Appendix A

PLANTING REQUIREMENTS

1.0 INTRODUCTION

- 1.1 General
- 1.2 Jurisdiction
- 1.3 Professional Assistance

2.0 PLANTING PLAN METHODS

Appendix A

PLANTING REQUIREMENTS

1.0 INTRODUCTION

1.1 General

The District recognizes the importance of Water Quality Sensitive Areas, Vegetated Corridors, and Stormwater Facilities that, along with the Tualatin River, are under its jurisdiction. To improve water quality and preserve aquatic species, and meet the intent of both the federal Clean Water and the Endangered Species Acts, the District developed requirements for planting of Vegetated Corridors, Sensitive Areas, and Stormwater Facilities.

Successful revegetation is critical to the proper function of Sensitive Areas, Vegetated Corridors, and Stormwater Facilities for the benefit of water quality and quantity management, and aquatic species preservation. This Appendix aids professionals, the development community, and field crews in planning, designing and implementing successful revegetation projects in these areas. This document guides design decisions to promote successful planting efforts, while allowing flexibility to address opportunities and constraints at each site.

1.2 Jurisdiction

Most Sensitive Areas are regulated by the Division of State Lands (DSL) and/or the U.S. Army Corps of Engineers (Corps). Where the Corps and/or DSL permit mitigation, planting plans for these areas shall follow DSL and Corps guidelines and approved plans. Vegetated Corridors and Stormwater Facilities are regulated by the District and the plans and management strategies for these areas shall follow the steps outlined in this document. Alternative plans and management strategies may be approved by the District.

1.3 Professional Assistance

Revegetation in Sensitive Areas, Vegetated Corridors and Stormwater Facilities should facilitate succession toward low-maintenance plant communities. Consultation with a professional landscape architect, ecologist, or horticulturist knowledgeable in native plants is highly recommended when preparing plans. Satisfying the landscaping requirements may require the services of a registered landscape architect. See ORS 671.310 through 671.459.

Non-native, invasive plant management and wildlife damage management strategies are provided in Clean Water Services *Integrated Pest Management (IPM) Plan*. Especially challenging management situations may require assistance from a landscape maintenance contractor or a wildlife biologist.

2.0 PLANTING PLAN METHODS

Planting plans shall be required for development projects with Vegetated Corridors or Stormwater Facilities. When a planting plan is required, four major components shall be addressed: hydrology, soils, plant materials, and maintenance. When developing planting plans, the following steps should be used:

2.1 Step 1: Assess Hydrologic and Hydraulic Conditions

a. Determine the frequency and duration of water inundation, including appropriate elevations of the revegetation area. Watershed hydrology and hydraulic models for major streams are available from the District. In some cases, current site conditions (i.e. wetland presence) will suffice. For Stormwater Facilities, the models used to design and size the facility shall be used to determine frequency, duration and surface water elevations within the facility.

b. Assign appropriate hydrologic zones to the revegetation area and apply them to the plan. Most project sites include one or more of the following planting zones with respect to hydrology during the growing season:

   1. Wet - standing or flowing water/nearly constant saturation; anaerobic soils

   2. Moist - periodically saturated; anaerobic and/or aerobic soils

   3. Dry - infrequent inundation/saturation, if any; aerobic soils

2.2 Step 2: Assess Soil Conditions and Assign Appropriate Preparation Specifications to Plans

a. Determine the organic content and non-native, invasive seed bank likely in the soil. For most Stormwater Facilities, the soil is often high in clay, gravel, or minerals devoid of topsoil and organic material, and/or high in non-native, invasive weed content. The conditions in Sensitive Areas and Vegetated Corridors vary greatly.

b. For upland sites with at least one foot of native topsoil, but containing a non-native, invasive seed bank or plants, add notes to the plan to remove the undesirable plants, roots, and seeds (*see IPM Plan*) prior to planting.

c. For upland sites with either disturbed and compacted soils or less than one foot of topsoil and invasive, non-native seed bank or plants that have become established, the following notes shall be added to the plan:

   1. Remove the undesirable plants, roots, and seeds (*see IPM Plan*) prior to adding topsoil.

2. Till the sub-grade in these areas to a depth of at least four inches and add at least 12 inches of clean compost-amended topsoil. The compost-amended topsoil shall have the following characteristics to ensure a good growing medium:
   A) Texture – material passes through one-inch screen
   B) Fertility – 35% organic matter

3. In the event of floodplain grading, over-excavate the sub grade to ensure 12 inches of topsoil can be applied without impacting surface water elevations.

d. For wet areas in Sensitive Areas and Stormwater Facilities, the soil conditions shall be hydric or graded to hold sufficient water to promote hydric soil formation. The addition of organic muck soil will improve plant establishment for some bulbs and tubers.

e. Where appropriate and necessary for erosion control or to enhance organic matter, leaf compost may be placed uniformly on topsoil. (Refer to Chapter 6, Erosion Prevention and Sediment Control). Other amendments, conditioners, and bio-amendments may be added as needed to support the specified plants or adjust the soil pH. Traditional fertilization techniques (applying N-P-K) are not necessary for native plants.

2.3 Step 3: Identify Plants to be Preserved, Select Revegetation Plant Materials, Quantities, Placement, and Assign Planting Zones and Specifications to Plans

a. Preservation: Every effort shall be made to protect a site's existing native vegetation. Native vegetation along Sensitive Areas and Vegetated Corridors shall be retained to the maximum extent practicable.

b. Selection: Plant selection shall be from a native species palette and shall consider site soil types, hydrologic conditions, and shade requirements. Containerized or bare root plants may be used. A list of common native plant community types appropriate for planting Sensitive Areas, Vegetated Corridors and Stormwater Facilities is provided in Table A-1. Upon approval from the District, limited use of non-invasive non-native plants may be permitted in highly urbanized and other unique settings such as regional town centers. Unless approved by District staff, planting restrictions are limited to the following:

1. Deep rooting trees and shrubs (e.g. willow) shall not be planted on top of concrete pipes, or within 10 feet of retaining walls, inlet/outlet structures or other culverts; and

2. Large trees or shrubs shall not be planted on berms over four feet tall that impound water. Small trees or shrubs with fibrous root systems may be installed on berms that impound water and are less than four feet tall.

c. Quantities:

1. Vegetated Corridors and Sensitive Areas
   Trees and shrubs shall be planted using the following equations to achieve the specified densities on a per acre basis.

   A) Total number of trees per acre = area in square feet x 0.01
   B) Total number of shrubs per acre = area in square feet x 0.05
   C) Groundcover = plant and seed to achieve 100% areal coverage

2. Stormwater Facilities
   A) Stormwater Facilities in tracts or easements less than 30 feet wide shall be planted using the following equations to achieve the specified densities on a per acre basis:
      i. Total number of shrubs per acre = area in square feet x 0.05
      ii. Groundcover = plant and seed to achieve 100% areal coverage
   B) Stormwater Facilities in tracts or easements 30 feet wide or more shall be planted using the following equations to achieve the specified densities on a per acre basis:
      i. Total number of trees per acre = area in square feet x 0.01
      ii. Total number of shrubs per acre = area in square feet x 0.05
      iii. Groundcover = plant and seed to achieve 100% areal coverage

d. Size: Potted plants shall follow size requirements outlined in Table A-1. Bare root plants shall be 12 to 16 inches long.

e. Placement: Plant placement shall be consistent with naturally occurring plant communities. Trees and shrubs shall be placed in singles or clusters of the same species to provide a natural planting scheme. This arrangement may follow curved rows to facilitate maintenance. Distribution and relative abundance shall be dependant on the plant species and on the size of the revegetation area. The Vegetated Corridor revegetation area shall be overseeded with native seed mixes appropriate to the plant community and hydrologic zone of the site (see Table A-1: Plant Communities for Revegetation). Plant placement and seeding shall promote maximum vegetative cover to minimize weed establishment.

2.4 Step 4: Determine Plant Installation Requirements and Assign Specifications to Plans

a. Timing
Containerized stock shall be installed only from February 1 through May 1 and October 1 through November 15. Bare root stock shall be installed only from December 15 through April 15. Plantings outside these times may require additional measures to ensure survival which shall be specified on the plans.

b. Erosion Control
Grading, soil preparation, and seeding shall be performed during optimal weather conditions and at low flow levels to minimize sediment impacts. Site disturbance shall be minimized and desirable vegetation retained, where possible. Slopes shall be graded to support the establishment of vegetation. Where seeding is used for erosion control, an appropriate native grass, Regreen (or its equivalent), or sterile wheat shall be used to stabilize slopes until permanent vegetation is established. Biodegradable fabrics (coir, coconut or approved jute matting (minimum 1/4" square holes) may be used to stabilize slopes and channels. Fabrics such as burlap may be used to secure plant plugs in place and to discourage floating upon inundation. No plastic mesh that can entangle wildlife is permitted. Consult Chapter 6 - Erosion Prevention and Sediment Control for additional information.

c. Mulching
Trees, shrubs, and groundcovers planted in upland areas shall be mulched a minimum of three inches in depth and 18 inches in diameter, to retain moisture and discourage weed growth around newly installed plant material. Appropriate mulches are made from composted bark or leaves that have not been chemically treated. The use of mulch in frequently inundated areas shall be limited, to avoid any possible water quality impacts including the leaching of tannins and nutrients, and the migration of mulch into waterways.

d. Plant Protection from Wildlife
Depending on site conditions, appropriate measures shall be taken to limit wildlife-related damage (*see IPM Plan*).

e. Irrigation
Appropriate plant selection, along with adequate site preparation and maintenance, reduces the need for irrigation. However, unless site hydrology is currently adequate, a District/City approved irrigation system or equivalent (i.e., polymer, plus watering) shall be used during the two-year plant establishment period. Watering shall be at a minimum rate of at least one inch per week from June 15 through October 15. Other irrigation techniques, such as deep watering, may be allowed with prior approval by District staff.

f. Access
Maintenance access for plant maintenance shall be provided for Sensitive Areas and Vegetated Corridors via a five-foot easement or shared boundary with Stormwater Facilities. Stormwater Facilities access requirements are provided in Chapter 4.

2.5 Step 5: Determine Plant Monitoring and Maintenance Requirements

a. Monitoring
Site visits are necessary throughout the growing season to assess the status of the plantings, irrigation, mulching, etc. and ensure successful revegetation.

b. Weed Control
The removal of non-native, invasive weeds shall be necessary throughout the maintenance period, or until a healthy stand of desirable vegetation is established (*see IPM Plan*).

c. Plant Replacement and Preservation
Installed plants that fail to meet the acceptance criteria (see Chapter 2) shall be replaced during the maintenance period. Prior to replacement, the cause of loss (wildlife damage, poor plant stock, etc.) shall be documented with a description of the corrective actions taken.

2.6 Step 6: Prepare Construction Documents and Specifications

The construction documents and specifications shall include:

a. Sensitive Area and Vegetated Corridor boundaries as shown on the Service Provider Letter, including limits of approved, temporary construction encroachment. Orange construction fencing shall be noted at Vegetated Corridor boundaries as well as at encroachment limits during construction. Note permanent type fencing and signage between the development and the Vegetated Corridor for project completion is required.

b. Site Preparation plan and specifications, including limits of clearing, existing plants and trees to be preserved, and methods for removal and control of invasive, non-native species, and location and depth of topsoil and or compost to be added to revegetation area.

c. Planting plan and specifications, including all of the following:
   1. Planting table that documents the common name, scientific name, distribution (zone and spacing), condition and size of plantings
   2. Installation methods for plant materials
   3. Mulching
   4. Plant tagging for identification
   5. Plant protection
   6. Seeding mix, methods, rates, and areas

d. Irrigation plan and specifications, including identification of water source, watering timing and frequency, and maintenance of the system.

e. Maintenance schedule; including responsible party and contact information, dates of inspection (minimum three per growing season and one prior to onset of growing season) and estimated maintenance schedule (as necessary) over the two-year monitoring period.

f. Easement descriptions for all Vegetated Corridor and Sensitive Areas that are required as part of the development.

g. Good rated corridor notes i.e. invasive species removal resulting in cleared areas exceeding 25 square feet shall be replanted with native vegetation.

h. Access points for installation and maintenance including vehicle access if available.

i. Standard drawing details (north arrow, scale bar, property boundaries, project name, drawing date, name of designer and Property Owner).

TABLE A-1
SUGGESTED PLANT COMMUNITIES FOR REVEGETATION

Plant Commiunities	Minimum Species Composition	Plant Category	Water Requirements	Light Requirements	Minimum Rooting Size	Minimum Plant Height	Spacing Format
Riparian Forest (RF)							
Red alder (Alnus rubra)	X	Tree	Moist	Sun	1 gal	3'	Single
Western red cedar (Thuja plicata)	X	Tree	Moist	Shade	2 gal	2'	Single
Red elderberry (Sambucus racemosa)	X	Shrub	Moist	Part	1 gal	1.5'	Single
Black twinberry (Lonicera involcrata)		Shrub	Moist	Part	1 gal	1.5'	Single
Red-osier dogwood (Cornus stoniferia)	X	Shrub	Wet	Part	1 gal	2'	Cluster
Indian plum (Oemleris cerasiformis)	X	Shrub	Moist	Shade	2 gal	2'	Cluster
Swamp rose (Rosa pisocarpa)		Shrub	Moist	Part	1 gal	1.5'	Cluster
Pacific ninebark (Pysocarpus capitatus)		Shrub	Moist	Shade	1 gal	2'	Single
Snowberry (Symphoricarpos albus)	X	Shrub	Dry	Part	1 gal	1.5'	Cluster
Salmonberry (Rubus spectabilis)	X	Shrub	Moist	Shade	1 gal	1.5'	Cluster
Maidenhair fern (Adiatum aleuticum)		Herb	Moist	Shade	4"	na	Cluster
Lady fern (Athyrium filix-femina)		Herb	Moist	Shade	1 gal	na	Cluster
Skunk cabbage (Lysichiton americanum)		Herb	Wet	Shade	bulbs	na	Cluster
False lily-of-the-valley (Maianthemum dilatatum)		Herb	Moist	Shade	bulbs, 4"	na	Cluster
Candy flower (Claytonia sibirica)		Herb	Moist	Shade	4"	na	Cluster
Miners lettuce (Montia perfoliata)		Herb	Moist	Shade	4"	na	Cluster
Stream violet (Viola glabella)		Herb	Moist	Shade	4"	na	Cluster
Youth-on-age (Tolmiea menziesii)		Herb	Moist	Shade	4"	na	Cluster
Insideout flower (Vancouveria hexandra)		Herb	Moist	Shade	4"	na	Cluster
Dewey's sedge (Carex deweyana)		Herb	Dry	Shade	plugs, 4"	4"	Mass
Hair bentgrass (Agrostis scabra)		Grass	Moist	Part	seed	na	Mass
Spike bentgrass (Agrostis exarata)	X	Grass	Moist	Part	seed	na	Mass
Tall manna-grass (Glyceria elata)	X	Grass	Moist	Part	seed	na	Mass

Plant Commiunities	Minimum Species Composition	Plant Category	Water Requirements	Light Requirements	Minimum Rooting Size	Minimum Plant Height	Spacing Format
Upland Forest (UF)							
Red alder (Alnus rubra)	X	Tree	Moist	Sun	1 gal	3'	Single
Big leaf maple (Acer macrophyllum)	X	Tree	Dry	Sun	2gal	3'	Single
Douglas Fir (Pseudotsuga menziesii)	X	Tree	Dry	Sun	2gal	3'	Single
Grand fir (Abies grandis)	X	Tree	Dry	Sun	2 gal	2'	Single
Pacific yew (Taxus brevifolia)		Tree	Moist	Shade	2 gal	2'	Single
Cascara (Rhamnus purshiana)		Tree	Dry	Part	2 gal	2'	Single
Pacific dogwood (Cornus nuttallii)		Tree	Moist	Shade	1 gal	2'	Single
Bitter cherry (Prunus emarginata)		Tree	Moist	Part	2 gal	2'	Single
Vine Maple (Acer circinatum)	X	Tree	Moist	Part	2 gal	2'	Single
Oceanspray (Holodiscus discolor)	X	Shrub	Dry	Sun	1 gal	1.5'	Single
Red elderberry (Sambucus racemosa)	X	Shrub	Moist	Part	1 gal	1.5'	Single
Red flowering currant (Ribes sanguineum)	X	Shrub	Dry	Sun	1 gal	1.5'	Cluster
Cascade Oregon grape (Mahonia nervosa)		Shrub	Moist	Part	1 gal	4"	Cluster
Tall Oregon grape (Mahonia aquifolium)		Shrub	Dry	Sun	1 gal	6"	Single
Red huckleberry (Vaccinium parvifolium)		Shrub	Moist	Shade	1 gal	1.5'	Cluster
Thimbleberry (Rubus pariflorus)		Shrub	Moist	Shade	1 gal	1.5'	Cluster
Snowberry (symphoricarpos albus)	X	Shrub	Dry	Part	1 gal	1.5'	Cluster
Baldhip Rose (Rosa gymnocarpa)	X	Shrub	Dry	Part	1 gal	1.5'	Cluster
Serviceberry (Almelanchier alnifolia)		Shrub	Dry	Part	2 gal	2'	Single
Sword fern (Polystichum munitum)		Shrub	Moist	Shade	2 gal	na	Cluster
Deer fern (Blechnum spicant)		Herb	Moist	Shade	1 gal	na	Cluster
Orange honeysuckle (Lonicera ciliosa)		Herb	Moist	Shade	2 gal	na	Single
Salal (Gaultheria shallon)		Herb	Moist	Part	1 gal	4"	Cluster
Wood strawberry (Fragaria vesca)		Herb	Moist	Shade	4"	na	Cluster
Western trillium (Trillium ovatum)		Herb	Moist	Shade	4"	na	Cluster
Five-stemmed mitrewort (Mitella pentandra)		Herb	Moist	Shade	1 gal	na	Cluster
Red columbine (Aquilegia formosa)		Herb	Dry	Part	4"	na	Cluster
False solomon's seal (Smilacina racemosa)		Herb	Moist	Shade	4"	na	Cluster
Native California brome (Bromus carinatus)	X	Grass	Dry	Sun	seed	na	Mass
Blue Wildrye (Elymus glaucus)	X	Grass	Dry	Part	seed	na	Mass

Plant Commiunities	Minimum Species Composition	Plant Category	Water Requirements	Light Requirements	Minimum Rooting Size	Minimum Plant Height	Spacing Format
Oak Woodland / Savanna (OW)							
Oregon white oak (Quercus garryana)	X	Tree	Dry	Sun	2 gal	2'	Single
Snowberry (Symphoricarpos albus)	X	Shrub	Dry	Part	1 gal	1.5'	Cluster
Serviceberry (Almelanchier alnifolia)	X	Shrub	Dry	Part	1 gal	2'	Single
Oceanspray (Holodiscus discolor)	X	Shrub	Dry	Sun	1 gal	1.5'	Cluster
Training blackberry (Rubus ursinus)		Shrub	Dry	Sun	1 gal	1.5'	Cluster
Cascade Oregon grape (Mahonia nervosa)		Herb	Moist	Part	1 gal	4"	Cluster
Blue wild-rye (Elymus glacus)	X	Grass	Dry	Part	seed	na	Mass
Native California brome (Bromus carinatus)	X	Grass	Dry	Sun	seed	na	Mass
Ash Forested Wetland (FW)							
Oregon Ash (Fraxinus latifolia)	X	Tree	Moist	Part	2 gal	3'	Single
Pacific Ninebark (Physocarpus capitatus)	X	Shrub	Moist	Shade	2 gal	2'	Single
Red-osier dogwood (Cornus sericea)	X	Shrub	Wet	Part	1 gal	2'	Cluster
Snowberry (Symphoricarpus albus)	X	Shrub	Dry	Part	1gal	1.5'	Cluster
Slough sedge (Carex obnupta)	X	Herb	Moist	Part	plugs	6"	Mass
Candy flower (Claytonia sibirica)		Herb	Moist	Shade	4"	na	Cluster
Streambank springbeauty (Montia parvifolia)		Herb	Moist	Shade	4"	na	Cluster
Dewey's sedge (Carex deweyana)		Herb	Dry	Shade	plugs	4"	Mass
Small fruited bulrush (Scirpus microcarpus)		Herb	Wet	Sun	plugs	4"	Mass
Tall mannagrass (Glyceria elata)	X	Grass	Moist	Shade	seed	na	Mass

Plant Commiunities	Minimum Species Composition	Plant Category	Water Requirements	Light Requirements	Minimum Rooting Size	Minimum Plant Height	Spacing Format
Shrub / Scrub Wetland (SS)							
Pacific willow (Salix lasiandra)	X	Tree	Wet	Sun	1 gal	3'	Single
Sitka willow (Salix sitchensis)		Tree	Moist	Sun	1 gal	3'	Cluster
Douglas hawthorne (Crataegus douglasii)		Tree	Moist	Part	2 gal	2'	Cluster
Pacific Crabapple (Malus fusca)	X	Tree	Moist	Part	2 gal	2'	Cluster
Scouler willow (Salix scouleriana)	X	Shrub	Moist	Sun	1 gal	3'	Cluster
Red-osier dogwood (Cornus sericea)	X	Shrub	Wet	Part	1 gal	2'	Cluster
Clustered rose (Rosa pisocarpa)		Shrub	Wet	Part	1 gal	1.5'	Cluster
Douglas's spiraea (Spiraea douglasii)	X	Shrub	Wet	Sun	1 gal	1.5'	Cluster
Nodding beggartick (Bidens cernua)		Herb	Wet	Sun	1 gal	1.5'	Cluster
Spreading rush (Juncus patens)		Herb	Moist	Part	plugs	6"	Mass
Western manna-grass (Glyceria occidentalis)	X	Grass	Wet	Sun	seed	na	Mass
Emergent Marsh (EM)							
Nodding beggarstick (Bidens cernua)	X	Herb	Moist	Sun	1 gal	1.5'	Cluster
Hardstem bulrush (Scirpus acutus)		Herb	Wet	Sun	plugs	1.5'	Cluster
Small-fruited bulrush (Scirpus microcarpus)	X	Herb	Wet	Sun	plugs	6"	Mass
Creeping spike rush (Eleocharis palustris)	8	Herb	Wet	Sun	seed, plugs	4"	Mass
Wapato (Sagittaria latifolia)		Herb	Wet	Sun	bulbs	na	Cluster
American water plantain (Alisma plantago-aquatica)		Herb	Wet	Sun	bulbs	na	Cluster
Soft stemmed bulrush (Scirpus taberaemontani)		Herb	Wet	Sun	plugs	1.5'	Cluster
American brooklime (Veronica americana)		Herb	Wet	Sun	plugs	na	Cluster
Marsh speedwell (Veronica scutellata)		Herb	Wet	Sun	plugs	na	Cluster
American sloughgrass (Beckmannia syzigachne)	X	Grass	Wet	Sun	seed, plugs	na	Mass
Western manna-grass (Glyceria occidentalis)	X	Grass	Wet	Sun	seed	na	Mass

Plant Commiunities	Minimum Species Composition	Plant Category	Water Requirements	Light Requirements	Minimum Rooting Size	Minimum Plant Height	Spacing Format
Storm Water Facility (SWF)							
Oregon Ash (Fraxinus latifolia)		Tree	Moist	Part	2 gal	3'	Single
Vine Maple (Acer circinatum)	X	Tree	Moist	Part	2 gal	2'	Single
Cascara (Rhamnus purshiana)		Tree	Moist/Dry	Part	1 gal	2'	Single
Bitter cherry (Prunus emarginata)		Tree	Moist	Part	2 gal	2'	Single
Mock orange (Philadelphus lewisii)		Shrub	Wet/dry	Part	1 gal	2'	Cluster
Red-osier dogwood (Cornus sericea)	X	Shrub	Wet	Part	1 gal	2'	Cluster
Pacific ninebark (Pysocarpus capitatus)		Shrub	Moist	Shade	1 gal	2'	Single
Oceanspray (Holodiscus discolor)	X	Shrub	Dry	Sun	1 gal	1.5'	Single
Serviceberry (Almelanchier alnifolia)	X	Shrub	Dry	Part	1 gal	2'	Single
Clustured rose (Rosa pisocarpa)		Shrub	Moist	Sun	1 gal	1.5'	Cluster
Snowberry (Symphoricarpus albus)	X	Shrub	Dry	Part	1gal	1.5'	Cluster
Douglas's spiraea (Spiraea douglasii)	X	Shrub	Wet	Sun	1 gal	1.5'	Cluster
Red flowering currant (Ribes sanguineum)	X	Shrub	Dry	Sun	1 gal	1.5'	Cluster
Nodding beggartick (Bidens cernua)		Herb	Wet	Sun	1 gal	1.5'	Cluster
Spreading rush (Juncus patens)		Herb	Moist	Part	plugs	6"	Mass
Small-fruited bulrush (Scirpus microcarpus)		Herb	Wet	Sun	plugs	6"	Mass
Slough sedge (Carex obnupta)	X	Herb	Moist	Part	plugs	6"	Mass
Toad rush (Juncus bufonius)*		Herb	Dry	Sun	seed, plugs	4"	Mass
Rossi Sedge (Carex rossi)*		Herb	Moist	Sun	plugs	4"	Mass
NW Native Wildflower mix		Herb	Mix	Sun	seed	na	Mass
Oregon Bentgrass (Agrostis oregonesis)*	X	Grass	Dry	Sun	seed	na	Mass
Idaho bentgrass (Agrostis idahoensis)*		Grass	Dry	Sun	seed	na	Mass
Western manna-grass (Glyceria occidentalis)		Grass	Wet	Sun	seed	na	Mass

* - Grows 5-30 cm tall