Planting Plan

Native Plant Selection

Trees and Shrubs

Plants were selected based on what species were indentified onsite, information from the Medford Riparian Ordinance, and typical native riparian species found in Southwestern Oregon. Four different planting strategies were identified (see the attached Figure 1(a.) and 1(b.)-Veranda Park Phase I Restoration – Draft Planting Plan): Upland Native 1 (Blue), Upland Native 2 (green), Understory 1 (red), and the Education area (yellow). A summary of plants proposed are shown below: Additional natives may be substituted or used in addition to the plants listed based on site conditions once the invasives are removed and pending availability from local nurseries.

Ponderosa Pine	White Oak	Crab Apple	Klamath Plum
Douglas Hawthorne	Vine Maple	Big Leaf Maple	Rose (woodsii and nootka)
Ocean Spray	Mock Orange	Common Snowberry	Oregon Grape
Redtwig dogwood	Pacific Dogwood	Willows (multiple species)	

Seeding

In addition, seeding will be used as needed in the areas where invasives are removed (green areas). The seed mix proposed (detailed below) is the same mix that is being used in the Gold Ray Dam area. The purpose of applying the seed mix is to get some ground cover established when the rains start before the invasives recover.

Botanical Name	***Common Name***	***% By Weight***
Elymus glaucus	Blue Wildrye	50
Festuca rubra rubra	Native Red Fescue	30
Bromos carnatius	California Brome	10
Triticum astevium x	Regreen	10

Channel Area (pending approval from the City)

In addition, willow cuttings would be placed at the toe of the channel and in the banks to provide some stability and prevent further downcutting pending approval from Public Works. The channel is maintained free of vegetation, presumably for the purpose of

flood insurance requirements.

Plant and Seed Source

Species native to the local riparian site are most appropriate for planting in the riparian area. Local biotypes have better vigor and hardiness, are better able to compete with nonnative vegetation, and attract local native wildlife (Carey, 2003). Cuttings and seeds can be taken from the plants located in the riparian area and wetland west of Thrasher Lane towards Foothill. Additional native plants and seeds will be purchased through local nurseries. The seeds will be purchased from Sunmark Seeds or another vendor as appropriate.

Plant Size

One-gallon container stock (18" container) with trees approximately 1 cm caliper or larger are used to the extent feasible to attain the desired planting goals more rapidly. Larger containerized plant stock are more tolerant of existing local climate conditions because they are less vulnerable to transplant shock and are more capable of moisture retention during the transplanting process (National Tree Trust, 1997). Additional plant stock used include smaller containers, plugs or cuttings. Cuttings will be used with appropriate species including willows and cottonwoods. Where appropriate, sedge and juncus species will be directly seeded along gravel bars to help build soils for future plantings.

Plant Spacing/Site Design

Plant layout reflects natural conditions to the greatest extent possible. Plants will be distributed to allow adequate spacing for root development. Additionally, attention to the site conditions and microsites will be used help to locate appropriate locations for plants. For example, in the Upland Native 2 area, the plantings will include species that require more water or are water tolerant since the site backs up to the wetland. As a general rule, plants will be clustered or generally be spaced at 11 feet apart with shrubs interplanted within those spaces, resulting in approximately 360 stems per acre.

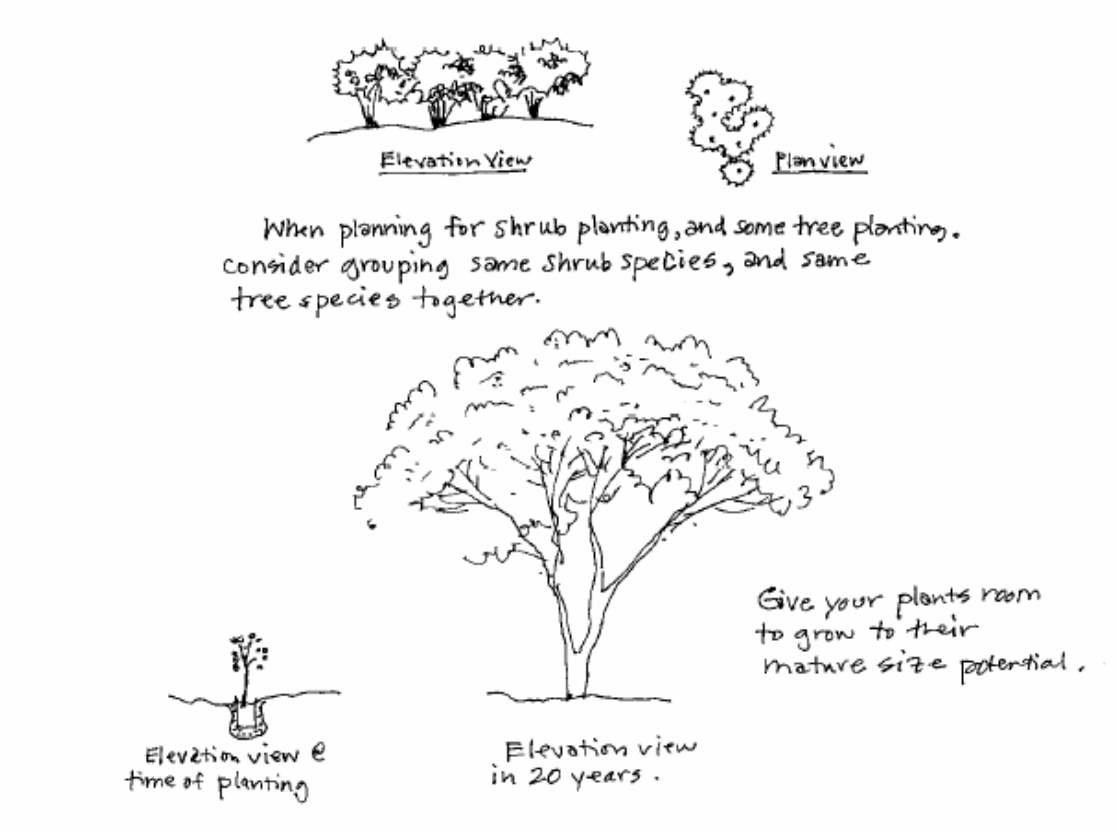

Figure 2: Planting design and spacing recommendations.
Drawing provided by Clean Water Services.

Site Preparation

Site preparation is critical for a successful planting. The purpose of site preparation is to allow for the native plants to better compete with plants already existing on site (often invasive or exotic species). The degree of site preparation needed is dependent on the type of vegetation found on the site, the presence of invasive exotic weeds, previous disturbance to the area such as fire and other needs.

Native Plants on Site

Existing native vegetation and woody debris should be retained and undisturbed to the extent feasible. In addition to providing wildlife habitat, native seed sources and microsites for new seedlings, existing plants provide a valuable source of microorganisms that are essential for plant development.

Where native plants are established on the planting sites the following actions are recommended:

- Design planting prescriptions to incorporate the existing vegetation.
- Flag existing native plants.
- Educate all volunteers and maintenance crews on native plants prior to site activities. Walk the site and show examples of the existing native plants and how they are marked.

Invasive Plants

Controlling Invasive Weeds

Invasive weeds can be controlled by a combination of biological, mechanical, and chemical means. Biological controls have been found effective for invasive plant control in the region and include agents such as weevils, moths, fungus and goats (ODA, 2003). Angora goats have also been utilized locally for blackberry control and have provided suppression of blackberry growth (ARWC, 2004).

Mechanical control includes techniques such as mowing and grubbing of plants and root systems. As an added benefit the cut canes from the Himalayan Blackberries can be left on site as mulch to reduce the regrowth of other weed species. The planting plan is designed to replant areas where invasives have been removed (see Figure 3).

Chemical control involves the use of aquatic labeled herbicides for invasive weed control (see herbicide labels in Appendix V and weed control under the Maintenance section 5.1). If chemical control is necessary application will be prior to planting and will utilize the cut-stump application method (see Appendix VI) to the extent feasible.

Release of Plants

Where native plants exist, they should be released by pruning leaving one to two leader limbs. Reducing the number of shoots will accelerate the growth of the plant and provide wildlife habitat in the riparian area. Cottonwoods are a species that does very well through release. Other species that will grow well with clearing of other plants include snowberry and native roses

Potential Planting Techniques and Tools

Prior to planting, the site is flagged, color coded for plant species, to assure plants are located according to the site prescription. The planting location is prepared by first removing all vegetation within a 3’ diameter of where the tree is placed.

Figure 4-3: Site flagged prior to planting event.

Tools

Tools such as shovels, pulaskis, hoe-dads, and mattocks are used for hand planting. In areas where the soil is compact or ground is rocky an auger or stinger is used. It is recommended that an auger be used to drill the holes necessary to plant the Upland Native 1 zone. Augers and equipment can also be used to plant larger stock in the Upland Native 2 area located south of the Creek. Heavy equipment use is not recommended for the Upland Native 2 area north of the creek, especially the western edge due to proximity of the wetland and moist soil conditions.

Hole Depth

Typical hole depth is typically the length of plant container plus 4", and approximately twice as large as the diameter of the plant container. The additional prepared soil encourages root growth beyond and results in a healthier tree.

Planting

The following guidelines will help increase plant survival:

1. Plant materials should be kept in the shade prior to planting.
2. Vertical cut any roots that show tendencies to circle the root ball to prevent root girdling.

3. Carefully pack the soil firmly around the root mass while slightly pulling the plant up so the root collar is even with the surrounding terrain to avoid "j" rooting and air pockets (National Tree Trust, 1997).

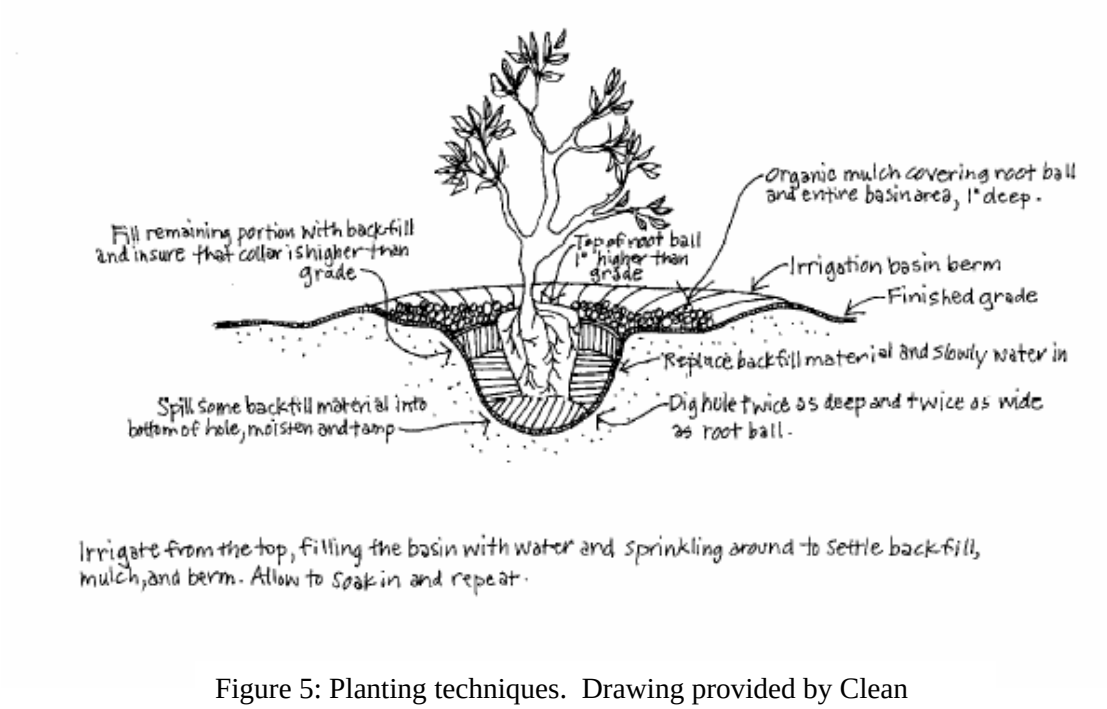

Figure 5: Planting techniques. Drawing provided by Clean Water Services.

Post-planting

Once planted, excess soil is placed around the plant to help collect and retain water. Mulch and/or geotextile fabric can be placed around the tree to inhibit weed growth, retain water and help protect against frost.

Figure 6: Ponderosa pine with vispor matting around base to suppress weed growth.