

Plant Enhancement Activity – PLT05 - Multi-story cropping, sustainable management of nontimber forest plants



Enhancement Description

This activity involves the manipulation of forest species composition, structure, and canopy cover to achieve or maintain a desired native plant community to facilitate the sustainable management of native non-timber forest plant(s) (e.g., goldenseal, ramps, mushrooms, ginseng, ferns, “sugarbush”, etc.).

Land Use Applicability

Cropland, Forestland

Conditions Where Enhancement Applies

This enhancement applies to forestland and cropland (sugar bush) where the forest is managed for harvestable non-timber plants in addition or instead of timber.

Benefits

Implementation of this enhancement activity can result in increased plant health and vigor, decreased intensity of pest outbreaks, decreased spread of diseases, decreased use of pesticides and improved water quality.

Criteria

Multi-Story Cropping can cover a wide variety and types of plants and products. Multi-Story Cropping requires the development and implementation of a plan for the manipulation of forest growth through management of the competition for light, nutrients, moisture and control of allelopathic (toxic) effects to promote the production of a nontimber forest plant complex while maintaining a healthy forest ecosystem. The plan will include the following components as a minimum:

1. The objectives of the multi-story cropping enhancement.
2. Maps, images and/or descriptions of the proposed multi-story area.
3. An inventory appropriate to the targeted species of the area to identify trees and understory species necessary to achieve the desired purposes.
4. Listing of management activities that will be used to complete the multi-story cropping such as, but are not limited to, pruning, selective thinning and the introduction of new species to achieve plant diversity or to re-establish native plants.
5. Identification of specific canopy and plant densities in the overstory and understory to achieve the intended purpose(s)



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6. The plant community will be diverse to avoid species-specific pests and to enhance wildlife food and habitat.

Adoption Criteria

This enhancement is considered adopted when the developed plan for forest growth manipulation has been implemented according to plan's criteria.

Documentation Requirements

1. Brief written description of the actions taken to enhance the multi-story cropping,
2. Delineations on a map or aerial photo of the areas being treated with multi-story cropping, and
3. Representative digital pictures of the overstory and understory plant community following multi-story cropping management activities.

References

Association for Temperate Agroforestry. 2012. Forest Farming Creates Profit Niches, Conserves Endangered Plants. University of Missouri. Columbia, MO. http://www.aftaweb.org/forest_farming.php

USDA National Agroforestry Center. 1997. Forest Farming: An Agroforestry Practice. Lincoln, NE. <http://nac.unl.edu/agroforestrynotes/an07ff01.pdf>

USDA National Agroforestry Center. 2012. Working Trees Info-What is Forest Farming. Lincoln, NE. <http://nac.unl.edu/Working%20Trees%20Info%20Sheets/WT%20Info%20forest%20farming.pdf>

Virginia Polytechnic Institute and State University. 2009. Non-Timber Forest Products. Blacksburg, VA. <http://www.sfp.forprod.vt.edu/>

PLANT ENHANCEMENT ACTIVITY

PLT 05 – OR MULTI-STORY CROPPING, SUSTAINABLE MANAGEMENT OF NON-TIMBER FOREST PLANTS.

Enhancement Description

This activity involves the manipulation of forest species composition, structure, and canopy cover to achieve or maintain a desired native plant community to facilitate the sustainable management of native non-timber forest plants. Other benefits include an increase in forest health and vigor, decrease in pests and diseases, control of invasive and noxious species, enhanced wildlife habitat and improved water quality.

Notes

Refer to Practices; 379 Multi-storied cropping, 590- Pest Management, 660 Tree/Shrub Pruning, and 666 Forest Stand Improvement.

Task

List of common non-wood forest products for the state.

Oregon supplement information

Non-timber forestry products (also called special forest products) are gathered from both the overstory trees and the understory vegetation. This Enhancement focuses on the native understory vegetation (or very common introduced species) as an alternate crop that can be managed in sustainable manner. There are a few main categories of non-timber forest products that are common in the state of Oregon. This list of non-timber forest products is dynamic and not all inclusive.

Poles

Firewood

Fir and Cedar Boughs

Edible Plants (such as berries, nuts and greens)

Blackberry - native & introduced
Chickweed
Current and gooseberry
Hawthorne

Elderberry (jams and wine)
Hazelnut
Huckleberry/ blueberry
Minor's lettuce
Oxalis
Raspberry -native & introduced
Rose hips
Salmonberry
Serviceberry
Strawberry
Sumac
Thimbleberry
Violet
Yarrow

Mushrooms

Boletes
Chanterelles
Matsutake
Morels

Medicinals

Cascara (Bark is a laxative)
Cherry
Devils Club (ginseng)
False hellebore
Pacific Yew (Taxol)
Purple Foxglove (Digitalis)-introduced

Floral Greens

Beargrass
Evergreen huckleberry
Moss (many different species)
Oregon boxwood
Oregon grape
Salal
Western swordfern

Honey/Beeswax:

Blackberry-native & introduced
Cherry
clover- native & introduced
Fireweed
Cranberry
Serviceberry
Snowberry
Yarrow

Cultural/Weaving/Dyeing/Basketry:

Beargrass
Bitterbrush
Bluebell

Blueberry
Bracken Fern
Buttercup-native & introduced
Cattail
Choke cherry
Cinquefoil
Dandelion-native & introduced
Dogbane
Fireweed
Groundsel
Honeysuckle
Indian paintbrush
Kinnikinick
Oregongrape
Oxalis
Purple & White Aster
Rabbitbrush
Rose
Sagebrush
Sweetgrass

NHQ criteria described in the Job Sheet for the activity are adequate.

References

USDA Plants Database: <http://www.plants.usda.gov/>

2004 Pojar & MacKinnon, "Revised Plants of the Pacific Northwest Coast", BC Ministry of Forests.

1993 Thomas & Schumann, "Income Opportunities in Special Forest Products", USDA AIB-666.

2001 Alexander & McLain, "An Overview of Non-Timber Forest Products in the United States Today", Journal of Sustainable Forestry Vol. 13, No. ¾.

1997 Freed & Schlosser, "Guide to Floral Greens: Special Forest Products", Washington State Extension, EB1659E.

Summer 2000 Stuhr, "Look at the Possibilities", Inside Agroforestry, USDA Forest Service and Natural Resources Conservation Service.