

MAGNUSON PARK LIVE-STAKE COOP PROJECT PROPOSAL

2003 NOAA/Earthcorps Habitat Restoration Partnership

“Give a man a fish and you feed him for a day. Teach him how to fish and you feed him for a lifetime.” - Lao Tsu

SUMMARY

This project proposes to create a coppiced planting of 12 species of native shrubs and small trees suitable for use as live-stakes. This planting would produce approximately 2,700 plant starts a year for the 10-15 year life of the planting. These cuttings would be used for the restoration of native shoreline vegetation on the Sand Point peninsula and regional riparian corridors, as well as used for research to advance the development of restoration methods using live stakes. A publicly accessible site within the Magnuson Community Garden’s Native Plant Nursery will be developed to maximize community exposure and educational value.

SITE HISTORY AND PROBLEM STATEMENT

A live-stake is a living section of stem that roots and grows when stuck in an appropriate location. It is the most cost-effective way of establishing plants on wetland and shoreline restoration projects. Commercial live stakes are currently of variable quality and are typically harvested from wild native plant communities. Irresponsible harvest of live stakes may degrade these communities.

Currently four willow species, black cottonwood and red-twig dogwood are commonly available for biotechnical erosion control applications. Over twenty species of native plants have potential to root from cuttings to an extent that they could be useful as live-stakes (Darris, 2002a; Darris, 2002b). The ability to economically and ethically produce these materials by harvesting from wildlands is limited by sparse plant distribution.

As many as 10 plants may be established on site using live-stakes for the cost of installing a single plant of nursery stock. Live staking using diverse native species would allow projects with limited capital resources to increase species diversity, increase planting density, increase the breadth of volunteer participation, and increase project scope with no additional resources.

Coppice (or stooling beds) is an agricultural method of producing large quantities of high quality even-aged stems, traditionally used for production of wood fuel or coarse craft fiber. Desired species are planted densely and cut to the ground every one to three years. This method is ideal for producing live-stakes.

The coppice site is a currently underutilized section of land in Magnuson Park, owned by Seattle Department of Parks and Recreation, and managed by the Magnuson Community Garden Native Plant Nursery Committee. Water is available and initial site prep has been completed. The project has received in-kind support or endorsement by the Magnuson Community Garden, Washington State Native Plant Society, Earthcorps and the associated ORCA program, NOAA DARC-NW, Seattle Parks and Recreation, and the Magnuson Environmental Stewardship Alliance.

The Sand Point Peninsula proves the largest contiguous publicly owned stretch of shoreline in Lake Washington. The waters of Lake Washington that surround Sand Point provide rearing habitat for populations of Sockeye, Coho, Steelhead, coastal cutthroat trout and ESA listed Puget Sound Chinook Salmon. This mile-long public shoreline was degraded during the development and operation of the Sand Point naval air station. Significant shoreline enhancement is included in Sand Point/Magnuson Park Master planning. Degradation of shoreline rearing habitat has been identified as a limiting factor for salmonid recovery in the Lake Washington watersheds (Kerwin, 2001). The development of this system of coppice beds will provide a self-sustaining resource that increases the capacity of community-based restoration in the Lake Washington watershed for the next decade.

THE GOAL

- Efficiently produce high quality native live-stakes for local restoration
- Demonstrate efficient methods of low-impact agricultural live-stake production
- Demonstrate the diversity of species that have potential use as live stakes

WHO BENEFITS

- Live-stakes would be disbursed among project partners and local restoration projects to support in-house and local restoration efforts
- A model for local production of live stakes would increase the quality and variety of live-stakes available for local restoration.

PROJECT DESCRIPTION

A site plan and section detail are attached (Figures 1 and 2).

Layout, purchasing and installation will be completed during the fall-spring planting season of 2003-2004.

The site will be weeded. A log structure will be used for grade control on the East boarder of the site. A 2" layer of compost will be tilled into the bed areas and beds will be mulched with 6" of arborist wood chips. Paths will be covered with a nursery grade weed fabric. A seed grown, King county genetic stock bare root plant (1-0 or 2-0 grade), will be planted for every 3 square feet of bed area. Irrigation will be delivered via an agricultural grade in-line drip emitter system, and controlled by a Galcon agricultural drip irrigation controller.

Site maintenance will be provided over the life of the planting, as a precondition for participation in harvest. Maintenance will be provided by Earthcorps for the first growing season. Materials for replenishing mulch will be supplied by Seattle Department of Parks and Recreation (SDPR). Disbursement of cutting privileges will be administered by the Magnuson Community Garden Native Plant Nursery Committee.

Permission for construction has been secured from the property owner (SDPR). No permits are required for construction.

CITATIONS

Darris, Dale. 2002a. Ability of Pacific Northwest shrubs to root from hardwood cuttings. Portland, OR: USDA Natural Resource Conservation Service Technical Note #30.

Darris, Dale. 2002b. Native Shrubs As a Supplement to the Use of Willows as Live Stakes and Fascines in Western Oregon and Western Washington. Portland, OR: USDA Natural Resource Conservation Service Technical Note #31.

Kerwin, J., 2001. Salmon and Steelhead Habitat Limiting Factors Report for the Cedar – Sammamish Basin (Water Resource Inventory Area 8). Washington Conservation Commission. Olympia, WA.

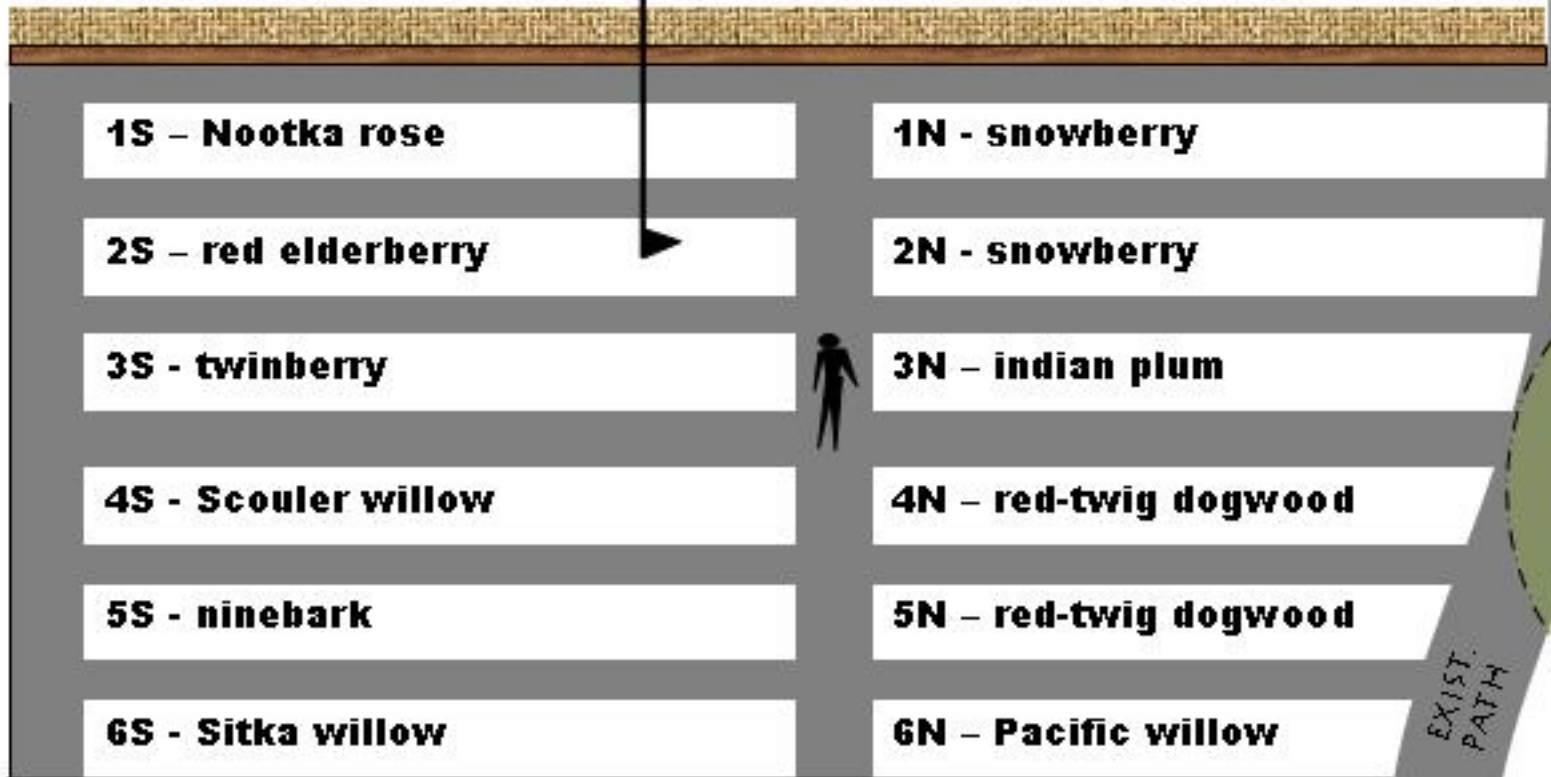


NOAA WRC

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SEE FIGURE 2 FOR SECTION DETAIL

EXIST. COMMUNITY GARDEN



EXIST. CONCRETE PAD

EXIST. NURSERY

MATERIALS STORAGE

EXIST. PATH



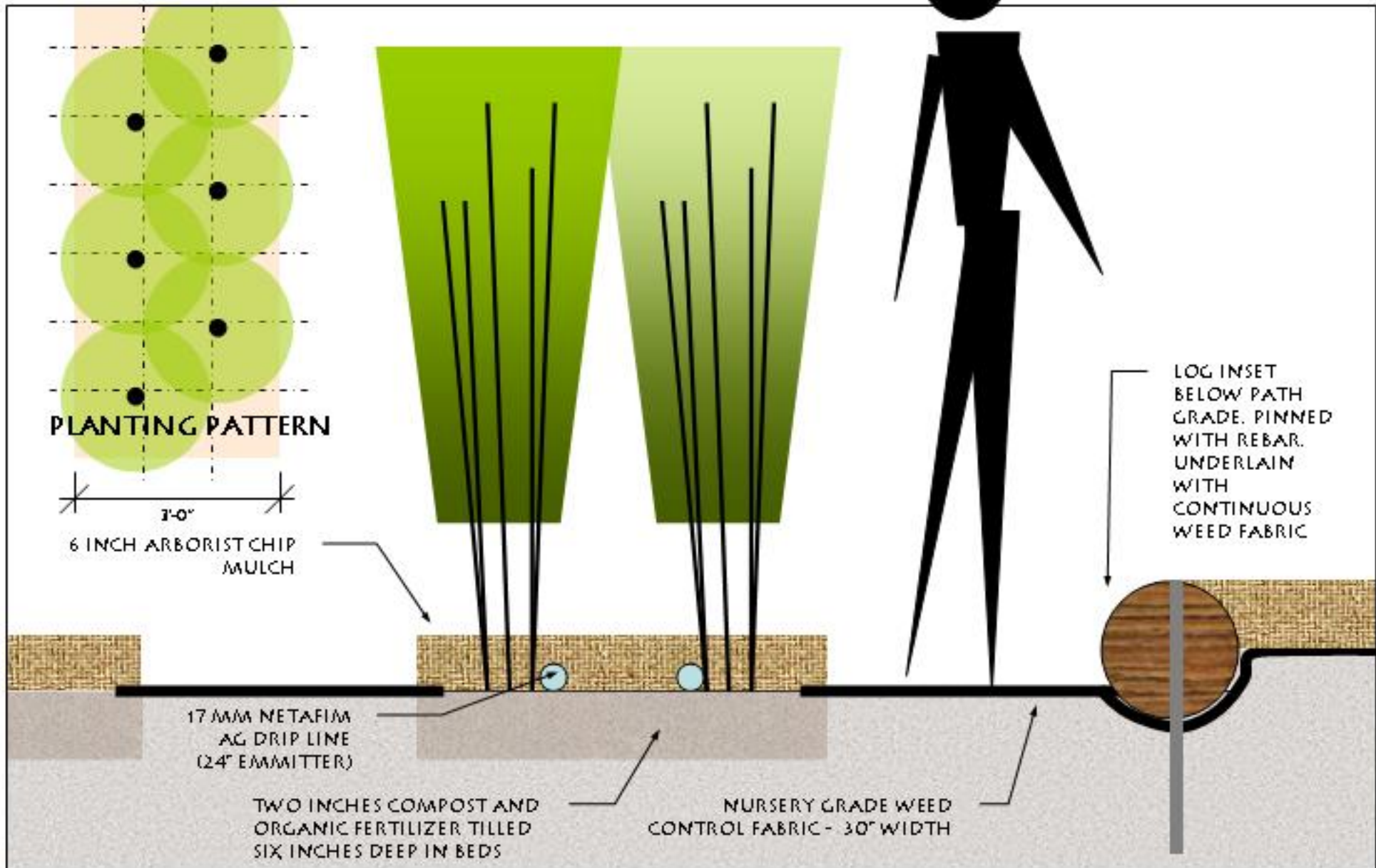
NOAA RESTORATION CENTER
NWR, SEATTLE, WASHINGTON

DATE: 8/1/2008
CONTACT: FIC

APPROX SCALE
1" = 10' - 0"

LIVE-STAKE FARM / SCHEMATIC VIEW

FIGURE
1



Rick Thompson <q.garryana@gmail.com>

Thu, May 3,
2018, 10:58
PM

to me

Paul,

I'am the current lead for the cutting bed you designed and planted. The bed has provided thousands of stakes for projects in Seattle Parks.

The idea of sharing stake harvest with organizations or individuals that participated in regular bed maintenance never worked well, so annual live stake harvest and planting classes were offered to Seattle Park Forest Stewards. The class participants were permitted to harvest stakes for their project sites. Typically, only Red osier dogwood, and Ninebark were taken. participants were asked to provide planting information but rarely did

I am not sure if you have visited the bed recently. If so you may have noticed the Nootka rose, willow, and Snow berry have been removed. The Snowberry crowded out the Indian plum (which grew spindly). The willow became infested with the poplar borer and was mechanically removed. The rose and Snowberry were never used as stake material so both species were removed and planted as whole shrubs in nearby parks. The Indian plum has been moved to a new location in the cutting bed.

Mock orange, High brush cranberry. and Red elderberry have been planted in the bed this past year,

Sorry it has taken a while to respond to you initial note...

Rick Thompson