

TECHNICAL NOTES

U.S. Department of Agriculture

Natural Resources Conservation Service

TN-PLANT MATERIALS-78

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Native American Plant Resource Hedgerow Establishment

The indigenous people of California used and continue to use native plant materials in a variety of ways. Traditionally, native plants were used in all facets of life: for food, medicine, clothing, basketry, tools, and building materials. California's native people managed wildland resources to increase production; as a pest management practice; as a method of increasing useful plant species; and producing or maintaining desirable plant characteristics.

Managing and maintaining plants for basketry and other uses has been a significant use of plant materials for Native Americans in California even in contemporary times. Access to the needed species is often limited as a result of diminishing native plant populations, encroachment of exotic species, private property restrictions, development, and public land laws. Therefore, establishing locations for gathering of useful plant materials will provide an important botanical resource for native people, tribes, and others. Creating Native American Plant Resource Hedgerows using culturally significant plants can greatly facilitate these gathering efforts as well as providing the benefits of hedgerow diversity.

On November 21, 2006, a Native American plant resource hedgerow was planted at the USDA-NRCS Lockeford Plant Materials Center (PMC) with the goal of determining the labor and material costs involved. Staff from USDA-NRCS, The Center for Land Based Learning, a member from the California Indian Basketweavers Association, The Lodi - Woodbridge Wine Growers Association and local high school students established the hedgerow.

The native plants for this demonstration hedgerow were selected because of their utility as well as the ability to survive at the Lockeford PMC location in the central valley of California which receives 16 inches of rainfall per year (Major Land Resource Area 17e). The soil at the PMC planting site is a deep fine sandy loam. The plants were drip irrigated for establishment and landscape fabric was used to control weeds. All plants were potted and obtained from a local nursery. The hedgerow is 200 feet in length.

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Workload Analysis for establishing a 200 foot hedgerow:

1. Planning	2 Hr.
2. Obtaining plants and materials	4 Hr.
3. Preparation of soil for planting	3 Hr.
4. Installing landscape fabric	8 Hr.
5. Planting plants	5 Hr.
6. Installing drip irrigation system	2 Hr.
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Total labor hours needed	24 Hours

Average labor cost per hour \$20.00 X 24 Hours = \$480.00 / 200 feet = \$2.40 per foot

Material costs:

1. Plants	\$174.00
2. Drip irrigation supplies	\$80.00
3. Landscape fabric	\$63.00
4. Fertilizer, slow release	\$5.00
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Total material costs	\$322.00

\$322.00 / 200 feet = \$1.61 per foot

Total costs: \$4.01 per foot, on 11-21-2006

References

T.C. Blackburn, K. Anderson. 1993. *Before the Wilderness, Environmental Management by Native Californians*, Ballena Press.

M. K. Anderson. 2005. *Tending the Wild, Native American Knowledge and the Management of California's Natural Resources*. University of California Press.

Native Uses of Native Plants in the Sierra Nevada Mountains and Foothills of California and Nevada. USDA Natural Resources Conservation Service.

Plant Species Observed on Shasta Lake with Native American Historical and/or Current Usage, Draft prepared by North State Resources, Inc. for Bureau of Reclamation.

Appendix 1, Native Plant Species Planted at Lockeford PMC

Common Name	Scientific Name	Native American Uses
MEXICAN ELDERBERRY	<i>Sambucus mexicana</i>	Berries, leaves, flowers used for food, medicine, and dyes. Branches and wood for medicine and musical instruments.
WESTERN CHOKECHERRY	<i>Prunus virginiana</i> <i>var. demissa</i>	Fruits raw or cooked into jellies, jams, syrup or pudding. Branches and wood for arrow shafts, cradle boards, household items, and medicine.
LEMONADEBERRY	<i>Rhus integrifolia</i>	Fruits for food.
CALIFORNIA WILD ROSE	<i>Rosa californica</i>	Roots, stems, leaves, flowers, and fruits for food and medicine.
WINTER CURRENT	<i>Ribes sanguineum</i>	Fruits for food.
INCENSE CEDAR	<i>Calocedrus decurrens</i>	Wood, branches, and roots for bow staves, medicinal, building material, brooms, basketry, and other household items. Also for ceremonial.
WESTERN REDBUD	<i>Cercis occidentalis</i>	Basketry.
FLANNEL BUSH	<i>Fremontodendron californicum</i>	Shoots and stems for string and basketry.
BIG-LEAF MAPLE	<i>Acer macrophyllum</i>	Branches and shoots for household utensils. Leaves, flowers and seeds for medicinal and food.
CALIFORNIA BAY	<i>Umbellularia californica</i>	Medicinal and food.
WESTERN DOGWOOD	<i>Cornus stolonifera</i>	Bows, arrows, stakes, tools, and household items. Also used medicinally and for ceremonies
CALIFORNIA BLACK OAK	<i>Quercus kelloggii</i>	Medicine, dyes, utensils, games, toys, and building materials. Acorns for food; soup, mush, bread.
PURPLE MUHLY	<i>Muhlenbergia filipes</i>	Basketry
DEER GRASS	<i>Muhlenbergia rigens</i>	Basketry
WHITE SAGE	<i>Salvia apiana</i>	Medicinal and ceremonial