



Programmatic Plan for Clark County's Sustainable Forestry Program

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Peer Review

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¹ King County. 2003. King County Water and Land Resources Division Programmatic Plan for Management of King County-owned Working Forest Properties. King County Department of Natural Resources and Parks, Water and Land Resources Division. Seattle, Washington.

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Programmatic Plan for Clark County's Sustainable Forestry Program

INTRODUCTION

Purpose

This document outlines key policies and goals for managing forests in the Clark County Sustainable Forestry Program managed by the Department of Environmental Services (DES). This document also provides direction for land managers when developing forest stewardship plans for each forest.

Background

Clark County has obtained several forested properties in recent years through the state's Trust Land Transfer program and through the acquisition of the former Camp Bonneville military installation.

Starting in late 2011, DES began implementation of the Sustainable Forestry Program at Camp Bonneville through the development of a Forest Stewardship Plan. Douglas-fir forests at Camp Bonneville tend to be even-aged stands that are 60+ years of age, densely planted, and lacking horizontal and vertical structural diversity.

Uneven-aged forest management techniques including selective thinning, small patch cuts, habitat creation, understory replanting are thought to help manage even-aged stands towards an increase in structural diversity. The Camp Bonneville Forest Stewardship Plan was designed to treat the even-aged Douglas-fir forests at the camp as an experimental forest using these structure-based management techniques.

Camp Bonneville's forest stewardship plan was certified by the American Tree Farm System under the requirements of the Sustainable Forestry Initiative® and by the Forest Stewardship Council™. These dual certifications provide a platform to implement rehabilitation of the 3,840 acre forest's health. As a result of the structure-based management techniques, it will emerge as a natural looking, multi-storied diverse forest that supports a variety of plants and animals while generating revenue from its wood products.

Implementation of the Camp Bonneville forest stewardship plan has begun with selective thinning in priority stands. In addition, the Sustainable Forestry Program has begun to expand with development of forest stewardship plans for the Camp Hope and Green Mountain properties (to be discussed later in this plan).

GOALS FOR THE SUSTAINABLE FORESTRY PROGRAM

The overarching goal of the Sustainable Forestry Program is to research and demonstrate how former even-aged Douglas-fir forests can be managed to produce a sustained yield of commercial forest products and increased ecosystem services through the implementation of uneven-aged forest management practices. To that end, DES will utilize the following objectives when managing forest properties as part of the Sustainable Forestry Program:

Short Term Objectives (5 – 10 years)

- Thin dense stands to enhance forest health and timber productivity
- Improve wildlife habitat through snag creation, distribution of downed woody debris and forage planting
- Begin restoring riparian forest cover by planting streamside areas with a mix of hardwoods and conifers
- Develop and implement survey, control, and eradication measures for invasive non-native plant species
- Begin a systematic monitoring program to inventory and assess forest resources and wildlife habitat
- Develop an annual or semi-annual commercial thinning plan that provides sufficient income to pay for all forest management expenses and provide positive revenue to the County
- Develop a research and development program to demonstrate structure-based forest management principles

Long Term Objectives (10 – 100+ years)

- Restore historic species composition and habitat complexity throughout the forest
- Begin restoring areas of forest to late seral conditions
- Produce periodic income through commercial thinning
- Use forest resources as a model for structure-based forest management
- Recruit or retain legacy trees, old and large trees, snags and downed woody debris in order to sustain populations of native plants, fungi, and animals, both within individual forest stand and across the entire forest
- Monitor forest ecosystem dynamics, record and analyze trends and periodically update forest management plan to reflect new strategies for managing the forest
- Consolidate certifications for a suite of properties in the Upper Lacamas Basin

and develop a research and demonstration forest

GUIDELINES FOR FOREST MANAGEMENT PLANS

The following guidelines will direct the management of forestlands owned by DES to assure that they meet the programs overarching goal and both the short-term and long-term objectives. DES land managers will follow these guidelines in their management actions.

Timber Production

- Meet Washington State Forest Practice Act standards to protect water quality, riparian habitat, and other non-timber values of the forest, and to reduce the invasion of non-native vegetation into newly disturbed areas.
- Design timber harvests to make effective use of existing access and minimize the impacts of new and existing roads.
- Maintain the long-term timber production capability of the site by maintaining and/or improving forest health.
- Before commercial harvest or thinning, analyze the economic costs and benefits. The cost-benefit analysis should include: project planning and design, volume and value estimates by species; the extraction costs, including logging, trucking, permits, road building/maintenance/decommissioning, culvert fish passage assessment/removal/replacement, permitting, and reforestation. This analysis should also determine if the timing is appropriate. If the analysis concludes that harvesting costs exceed revenue generation and the overall ecological health of the forest will not be materially improved, harvesting will not be pursued until a future time when these conditions can be met.
- Develop an efficient mechanism for contracting forest practices, including harvest.
- Dedicate revenue from harvests for the continued management of the Sustainable Forestry Program. Net revenue above and beyond the needs of the program will be dedicated to the County's general fund, with the exception of Camp Bonneville where revenues are required to be reinvested in the camp according to the memorandum of agreement between Clark County and the Department of Army for early transfer of the property. See Appendix A for the 6-year Sustainable Forestry Implementation Plan.
- Use a multidisciplinary team approach to implement forest practices. The team may include the expertise of County, State or private ecologists, hydrologists and other professionals in addition to silviculturists and foresters.

Conservation and Restoration of Resources

- Protect, and where possible, enhance and restore sensitive areas, ecological and cultural resources, and fish and wildlife habitats.
- Consider cumulative impacts on ecological resources within the context of surrounding land uses.
- Manage to create a native vegetation community for each sustainable forest site that includes a range of tree species and age diversity.
- Meet the requirements of federal and state laws and other legal requirements to identify and protect endangered, threatened, sensitive, candidate species, and species of concern, and their habitats.

Public Use

Provide opportunities for education and appropriate recreation.

- Where it does not conflict with sustainable timber production and conservation of resources, provide public access and opportunities for recreation on sustainable forest properties².
- Public access may be closed, restricted or limited to protect public safety during a timber harvest; to prevent theft, vandalism and garbage dumping; to protect soils, water quality, plants and animals; or to meet other objectives identified in the individual Forest Stewardship Plan.
- Appropriate recreation may include: hiking, mountain biking, horseback-riding, picnicking, bird watching, orienteering, and recreation opportunities that require only limited development (e.g., access, parking lot, trail-building and trail improvements). Allowed recreation will be determined for each site based on sensitivity of the site and potential conflicts with other uses.
- Assure that any allowed public use of trails and roads is not resulting in damage to public resources. Decommission trails that cause damage to sensitive areas. When possible, make trail and road maps available to the public.
- When possible, provide interpretive information on each site as appropriate, including signs, maps, etc. that describe the features of the site, sustainable forestry practices, and the Clark County Sustainable Forestry Program.
- Work with community groups and individuals to help monitor, maintain, and steward sustainable forest properties.
- Consider recreation use when planning the location of a timber harvest.

² Camp Bonneville is currently implementing clean-up operations for unexploded ordnance or munitions and explosives of concern. The site does not allow for public access at this time.

When forest practices occur near recreational areas, post signs to educate, protect and inform visitors.

Provide opportunities for research and forestry demonstration.

- Make sites available for forestry education.
- Offer sustainable forests as research sites for the University of Washington, Washington State University, Clark College and other academic institutions to pursue mutually beneficial opportunities.
- Use forest practices as opportunities for educating the general public and landowners about sustainable forestry through workshops, tours, signs, and/or press releases.

Adjacent Landowners and Surrounding Landscapes

- Consider the broader landscape and adjacent landowners in planning for and managing sustainable forestry sites.
- Consider land uses and forest management strategies on neighboring properties and the surrounding landscape when preparing a Forest Stewardship Plan. Stay apprised of surrounding management activities.
- Consider impacts to adjacent landowners and the surrounding landscape when developing a Forest Stewardship Plan. Encourage landowner participation in the planning process.
- Inform adjacent landowners when going forward with forest practice or site development activities that will affect them.
- Consider sharing resources and cooperating on forest practice activities with adjacent landowners to improve operational and economic feasibility of these practices.

EXISTING FOREST STEWARDSHIP PLANS

As discussed previously, DES has developed and begun implementation on three forest stewardship plans at three separate properties. All three forest stewardship plans follow the same overarching goals and objectives.

Camp Bonneville

Camp Bonneville is located in southeastern Clark County, approximately 12 miles east of Vancouver and seven miles north of the Columbia River. The property is largely undeveloped comprising 3,840 acres.

Camp Bonneville has been designated by Clark County as a “Forest Tier I” area

through the County's Comprehensive Land Use Plan. This is defined as an area that is potentially capable of sustaining "long term production of commercially significant forest products".

To date, DES has developed a forest stewardship plan covering 1,833 acres of the 3,840 acre camp. Implementation of the stewardship plan began in 2012 with selective thinning within priority units. Reforestation of 40 acres also occurred during the winter of 2014. Implementation of the plan has stalled recently to accommodate ongoing munitions clean-up operations. For additional information on Camp Bonneville see Appendix B: Camp Bonneville Forest Stewardship Plan.

Green Mountain

Clark County's Green Mountain forest is located in southeastern Clark County, 12 miles east of Vancouver and seven miles north of the Columbia River, and is approximately one mile southwest of Camp Bonneville. Total property area of the Green Mountain forest is 360 acres.

The Green Mountain tract was acquired by Clark County through a trust lands transfer agreement with the Washington Department of Natural Resources. The County has designated Green Mountain as a Forest Tier II area through the County's Comprehensive Land Use Plan. This is defined as an area that is potentially capable of sustaining long term production of commercially significant forest products.

Forest cover across this property is dominated by even-aged Douglas fir stands that vary in age from 60 – 80 years old. These stands naturally regenerated following successive fires across the site. There is more age and species diversity throughout this forest than the stands at Camp Bonneville. Additionally, stocking densities are significantly lower, which may be due to past commercial thinning activities by either the WA DNR or a previous owner. Unlike Camp Bonneville, no prior forest inventory data was transferred to the County during the acquisition process.

Continued selective commercial thinning is recommended for the majority of the forest at Green Mountain in order to meet both long-term forest structure and habitat development and sustained revenue objectives. Periodic, low-intensity thinning can optimize tree growth, simulate the successional pattern of the historic Douglas fir forest type, optimize forest health, and minimize fire hazard. Other forest management goals include creating a multiple-canopy forest structure, increasing wildlife habitat and optimizing growth and yield of high quality timber products for domestic mills. For additional information on Green Mountain see Appendix C: Green Mountain Forest Stewardship Plan.

Camp Hope

Camp Hope is located in central Clark County, immediately north of the city of Battle Ground on the south side of the East Fork Lewis River opposite from Lewisville Regional Park and adjacent to State Route 503. The property was

purchased by the county from the Girls Scouts of America in the early 2000's. Primary uses at the site continue to be recreation.

Total property area is 107 acres and terrain on the property ranges from flat to moderately steep. The forest stewardship plan for the property lays out five (5) forest management units, one of which is currently non-forested. Forest management actions on the property historically included a shelterwood cut of approximately 28% of the property 30 years ago, and a 4 acre clear cut 12 years ago.

Forest management objectives on the property have been designed to improve or protect wildlife or plant habitat, maintain a diverse forest, assure a healthy and sustainable forest, reach ecological objectives, and balance with ongoing recreational needs. These objectives stem from a goal of maintaining and enhancing the riparian and upland forests in uneven-aged configuration. To accomplish these objectives, the forest management prescription calls for three (3) equally spaced limited harvest entries unit within the first decade of the plan. The first of these entries occurred in 2014. For more information on Camp Hope see Appendix D: Camp Hope Forest Stewardship Plan.

Future Additions to the Program

For each new sustainable forestry property added to the program, the Department of Environmental Services will develop a Forest Stewardship Plan. For example, the Spud Mountain property was recently acquired by the department through a trust lands transfer agreement with the Washington Department of Natural Resources. Each plan will be developed by the County Forester and reviewed and approved by the Resource Enhancement & Permitting Manager. The plans will follow the guidelines in this document and will pursue dual certification under the Sustainable Forestry Initiative and Forest Stewardship Council. Ultimately, as described in the long-term goals for the Sustainable Forestry Program, a major long-term goal is to consolidate the sustainable forestry certifications of properties near Camp Bonneville and Spud Mountain in the Upper Lacamas Basin in order to develop a research and demonstration forest that can be used as a community resource for generations to come.

Forest Stewardship Plans and their subsequent updates should include:

- A vision (i.e. long-term goals, and objectives) for each working forest site that correspond to the overarching goals and objectives of this plan;
- A description of funding sources and other administrative constraints that may limit potential management approaches for the property;
- Forest inventory data, including mapped sensitive areas and significant habitat features, collected with protocols consistent with industry standards and separated into management units;
- Survey and mapping of invasive non-native plant species

- Short and long-term maintenance and capital improvement needs and budgets;
- An assessment of sustainable timber production, growth and yield projections (harvest volume) and potential revenue (income/cost estimates);
- An assessment of ecological resources, forest stand health, forest habitat functions, and natural resource restoration opportunities;
- A list of management practices and time frames to address the identified goals, objectives, and priorities for at least the next 20 years.
- Plans should be updated every ten years. Plans can be amended at any time if significant new conditions or technologies arise.
- Plan updates and monitoring indicators should be flexible and based on adaptive management principles.

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APPENDICES

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APPENDIX A – 6-year Sustainable Forestry Program Implementation Plan

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**2016-2021 Sustainable Forestry Program
Project Funding Analysis**

EXPENSES

RC		2016	2017	2018	2019	2020	2021	Total Expenses	
7647	Camp Bonneville	Salaries & Benefits	\$ 50,000	\$ 75,000	\$ 60,000	\$ 25,000	\$ 75,000	\$ 25,000	\$ 310,000
		Supplies	\$ 50,000	\$ 50,000	\$ 40,000	\$ 10,000	\$ 50,000	\$ 10,000	\$ 210,000
		Services	\$ 100,000	\$ 400,000	\$ 300,000	\$ -	\$ 400,000	\$ -	\$ 1,200,000
7648	Green Mountain	Salaries & Benefits	\$ 10,000	\$ 5,000	\$ 5,000	\$ -	\$ -	\$ -	\$ 20,000
		Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7596	Camp Hope	Salaries & Benefits	\$ -	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ 15,000
		Supplies	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ 10,000
		Services	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ 100,000
7663	Spud Mountain	Salaries & Benefits	\$ 15,000	\$ -	\$ -	\$ 75,000	\$ 25,000	\$ 10,000	\$ 125,000
		Supplies	\$ -	\$ -	\$ -	\$ 50,000	\$ 10,000	\$ 5,000	\$ 65,000
		Services	\$ -	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ 400,000

REVENUES

			2016		2017		2018		2019		2020		2021		Total Revenues	
			Timber Fund	General Fund	Timber Fund	General Fund	Timber Fund	General Fund	Timber Fund	General Fund	Timber Fund	General Fund	Timber Fund	General Fund	Total Timber Fund Revenue	Total General Fund Revenue
7647	Camp Bonneville	Revenue	\$ 450,000	NA	\$ 1,000,000	NA	\$ 750,000	NA	\$ -	NA	\$ 1,000,000	NA	\$ -	NA	\$ 3,200,000	NA
7648	Green Mountain	Revenue	NA	\$ -	NA	\$ -	NA	\$ -	NA	\$ -	NA	\$ -	NA	\$ -	NA	\$ -
7596	Camp Hope	Revenue	NA	\$ -	NA	\$ -	NA	\$ 250,000	NA	\$ -	NA	\$ -	NA	\$ -	NA	\$ 250,000.00
7663	Spud Mountain	Revenue	NA	\$ -	NA	\$ -	NA	\$ -	NA	\$ 1,000,000	NA	\$ -	NA	\$ -	NA	\$ 1,000,000.00

Summary Table			2016	2017	2018	2019	2020	2021	6-year Total	6-year Sustainable Forestry Total
General Fund Annual Totals	Salaries & Benefits	\$ 25,000.00	\$ 5,000.00	\$ 20,000.00	\$ 75,000.00	\$ 25,000.00	\$ 10,000.00	\$ 160,000	\$ 515,000.00	
	Supplies	\$ -	\$ -	\$ 10,000.00	\$ 50,000.00	\$ 10,000.00	\$ 5,000.00	\$ 75,000		
	Services	\$ -	\$ -	\$ 100,000.00	\$ 400,000.00	\$ -	\$ -	\$ 500,000		
	Revenue	\$ -	\$ -	\$ 250,000.00	\$ 1,000,000.00	\$ -	\$ -	\$ 1,250,000		
Net Revenue			\$ (25,000.00)	\$ (5,000.00)	\$ 120,000.00	\$ 475,000.00	\$ (35,000.00)	\$ (15,000.00)	\$ 515,000.00	

Summary Table			2016	2017	2018	2019	2020	2021	6-year Total	Sustainable Forestry Total
Timber Fund Annual Totals	Salaries & Benefits	\$ 50,000.00	\$ 75,000.00	\$ 60,000.00	\$ 25,000.00	\$ 75,000.00	\$ 25,000.00	\$ 310,000.00	\$ 1,480,000.00	
	Supplies	\$ 50,000.00	\$ 50,000.00	\$ 40,000.00	\$ 10,000.00	\$ 50,000.00	\$ 10,000.00	\$ 210,000.00		
	Services	\$ 100,000.00	\$ 400,000.00	\$ 300,000.00	\$ -	\$ 400,000.00	\$ -	\$ 1,200,000.00		
	Revenue	\$ 450,000.00	\$ 1,000,000.00	\$ 750,000.00	\$ -	\$ 1,000,000.00	\$ -	\$ 3,200,000.00		
Net Revenue			\$ 250,000.00	\$ 475,000.00	\$ 350,000.00	\$ (35,000.00)	\$ 475,000.00	\$ (35,000.00)	\$ 1,480,000.00	

APPENDIX B – Camp Bonneville Forest Stewardship Plan

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APPENDIX C – Green Mountain Forest Stewardship Plan

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APPENDIX D – Camp Hope Forest Stewardship Plan

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