting the location of each individual planting. This type of plan must properly represent plant spacing and use easily recognizable symbols and/or abbreviations to identify each plant. Plants should be drawn as circles with a diameter approximating their spacing requirement. 10 foot diameter circles for trees, 6 foot diameter circles for shrubs and 4 foot diameter circles for groundcover are good approximations for drawing the planting plan; however, plant spacing directions given by nurseries should be followed when planting. Significant overlap can occur and is encouraged to create a sufficiently dense planting.
   b. A plan depicting zones in which there will be consistent plant groups and spacing. This type of plan will require a description of each zone including the plants contained in each and their basic arrangement. Note: a single zone for the entire planting area may be appropriate as long as it is well described.

4. **Submit the Mitigation Plan for Approval (See CAM 331, *ECA Tree & Vegetation Removal Permits*)** – In other than steep slopes, vegetation mitigation and restoration projects of less that 1,500 square feet in area that follow this standard plan are considered to satisfy the requirement for preparation by a qualified professional under Section 25.09.320.B.3.
   In steep slope ECA's or buffers, all vegetation mitigation or restoration plans 750 square feet or greater in area must be approved by a geotechnical engineer or geologist licensed in the state of Washington.

PLANT SELECTION FORM

Is this plan required for one of the following purposes? (Check only one)

- Other development in a Critical Area ☐
- Mitigation of a code violation ☐ Describe code violation _____
- Voluntary Restoration ☐ Size of Restoration Area _____ square feet

Total Area of Mitigation Required: _____ Square Feet

Are steep slopes present in the planting area? YES / NO (If yes, select plants noted as "appropriate for steep slopes" for steep slope areas)
Are saltwater shorelines present near the planting area? YES / NO (If yes, contact the Department of Planning and Development)

Calculate the minimum required number of trees and shrubs for the area as follows (except voluntary restoration).
Round fractions up to the nearest whole number.

_____ total square feet x 0.018 per square foot for trees = _____ trees. (min. 2 gallon container)
_____ total square feet x 0.042 per square foot for shrubs = _____ shrubs (min. 1 gallon container)

Select plant species to be used and record the quantity of each using the plant list below. Choose a variety of plants where possible. Native plants not included on this list may be substituted and recorded in the blank spaces provided. Pictures and additional information for native plants can be found on the Washington State University Native Plant website. A local nursery should also be contacted at this time to make sure the chosen plants are currently available. A list of native plant nurseries can be found on King County's Native Plant Nurseries List.

LIGHT PREFERENCE

○ = Full Sun
◑ = Partial Sun / Partial Shade
● = Full Shade

SITE PREFERENCE

Water's Edge = Edge of stream, wetland or freshwater shoreline
Wet = Soils that hold water during most of the year or are very near water table
Standard = General condition of soil in Seattle (may hold water during parts of winter)
Steep = Also appropriate for Steep Slopes

Trees

Quantity	Common Name	Scientific Name	Average Ht.(ft.)	Light Preference	Soil Preference	Comments
	Cascara	*Rhamnus purshiana*	25	◑ ●		Good for wetlands and riparian
	Douglas fir	*Pseudotsuga menziesii*	200	○		Driest conifer-seral, fast grower
	Oregon Ash	*Fraxinus latifolia*	70	○ ◑		
	Pacific willow	*Salix lasiandra*	40	○ ◑ ●		Tolerant, prefers riparian
	Shore pine	*Pinus contorta*	40	○ ◑ ●		Tolerates poor soil
	Sitka willow	*Salix sitchensis*	25	○ ◑ ●		
	Vine maple	*Acer circinatum*	15	●		Slow grower
	Western Hemlock	*Tsuga heterophylla*	150	○ ◑ ●		Not drought-tolerant
	Western Red Cedar	*Thuja plicata*	150	◑ ●		

Shrubs

Quantity	Common Name	Scientific Name	Average Ht.(ft.)	Light Preference	Soil Preference	Comments
	Black twinberry	*Lonicera involucrata*	10	○ ◑		Takes sun if has lots of moisture
	Nootka rose	*Rosa nutkana*	6	◑		Rapid volunteer on damp soil
	Ocean spray	*Holodiscus discolor*	10	○ ◑		Drought-tolerant
	Pacific ninebark	*Physocarpus capitatus*	15	○ ◑		Needs good drainage, forms thickets
	Red osier dogwood	*Cornus sericea*	10	◑		Can be trimmed without harm
	Salmonberry	*Rubus spectabilis*	8	○ ◑ ●		Takes sun if has lots of moisture
	Serviceberry	*Amelanchier alnifolia*	12	○		
	Slough sedge	*Carex obnupta*	3	◑		Extremely common
	Snowberry	*Symphoricarpos albus*	4	○		Common, tolerant
	Swamp rose	*Rosa pisocarpa*	6	○ ◑ ●		Fast growing, forms thickets
	Sword fern	*Polystichum munitum*	3	●		
	Thimbleberry	*Rubus parviflorus*	4	○		Drought tolerant
	Western hazelnut	*Corylus cornuta*	15	○ ◑		

EXECUTION OF PLAN

GENERAL

- Noxious or invasive vegetation must be removed prior to planting and properly disposed of off site.
- Day-Glo Survey Flags should be attached to each of the new plants in order to locate them in the future and to ensure identification by an inspector. The name of each species should be written on the flags in permanent marker.
- Removal of existing trees is forbidden unless it will improve overall habitat function or the trees are designated as hazardous by a qualified professional or DPD. Any trees to be removed must be noted on this sheet.

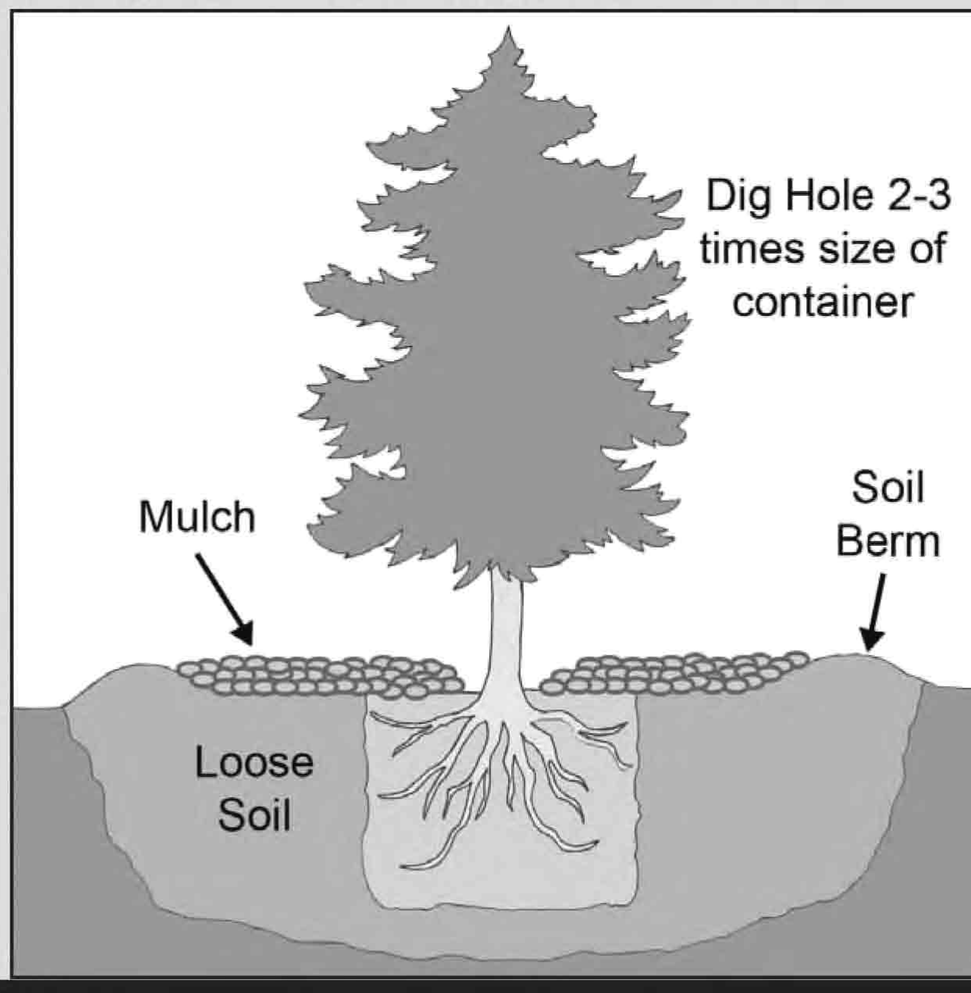
MAINTENANCE

- The entire site should be watered every week with 1" of water from July 1 to October 15 during the first year of planting. Note this is a general guideline and more or less water may be necessary depending on weather conditions. Larger trees may also require additional water.
- Weeding around the plants should be done at least twice a year in the early and late spring. More frequent weeding may be required if noxious or invasive weeds are present. Mulching after weeding is ideal to prevent weed growth.
- Maintenance of the plantings is required. If the number of surviving trees, shrubs or small plants drops below 50% of the minimum number detailed in step 2 within the first three years, replacements must be added to maintain this level of plants.

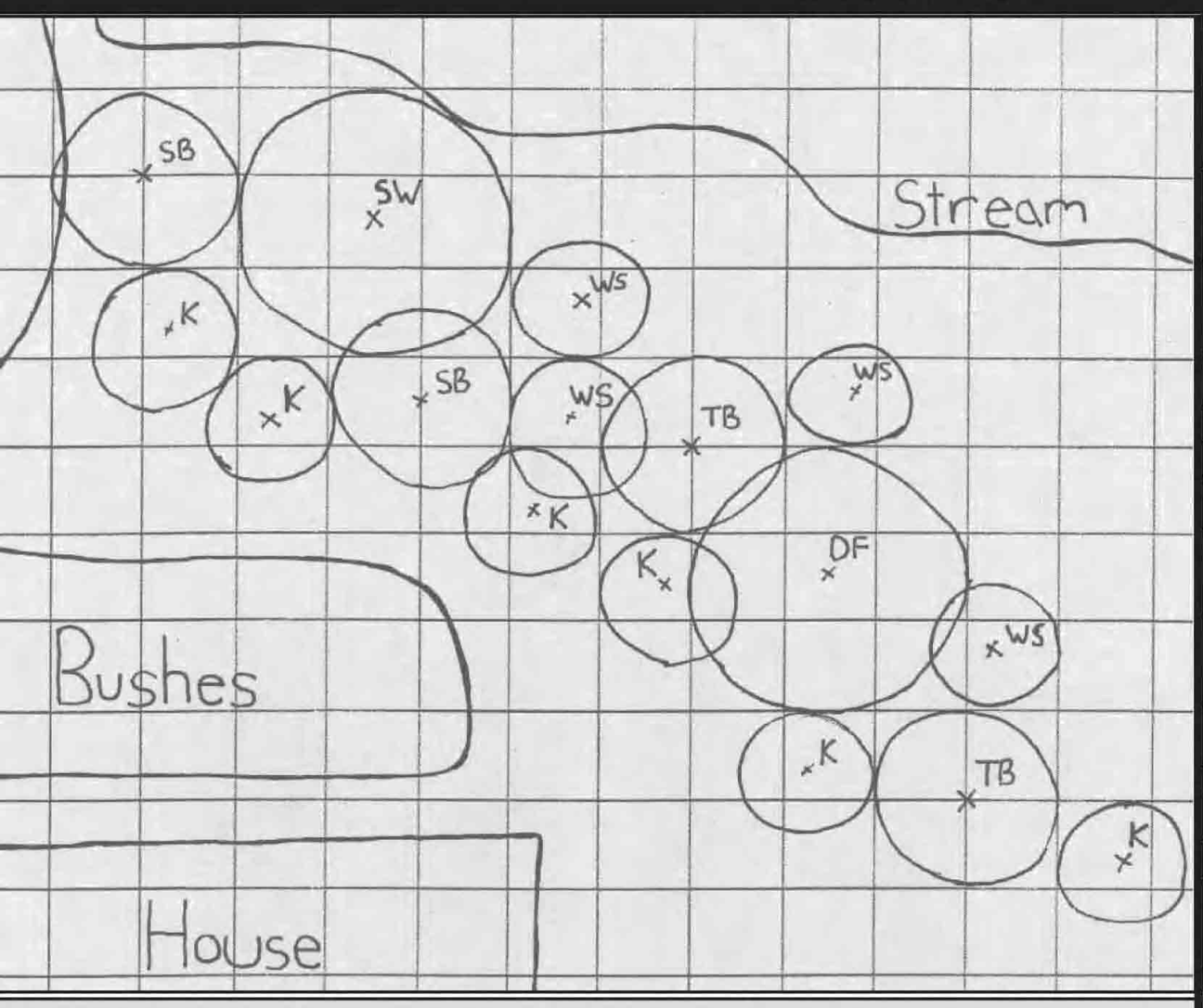
BASIC PLANTING INSTRUCTIONS

- When possible, planting should be done between mid-October and mid-December as plants grow roots during cool weather, even when the top of the plant is dormant. Planting between mid-December and mid-April is also appropriate but more attention to supplemental watering may be required.
- Make sure to read and follow any nursery instructions that come with the plants. Spacing requirements, in particular, may vary from the estimates used in your planting plant and should be followed.
- Before planting, set out the plants according to your plan to make sure the arrangement works well.
- Dig bowl-shaped planting holes at least twice the width and just slightly deeper than the potted plants container. Roughen the sides and bottom of the hole with a pick or shovel.
- Remove the plant from its container and gently loosen bound roots on the outer inch of the soil and cut roots that encircle the root ball.
- Set the plant in the hole so that the top of the soil remains level with the surrounding soil. Fill the surrounding space with loose native soil. Cover any exposed roots, but do not pile dirt on the stem as it can kill some plants.
- Gently press the filled soil to collapse air pockets, but allow the soil to remain loose.
- Form a temporary water basin around each plant to encourage water collection and water thoroughly.
- Immediately after watering, mulch such as wood chips, leaves, or compost should be added to a 3 inch thickness over the entire planting area without covering the stems of plants. Heavy duty wood chips are preferable in areas where noxious or invasive species may be a problem.
- Staking of trees or shrubs should not be necessary unless high winds exist or the tree is tall and has little roots. If it is necessary, use thick rope or padding around the tree to prevent damage to the bark. Use the minimum amount of tension necessary to achieve balance.

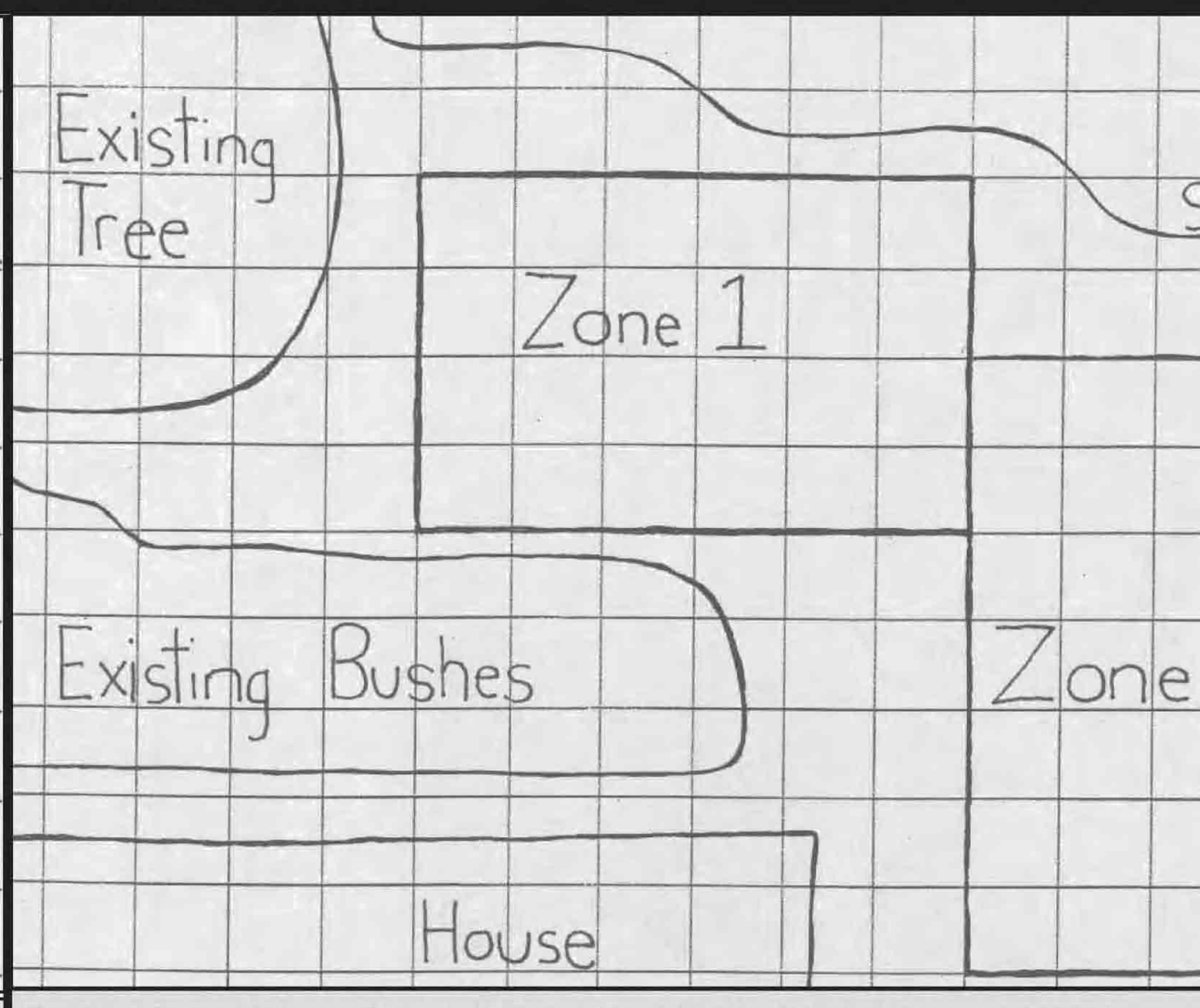
For more information, go to Washington State University's Master Gardeners Program website or talk with your local nursery.



SAMPLE PLANTING PLANS



itka Willow TB = Thimbleberry K = Kinnickack
ouglas Fir SB = Snowberry WS = Wood Sorrel



Zone 1 has a Shore Pine with one Snowberry plant to the north and one to the south and clumps of 3 Salal plants to both the east and west.

Zone 2 has a Western Hemlock with one Red osier dogwood plant to the west and one to the east and clumps of 2 Kinnickack plants to both the north and south.

PLANTING PLAN

The planting plan must include:

- ☐ A north arrow
- ☐ Map scale
- ☐ Nearest street names if visible
  Location of existing or proposed buildings, driveways, patios, etc.
- ☐ Approximate location of critical areas and buffers
- ☐ Existing trees
- ☐ Property boundaries if visible
- ☐ Key, if applicable

KEY / DESCRIPTION OF PLANTING ZONES / NOTES