



2000 Powell St., Suite 600
Emeryville, CA 94608, USA
www.scscertified.com
Brendan Grady
bgrady@scscertified.com

FOREST MANAGEMENT AND STUMP-TO-FOREST GATE CHAIN-OF-CUSTODY CERTIFICATION EVALUATION REPORT

Forestry Branch, Joint Base Lewis-McChord, Department of Defense

SCS-FM/COC-00096N

IMNW-LEW-PWE MS 17

Box 339500

Fort Lewis, WA 98433-9500

Contact: Jeffrey Foster, Ecologist, Jeffrey.r.foster@us.army.mil

CERTIFIED	EXPIRATION
03/31/12	03/31/17

DATE OF FIELD AUDIT
01/03/12
DATE OF LAST UPDATE
03/20/12

Organization of the Report

This report of the results of our evaluation is divided into two sections. Section A provides the public summary and background information that is required by the Forest Stewardship Council. This section is made available to the general public and is intended to provide an overview of the evaluation process, the management programs and policies applied to the forest, and the results of the evaluation. Section A will be posted on the FSC Certificate Database (<http://info.fsc.org/>) no less than 30 days after issue of the certificate. Section B contains more detailed results and information for the use of by the FME.

FOREWORD

Scientific Certification Systems (SCS) is a certification body accredited by the Forest Stewardship Council to conduct forest management and chain of custody evaluations. Under the FSC/SCS certification system, forest management enterprises (FMEs) meeting international standards of forest stewardship can be certified as “well managed,” thereby permitting the FME’s use of the FSC endorsement and logo in the marketplace subject to regular FSC/SCS oversight.

SCS deploys interdisciplinary teams of natural resource specialists and other experts in forested regions all over the world to conduct evaluations of forest management. SCS evaluation teams collect and analyze written materials, conduct interviews with FME staff and key stakeholders, and completes field and office audits of subject forest management units (FMUs) as part of certification evaluations. Upon completion of the fact-finding phase of all evaluations, SCS teams determine conformance to the FSC Principles and Criteria.

All items marked with an asterisk (*) are not required for FMUs that qualify as single SLIMFs.

Contents

1.1 Certificate registration information.....	4
1.2 Areas outside of the scope of certification.....	5
1.3 Standards used.....	7
1.4 Conversion Table English Units to Metric Units (Omit if not necessary).....	7
2.0 Description of Forest Management.....	8
2.1 Management Context*.....	8
2.2 Forest Management Plan.....	11
2.3 Monitoring System.....	12
2.4 Pesticide and other chemical use.....	13
3.0 Certification Evaluation Process.....	13
3.1 Evaluation Dates and Activities.....	13
3.2 Evaluation of Management System*.....	17
3.3 Stakeholder Consultation Process*.....	17
4.0 Results of the Evaluation.....	22
5.0 Certification Decision.....	25
SECTION B – APPENDICES.....	Error! Bookmark not defined.
Appendix 1 – FSC Data Request (Public).....	Error! Bookmark not defined.
Appendix 2 – Current and Projected Annual Harvest for Main Commercial Species (CONFIDENTIAL)	Error! Bookmark not defined.
Appendix 3 – Certification Standard Conformance Table (CONFIDENTIAL).....	Error! Bookmark not defined.
Appendix 4 – Tracking, tracing and identification of certified products (CONFIDENTIAL).....	Error! Bookmark not defined.
Appendix 5 – List of Stakeholders Consulted (CONFIDENTIAL)*.....	Error! Bookmark not defined.
Appendix 6 – List of FMUs selected for evaluation (CONFIDENTIAL)*.....	Error! Bookmark not defined.
Appendix 7 – Partial Certification/ Excision (CONFIDENTIAL).....	Error! Bookmark not defined.
Appendix 8 – Additional Evaluation Techniques Employed*.....	Error! Bookmark not defined.
Appendix 9 – Peer Review and SCS Evaluation Team Response to Peer Review.....	Error! Bookmark not defined.

Section A – Public Summary

1.0 GENERAL INFORMATION

1.1 Certificate registration information

1.1.1.a Name and Contact Information

Organization name	Forestry Branch, Joint Base Lewis-McChord		
Contact person	Jeffrey Foster		
Address	Box 339500 MS17	Telephone	253-966-6446
	Joint Base Lewis-McChord,	Fax	
	WA 98433	e-mail	jeffrey.r.foster@us.army.mil
		Website	

1.1.1.b FSC Sales Information

<input type="checkbox"/> FSC Sales contact information same as above.			
FSC salesperson	Jeffrey Northfield		
Address	Army Corps of Engineers	Telephone	253-964-2100
	Joint Base Lewis	Fax	
	McChord, WA 98433	e-mail	Jeffrey.W.Northfield@usace.army.mil
		Website	

1.1.2 Scope of Certificate (see [Appendix 1](#) for further details)

Certificate Type	<input checked="" type="checkbox"/> Single FMU	<input type="checkbox"/> Multiple FMU†
	<input type="checkbox"/> Group	
SLIMF <i>if applicable</i> <i>All items marked with an asterisk (*) are not required for single SLIMFs.</i>	<input type="checkbox"/> Small SLIMF certificate	<input type="checkbox"/> Low intensity SLIMF certificate
	<input type="checkbox"/> Group SLIMF certificate	
Group Members <i>if applicable</i>		
Number of FMU's in scope of certificate	1	
Geographic location of non-SLIMF FMU(s)‡	22° 35' W	
	47° 00' N	
Forest zone ^{1,2}	<input type="checkbox"/> Boreal	<input checked="" type="checkbox"/> Temperate
	<input type="checkbox"/> Subtropical	<input type="checkbox"/> Tropical
Total forest area in scope of certificate which is:		
privately managed³	56,824 acres	

¹ According to the Holdridge life zone classification scheme.

² If more than one zone is applicable, please include the total area for each forest zone.

state managed		0	
community managed⁴		0	
Number of FMUs in scope that are:			
less than 100 ha in area	0	100 - 1000 ha in area	0
1000 - 10 000 ha in area	0	more than 10 000 ha in area	1
Total forest area in scope of certificate which is included in FMUs that:			
are less than 100 ha in area		0	
are between 100 ha and 1000 ha in area		0	
meet the eligibility criteria as <i>low intensity</i> SLIMF FMUs		0	
Division of FMUs into manageable units:			
JBLM divides its forest lands into three separate Ecological Landscape Units (ELU) to monitor landscape level attributes such as stand age-class diversity, patch-size and community type composition in order to implement management strategies tailored to the specific characteristics of each unit. Within these units, stands are selected for treatment based on a 10-year cycle for evaluating and treating delineated stand units (734 stands are currently delineated, though this is likely to change based on the initiation of the stand exam and the review of the management plan).			
†Audit team must complete Appendix 5			
‡See section 1.1.3 for Non-SLIMF group members			

1.2 Areas outside of the scope of certification

Applicability of FSC partial certification and excision policy (FSC-POL-20-002 and SCS-SOP-FM-10)		
1. Are there any lands owned or managed by the applicant not included in the scope of the certification evaluation?	<input checked="" type="checkbox"/> Yes <i>Continue to question 2.</i>	<input type="checkbox"/> No, all forestland owned or managed by the applicant is included in the scope. <i>Finished with this section.</i>
2. What is the nature of the land(s) outside of the scope of evaluation? Check all that apply.	<input type="checkbox"/> Applicant owns and/or manages other forestland (FMUs) not under evaluation. <i>Complete this section.</i>	<input checked="" type="checkbox"/> Applicant wishes to excise portions of the FMU(s) under evaluation from the scope of certification. <i>Complete this section.</i>
Explanation for exclusion of	The excluded FMU is McChord Field, which has been part of JBLM	

³ The category of 'private management' includes state owned forests that are leased to private companies for management, e.g. through a concession system.

⁴ A community managed forest management unit is one in which the management and use of the forest and tree resources is controlled by local communities.

<p>FMUs and/or excision:</p>	<p>since 2010. These lands are small, surrounded by development, and not used for military training.</p> <p>In 2010-2011, JBLM explicitly defined the certified area, which is the total area of Joint Base Lewis-McChord (91,148 acres) minus McChord Field and the following excised areas of the Fort Lewis FMU:</p> <ul style="list-style-type: none"> • Cantonment and Artillery Impact Area • Remaining two inholdings • Outgrants, including rights-of-way along public roads/powerlines/pipelines and the Nisqually Tribe fish hatchery • 17-foot buffer either side of paved road (JBLM ownership) centerlines where they pass through forested areas • 20-foot buffer inside the boundary fences • Non-forested areas outside of these exclusions <p>In the 2012 reassessment, JBLM indicated that they had to clearcut the south approach zone to Gray Army Airfield, a decision out of Forestry Branch’s control. The proposed area to be excised is 206 acres.</p> <p>These exclusions total 34,324 acres, so the total certified area is 56,824 acres. The Forestry Branch does no management in the cantonment, except for selling trees felled during construction. JBLM also does no management in the Artillery Impact Area, due to the presence of unexploded ordnance, or in the two in-holdings and the fish hatchery. The two in-holdings may eventually become a part of the certified FMU.</p>
<p>Control measures to prevent mixing of certified and non-certified product (C8.3):</p>	<p>No Forestry Branch Timber sales occur on the McChord FMU.</p> <p>On the excised areas of Fort Lewis, the cantonment and artillery impact area, in-holdings, and non-forested areas are easily excisable from a chain of custody standpoint. These areas are maintained as separate harvestable units. Corps of Engineers staff that administer timber sales know which units/ areas are certified and which are not. JBLM has documented COC procedures for areas that may include certified and non-certified portions that are sufficient to ensure that no mixing occurs.</p>
<p>Description of FMUs excluded from or forested area excised from the scope of certification:</p>	

Name of FMU or Stand	Location (city, state, country)	Size (ha or ac)
McChord Field FMU	Joint Base Lewis-McChord, WA,	618 ac
Excised areas of Fort Lewis	USA	33,500 ac
Proposed airfield		206 ac

FSC will only allow its association with organizations that are not directly or indirectly involved in the unacceptable activities defined in FSC-POL-01-004.

1.3 Standards used

Box 1.3.1.1 – Applicable FSC-Accredited Standards		
Title	Version	Date of Finalization
FSC-US Forest Management Standard	V1-0	July 8 th , 2010
FSC US Standards for US Department of Defense and Department of Energy Forests	V1-1	February 3 rd , 2004

All standards employed are available on the websites of FSC International (www.fsc.org), the FSC-US (www.fscus.org) or the SCS Forest Conservation Program homepage (www.scs-certified.com/forestry). Standards are also available, upon request, from Scientific Certification Systems (www.scs-certified.com).

1.4 Conversion Table English Units to Metric Units (Omit if not necessary)

Length Conversion Factors		
To convert from	To	multiply by
Mile (US Statute)	Kilometer (km)	1.609347
Foot (ft)	Meter (m)	0.3048
Yard (yd)	Meter (m)	0.9144
Area Conversion Factors		
To convert from	To	multiply by
Square foot (sq ft)	Square meter (m ²)	0.09290304
Acre (ac)	Hectare (ha)	0.4047
Volume Conversion Factors		
To convert from	To	multiply by
Cubic foot (cu ft)	Cubic meter (m ³)	0.02831685
Gallon (gal)	Liter (l)	4.546
Quick reference		
1 acre	= 0.404686 ha	
1,000 acres	= 404.686 ha	
1 board foot	= 0.00348 cubic meters	
1,000 board feet	= 3.48 cubic meters	
1 cubic foot	= 0.028317 cubic meters	

2.0 Description of Forest Management

2.1 Management Context*

2.1.1 Regulatory context

Box 2.1.1.1.	
Pertinent Laws and Regulations at the National Level	Endangered Species Act Clean Water Act (Section 404 wetland protection) Occupational Safety and Health Act National Historic Preservation Act Archaeological and Historic Preservation Act Americans with Disabilities Act U.S. ratified treaties, including CITES Lacey Act
Laws and Regulations Pertinent to JBLM	Sikes Act (Public Laws 99-561 and 105-85). Army Regulation 200-3, 9-4 Washington State Historic Preservation Offices Native American Graves Repatriation and Protection Act

Regulatory context description (portions adapted from the JBLM Forest Management Strategy 2012 revision).

Fort Lewis was established in 1917 with the passage of a Pierce County bond measure to purchase 70,000 acres of land to donate to the federal government for use as a military installation. The Sikes Act requires the DoD to develop and implement Integrated Natural Resource Management Plans (INRMP) for all military installations. As such, JBLM adopted an INRMP in 2001 as required by Army regulations (AR 200-3, 9-4) and the Sikes Act (Public Laws 99-561 and 105-85). Forest management operations are a required component of the INRMP for JBLM. The INRMP incorporates the Forest Management Strategy and two other natural resources plans; the Fish and Wildlife Management Plan and the Integrated Pest Management Plan. The INRMP also required preparation of a Prairie Management Plan and an Oak Woodland Management Plan.

The Cultural Resources Program at JBLM undertakes archaeological and historic site preservation and coordination with local tribes as mandated by the National Historic Preservation Act, the State Historic Preservation Offices and the Treaty of Medicine Creek. Native American cultural resources, including traditional uses, are regulated by the Native American Graves Repatriation and Protection Act, and Executive Orders 13007 and 13175. JBLM recognizes tenure and use rights within the “usual and accustomed territories” as delineated by the federal government for the tribes involved in the 1854 Treaty of Medicine Creek, which today includes the Puyallup, Squaxin Island, and Nisqually tribes. In
Version 5-0
June 2011

compliance with sections 106 and 110 of the National Historic Preservation Act, the Cultural Resources Program regularly conducts and contracts out archeological and cultural resource surveys across JBLM in order to identify any such sites prior to development or management activities. OSHA regulates workplace safety and conducts regular inspections during harvesting to ensure safety regulations are met.

JBLM is subject to the FSC indicators developed specifically for certification assessments of US federal lands under the authority of the Departments of Defense and Energy (labeled as such in the conformance table), in addition to the FSC P&C. On JBLM specifically, the Forestry Branch is responsible for forest and timber management, while the Army Corps of Engineers is responsible for administering the timber sales.

2.1.2 Environmental Context

Box 2.1.2.1.
Environmental safeguards:
The use of slash on skid trails and prohibition of operations on sensitive sites during saturated conditions help to reduce impacts to soil, water, and understory vegetation. Use of slash on skid trails minimizes rutting and compaction. The Wildlife Division conducts wetland surveys prior to harvests to ensure that all sensitive areas have been identified. These wetland areas are delineated and protected during harvests. Waterbars and other drainage structures, as well as slash, are used to minimize and control erosion. Streams and other water courses are identified prior to harvest and protected. The only Class A stream, the Nisqually, has a no-harvest buffer that exceeds FSC-US Pacific Coast guidelines.
Management strategy for the identification and protection of rare, threatened and endangered species and their habitats:
JBLM has a Fish & Wildlife Division that reviews all timber harvest areas prior to the initiation of harvesting. During this review, the wildlife team identifies and delineates any wetlands that may have not been captured in the National Wetlands Inventory, identifies raptor nests, and advises on the protection or enhancement of RTE species and their habitat. JBLM cooperates with local Tribes on Salmonid and amphibian surveys, which are conducted annually. Locations of important species and their habitats are included in the GIS database. JBLM cooperates with the Washington Department of Fish and Wildlife on telemetry and vegetation surveys of core habitat of Western grey squirrel. JBLM's plant communities are well documented in the management plan and harvest prescriptions are designed to protect or enhance these resources. JBLM protects remnant old growth stands, as well as what it terms 'reference stands,' which are allowed to develop in the absence of harvest. Many of these stands are developing late seral conditions over time. Modifications are made to harvest prescriptions when rare ecological communities are present.

2.1.3 Socioeconomic Context (adapted from the JBLM Forest Management Strategy, 2005).

The total number of soldiers stationed at JBLM is currently 44,000. The total resident population of Fort Lewis (military and family) fluctuates annually as troops and families move on and off the installation and as units are deployed or return from deployment. Approximately 50% of soldiers and family members live off post, with 95 percent of these live in Pierce and Thurston Counties. In addition, an estimated 16,000 retired personnel and 4,900 civilian personnel reside in or near Pierce and Thurston Counties. JBLM has a large impact on local employment and business, with Fort Lewis expenditures constituting 10 to 12 percent of the Pierce and Thurston Counties' total income. The Forestry Branch generates substantial revenue for the installation through the regular supply of sawtimber and firewood. A rough estimate of the employment provided by timber harvest from Fort Lewis is about 117 direct jobs and 180 indirect jobs.

The area surrounding JBLM has experienced rapid development in the last decade. Development north of the installation includes residential housing interspersed with commercial areas, while the east and southeast of the base are characterized by extensively subdivided, low density rural residential development. Land south and southwest of the Fort is comprised of private forest lands and agricultural lands, interspersed with rural residential areas. Rapid development from the communities of Lacey, Olympia, and Tumwater is expanding towards the southwest boundary of the Fort. The Nisqually Indian Reservation and the Nisqually National Wildlife Refuge are adjacent to the western boundary. The Nisqually Reservation was established under the terms of the 1854 Medicine Creek Treaty. Two-thirds of the original reservation was acquired by the U.S. Army in 1917 and incorporated into Camp Lewis

2.1.4 Land use, Ownership, and Land Tenure (adapted from the JBLM Forest Management Strategy, 2005).

The original military installation of Camp Lewis was established in 1917 on about 67,000 acres acquired by land-grant from Pierce County. In 1926, the post was renamed Fort Lewis and construction of facilities proceeded steadily on the northwest portion of the installation, with accelerated development during World War II. During this time, additional lands were obtained, primarily by condemnation. During World War II, 17,160 acres of cut-over forest south of the Nisqually River (Rainier Training Area) were acquired from Weyerhaeuser Company and other private owners.

Fort Lewis contains three primary, military land-use categories: the cantonment area, training areas, and airfields (Gray Army and McChord). The cantonment area includes residential, administrative, commercial, industrial, and open space uses. The training areas consist of 75,573 acres, used primarily as maneuver, impact range, and special-use areas. JBLM allows recreational access to the forest through a permit system available to those members of the community who have some prior association with the installation. In recognition of the role the JBLM forests play for the community both on and off base, forest management activities strive to maintain scenic values and safe public access in designated scenic and recreational areas. These areas include the Fort Lewis Golf Course, camping areas at Chambers and Lewis Lakes, scenic corridors along the Nisqually River, and scenic buffers along some public highways.

Currently, there are 242 recorded archaeological sites on the installation. The vast majority of known cultural resources on Fort Lewis are pioneer homesteads and farmsteads that date from the 1850s. JBLM recognizes tenure and use rights within the “usual and accustomed territories” as delineated by the federal government for the tribes involved in the 1854 Treaty of Medicine Creek, which today includes the Puyallup, Squaxin Island, and Nisqually tribes. Such use rights include regular access to sacred or religious sites and cemeteries, and the rights and ability to gather food plants, firewood, cedar bark and logs for canoes.

2.2 Forest Management Plan

Box 2.2.1.1. – Forest Management Plan	
Management objectives:	
The mission statement of the 2012 revised Forest Management Strategy is “to provide good stewardship of the forested training lands of JBLM by ensuring the continued existence of a healthy forest that supports military training, sustains native plants and animals, and benefits local communities.”	
Forest Composition and Rationale for Species Selection:	
JBLM is dominated by Douglas fir dominated forest, with red alder, black cottonwood, western redcedar, western hemlock, bigleaf maple, ponderosa pine and Oregon white oak also present. Minor tree species include Sitka spruce, Pacific madrone, bitter cherry, Pacific yew, grand fir and lodgepole pine. Douglas fir is the primary species harvested.	
General Description of Land Management System(s):	
Harvest types currently include variable density thinning, partial overstory removal, and thinning with gap creation, primarily due to removal of Laminated root rot pockets. There has been a policy of no clearcutting since 1991; the most aggressive timber harvests have been partial overstory removals. The average residual stand diameter is 24 inches; the diameter of the cut trees has averaged 18 inches. Variable density thinning is now the primary tool for moving conifer stands towards the desired future conditions because it causes gradual increases in horizontal and vertical diversity.	
Silvicultural system(s)	Area under type of management (ha or ac)
Even-aged management	0
Clearcut (clearcut size range)	
Shelterwood	
Other (e.g., coppice, variable retention, seed-tree)	
Uneven-aged management	100%
Individual tree selection	
Group selection: in cases of Laminated root rot, small gap openings are used	10%
Other: variable density thinning, partial overstory removal	90%
Non-timber Forest Products (NTFPs)	

Silvo-pastoral production systems	
Agro-forestry production systems	
Harvest Methods and Equipment used:	
	Gap openings, variable density thinning, overstory removal: skidders, yarders, tractors.
Estimate of maximum sustainable yield for main commercial species (including NTFPs):	10-12 mmbf
Explanation of the assumptions and reference to the data source upon which estimates are based:	
JBLM annual harvest records and CFI and Intensive Stand Inventory (ISI) data analysis.	
Explanation of the management structures:	
The Forestry Branch is in charge of managing the forest resources on JBLM for multiple uses, including ecological restoration and protection of RTE species and their habitat. They designate and manage stands for harvests, determine the volume of wood available and harvest prescriptions to be used and mark all trees and layout sales. Actual timber sales are sold and administered by the Army Corps of Engineers, which maintains an office on the installation. Logging companies are contracted to operate a timber sale, though often the logger may be contracted through the mill that has purchased the sale.	

2.3 Monitoring System

Box 2.3.1.1 – Monitoring procedures
Growth and Yield
Growth and yield are monitored through the Continuous Forest Inventory system, established in 1963 and last measured in 2004. Plot volume is calculated at each measurement interval – each tree is tagged, allowing calculation of net growth and mortality over time.
Forest dynamics and changes in composition of flora and fauna
The Intensive Stand Inventory provides a “snapshot” of a representative sample of stands in each of the three major, ecological forest types (Moist, Dry, and Colonization), as well as other Management Unit Categories occupying substantial total acreages, such as unmanaged reference areas. The ISI measures snags, seedling vigor, sapling vigor, BA, understory composition, downed woody debris for biomass and fuels loading information, cover by forest layer, and attributes of average overstory trees
Environmental Impacts
Monitoring activities related to assessment of environmental impacts include the effectiveness of ecological restoration, silvicultural treatments, Salmonid and wildlife populations, and forest inventory.
Social Impacts
JBLM is in the process of contracting a social and economic analysis of the forestry program with the goal of analyzing the social impacts of a variety of forest management activities within the defined socioeconomic region of influence. Forest management activities, the impacts to be considered and stakeholder groups to be assessed have already been decided, and the contract is awaiting approval for the work to begin.
Costs, Productivity, and Efficiency

The JBLM forestry program is considered “reimbursable” meaning the costs of the program is borrowed from appropriations to the DoD by Congress and reimbursed through commercial sales of forest products. JBLM forestry branch tracks costs and revenue associated with forest management and sales and has consistently produced the highest revenue of any installation forestry program over the last several years, enabling it to provide the installation with fire suppression, prescribed burning, and road maintenance services.

2.4 Pesticide and Other Chemical Use

Commercial name of pesticide/ herbicide	Active ingredient	Quantity applied annually (kg or lbs)	Size of area treated annually (ha or ac)	Reason for use
Garlon 4 Ultra	Triclopyr	0.14 lbs	1.24 ac	Research study on methods to control Scotch broom in forest plantations.
Garlon 4 Ultra	Triclopyr	0.06 lbs	0.5 ac	invasive periwinkle in an oak woodland
Milestone	aminopyralid tri-isopropanolammonium	0.12 lbs	3.0 ac	oak/pine savanna to control non-native tall oatgrass
<i>See FSC-GUI-30-001 V2-0 for a list of prohibited ingredients and other information on chemical use in FSC-certified operations.</i>				

3.0 Certification Evaluation Process

3.1 Evaluation Dates and Activities

3.1.1 – Evaluation Itinerary and Activities

4 – Jan – 2012	
FMU/Location/ sites visited*	Activities/ notes
Opening meeting	Introductions; review of scope, open CARs/OBSs and FY10-11 management activities; discussion of fire safety and smoke management complaint system; finalization of field itinerary.
South Perry 7	30 acre clearcut (2009); reforested in March 2011 (45% DF, 14%WRC, and 41% Ponderosa Pine (PiPo) planted under retained Oregon white oak (OWO)); riparian area was noted during harvest and added to maps; WA DNR was invited to review reforestation plan and had no recommended

	changes.
South Perry Gap Study	Explanation of gap study variables (opening size and species mix) and frequency of monitoring; management results will be used for adaptive management.
TA10 Prescribed Burn	August 2011 prescribed burn to favor overstory PiPo and residual small diameter PiPo for next generation of trees; minor component of OWO. Discussion if prescribed fire planning and objectives.
West Heart Break	Active harvest and PiPo partial release experiment (PiPo approximately 30 years older than overstory DF). Experiment and control trees selected at random within a variable density thinning harvest.
Discussion with contractor	Discussion of OSHA stump specifications and training; small business opportunities.
5 – Jan – 2012	
FMU/Location/ sites visited*	Activities/ notes
Auditor Forward	
Unmanaged Stand #4 – Rainier training area	Unmanaged stand, not cut since land was acquired after WWII, functions as a reference area. Substantial LRR infestation. Discussed three different inventory systems, ISI, CFI, Stand Exam.
Upper Weird burn area	Prairie system with oak on edges, four separate burns conducted, one in the last year. On the other side of the road visited oak savannah with a grass and broom understory burnt two years ago. Some broom only top killed, only some roots killed, so likely burn next year. Discussion of prescribed burns and intent to remove broom without damaging oak. Oak regeneration not present due to low mast and light competition from broom.
Evans prairie	140 acre marked variable density thin, half operated on – wet forest area so no rubber skidders during winter and harvest stopped for the season. Discussion on harvest close-out, road closure and LRR management techniques.
North Cheatle	Completed sale, visited to see wildlife tree and buffer trees retained for Western grey squirrel mid-sale. Discussed retention guidelines, wildlife trees and legacy trees, marking system, harvest layout and RTE species.
Hardwood Stand 4 – HCVF Spruce and Alder	Wetland complex/terrace system, reference area with 60-80 year old Sitka spruce and alder hardwood stands. Designated HCVF area, high species diversity, species not usually found on JBLM. Saw illegally felled maple, discussed illegal activity (firewood collection, trespass). Reviewed property boundaries and road maintenance due to crushed culvert and water drainage issue.

West Rainier A planting unit	Planting unit with study on LRR presence and seedling mortality. Require loggers to mark LRR stumps, though review shows only 75% accurate ID, so may change requirement. GIS has layer for LRR.
Auditor Meister	
Proposed airfield	Excision and partial certification discussion; site recommended for excision due to Forestry Branch's lack of control. Discussion of FSC-US Pacific Coast regional even-aged management guidelines
Beal Hill	2009 harvest (3 rd thinning; 26 acres) – 11 acres mechanically prepared for reforestation (5 reforested with DF; 6 acres mixed conifer, noted that western white pine planted near residual oaks); retention of Big-leaf maple, small DF, western hemlock, western red cedar; adaptive management discussion for reforestation; rutting noted in closed skid trail; contract discussion; western white pine range in Puget Sound discussion; oak mast monitoring by WA Department of Fish & Wildlife.
NP IV	Variable density thinning (active sale; 136 acres); specifications for leave trees, blowdown salvage, course woody debris, and slash disposal and retention; laminated root rot stump marking discussion (adaptive management); road rocked; most skid trails blocked upon exit
Reference Stand	Unmanaged area; clearcut by previous landowner (before 1917) and allowed to naturally recover by JBLM. Area is easily recognizable.
Rumble Hill	Prescribed burn in oak-savannah – maintained as open oak-savannah for military training and control Scotch broom.
McAlister Oak-Savannah and Woodland	Prescribed burn; treatment of periwinkle and Scotch broom with herbicide.
Nisqually River (Hatchery area)	Riparian management zone (RMZ) that includes hill slopes with mixed conifers and hardwoods. RMZ width exceeds Class A requirements. No harvesting, but ecological restoration activities permitted (e.g., invasive species control). Water quality monitored for hatchery.
Interviews with base personnel	Pathogens, training, timber inventory, contract system, data management, stakeholder outreach & involvement, wildlife activities, tribal participation, prescribed burn program, and law enforcement.
6 – Jan – 2012	
FMU/Location/ sites visited*	Activities/ notes
Auditor Forward	
Oak OP9	Oak woodland, more dense than typical oak woodland with stump sprouts and dense underbrush, already thinned twice. Waiting to burn until oak mature, and don't want to open it up too fast because of Scotch broom.

Nisqually River floodplain	The entire floodplain, wetland areas and slopes are in a conservation reserve, no harvesting or management except for ecological restoration. Discussed FSC required buffer widths.
Auditor Meister	
Review of Chain of custody	
Both auditors	
Meeting with military trainers	Discussion of general logistics of coordinating training with forest management activities.
Auditor deliberations	
Closing meeting	Issuance of preliminary findings and timeline for report
<i>Add more rows as necessary.</i>	

3.1.2 – Total time spent on evaluation*

A. Number of days spent on-site assessing the applicant:	3
B. Number of auditors participating in on-site evaluation:	2
C. Additional days spent on preparation, stakeholder consultation, and post-site follow-up:	1
D. Total number of person days used in evaluation:	7
(Line D = (Total number of days in Line A x Total number of auditors from Line B) + additional days from Line C.	

3.1.3 – Evaluation Team

Auditor Name:	Liz Forward	Auditor role:	Lead auditor
Qualifications: Ms. Forward is a Program Associate in the LegalHarvest and FSC Forest Management program with Scientific Certification Systems. She holds a B.A. in Human Biology from Stanford University and Masters of Environmental Management and Masters of Forestry degrees from Duke University's Nicholas School of Earth and Environmental Science. She has worked in rural land use planning in Colorado and Montana, and in forest certification and sustainable agriculture in Indonesia. She is an ISO accredited lead auditor and has conducted forest management evaluation and surveillance audits in the Western United States and Indonesia.			
Auditor Name:	Kyle Meister	Auditor role:	Auditor
Qualifications: Mr. Meister is a Certification Forester with Scientific Certification Systems. He has been with SCS for three years and has conducted FSC pre-assessments, evaluations, and surveillance audits in Brazil, Panama, Mexico, Indonesia, India, and all major forest producing regions of the United States. He holds a B.S. in Natural Resource Ecology and Management and a B.A. in Spanish from the University of Michigan; and a Master of Forestry from the Yale School of Forestry and Environmental Studies. Mr. Meister has experience as an environmental educator and natural resource consultant in the U.S., Mexico, Ecuador, Costa Rica, Colombia, and Brazil. He is responsible for reviewing all of SCS' forest			

management reports from Latin America. He is a member of the Forest Guild and Society of American Foresters.

3.2 Evaluation of Management System*

3.2.1 – Methodology and strategies employed

SCS deploys interdisciplinary teams with expertise in forestry, social sciences, natural resource economics, and other relevant fields to assess an FME's conformance to FSC standards and policies. Evaluation methods include document and record review, implementing sampling strategies to visit a broad number of forest cover and harvest prescription types, observation of implementation of management plans and policies in the field, and stakeholder analysis. When there is more than one team member, team members may review parts of the standards based on their background and expertise. On the final day of an evaluation, team members convene to deliberate the findings of the assessment jointly. This involves an analysis of all relevant field observations, stakeholder comments, and reviewed documents and records. Where consensus between team members cannot be achieved due to lack of evidence, conflicting evidence or differences of interpretation of the standards, the team is instructed to report these in the certification decision section and/or in observations.

3.2.2 – Pre-evaluation*

A pre-evaluation of the FME *was not* required by FSC norms.

A pre-evaluation of the FME was conducted as required by and in accordance to FSC norms.

3.3 Stakeholder Consultation Process*

In accordance with SCS protocols, consultations with key stakeholders were an integral component of the evaluation process. Consultation took place prior to, concurrent with, and following the field evaluation. The following were distinct purposes to the consultations:

1. To solicit input from affected parties as to the strengths and weaknesses of the FME's management, relative to the standard, and the nature of the interaction between the company and the surrounding communities.
2. To solicit input on whether the forest management operation has consulted with stakeholders regarding identifying any high conservation value forests (HCVFs).

Principal stakeholder groups relevant to this evaluation were identified based upon results from the pre-evaluation (if applicable), lists of stakeholders from the FME, and additional stakeholder contacts from other sources (e.g., chair of the regional FSC working group). The following types of groups and individuals were determined to be principal stakeholders:

Box 3.3.1 – Stakeholder Groups consulted during evaluation for certification	
FME Management and staff	Pertinent Tribal members and/or representatives
Consulting loggers	Members of the FSC National Initiative
Contractors	Members of the regional FSC working group
Lease holders	FSC International
Adjacent property owners	Local and regionally-based environmental organizations and conservationists
Local and regionally-based social interest and civic organizations	Forest industry groups and organizations
Purchasers of logs harvested on FME forestlands	Local, state, and federal regulatory agency personnel

The stakeholder consultation activities were organized to give participants the opportunity to provide comments according to general categories of interest based on the three FSC chambers, as well as the FSC Department of Energy /Department of Defense requirements. The table below summarizes the major comments received from stakeholders and the assessment team’s response. Where a stakeholder comment has triggered a subsequent investigation during the evaluation, the corresponding follow-up action and conclusions from SCS are noted below.

Box 3.3.2 – Summary of Stakeholder Comments and Responses from the Team Where Applicable	
Stakeholder comments	SCS Response
Economic concerns	
Small logging companies are feeling squeezed by new, larger companies bidding on sales. There is a lot of competition with larger companies recently, and the small businesses are losing out, as they do not have the resources to bid on sales.	Due to the number of comments received this year regarding recent changes in the companies buying timber sales, SCS did extensive stakeholder consultation and document review on the issue during the audit, and carefully reviewed the requirements of the standard that relate to forest worker and employee relations, hiring and contracting practices and local purchase of goods and services. Information collected during the audit confirmed that although most sales on JBLM have been bought in the past by a handful of small logging companies (with small defined as having fewer than 500 employees), five of the last seven sales have been bought by a new, large mill with multiple sites in both Washington and Oregon, which has subsequently hired many of the local loggers to implement the jobs. JBLM is not required to set aside a certain number of sales for small businesses – rather, JBLM has an agreement with the local Small Business Association, whereby they have agreed that if more than 20% of the total annual volume in sales is bought by a large
Big mills have bought most of the sales in the last year, it has been hard on the small companies. Small logging companies have circulated a letter to sign, regarding the issue, that will be given to JBLM forestry soon.	
Small loggers haven’t been	

<p>buying any sales because the big mills have been buying them all out. JBLM is supposed to set aside jobs for small businesses, but they have not. When the issue has been brought up to people on the base, they say it is the responsibility of the logger to complain and get sales set aside.</p>	<p>company, JBLM will speak with the SBA about setting aside certain sales for small bidders. The agreement is not binding, and JBLM has not yet entered into discussion with the SBA regarding the recent change in bidding norms.</p> <p>In all other regards JBLM is meeting the requirements of the standard vis-à-vis worker relations and hiring and contracting practices, including ensuring that qualified workers are hired to implement the management plan, and hiring local workers when available. Interviews with loggers both before and during the audit indicated that small local operators are now being hired by the mills who outbid them to work the sales, as they are located nearby and more familiar with the ground.</p> <p>SCS is of the opinion that continued open communication with JBLM forestry staff on the part of small business loggers will enhance understanding of the issue, and potentially improve feelings by all parties. The letter being circulated among logging companies describing the recent shifts in sales bought and feelings on the part of small business owners is a step in the right direction, and will hopefully clarify the issues and bring the matter to everyone's attention. JBLM remains in conformance with related requirements of the standard, though this issue will continue to be reviewed at subsequent audits, to examine progress between the parties.</p>
<p>New requirements for loggers from JBLM, including slash treatment and road maintenance, is increasing costs and affecting bids from small logging companies.</p>	<p>SCS thoroughly investigated the recent changes in JBLM's timber sales contracts that now places responsibility for road repair and closeout on the logger. Although stakeholders voiced concern that this requirement is an added burden that leads to higher costs associated with a given sale, and thus higher bids that might be underbid by a competitor, this does not seem to be the case thus far. The road work requirements apply to all loggers equally and companies are not being underbid based on the requirement.</p>
<p>The inclusion of road maintenance in logger's responsibilities, like rocking the road after a job, has changed the bid process – they can do it, but it increases costs and changes bids.</p>	<p>Rather, discussion with JBLM forestry staff indicated that the change in requirements was due to internal changes on the base – mainly that the individuals responsible for road work have been moved to a different division (they are no longer housed within forestry) and the funding allocation process has changed making it is more difficult to get funds in advance dedicated to roadwork. This has meant that JBLM has needed to be more creative in finding ways to ensure road repair following harvests (particularly rocking needs) is completed.</p>

	<p>According to forestry staff, the current solution of having the rocking done by logging crews has worked well.</p> <p>The auditors noted the good condition of most roads, the recent rocking completed following harvests, and were impressed with JBLM's creativity in ensuring the requirements of the standard are met, given the challenging circumstances related to road maintenance they experience on the installation. While the auditors recognize this has become an additional responsibility of the logger, the change is not unduly affecting any one company, and is improving the quality of the road network on the installation. Furthermore, interviews with logging contractors confirmed that they were addressing the cost of road maintenance and slash treatment in their bids.</p>
<p>There is lost time on security in terms of trucking – e.g. they lose 1 or 2 loads just due to the time lost going through the security gate. Security clearance should be gotten for haulers, which would reduce costs.</p>	<p>Although SCS recognizes that the security measures required by the base require extra time, security requirements are outside the purview of the forestry branch, and affect all employees and contractors who access the base equally. Examination of bids on the Federal Budget Office (FBO) website revealed that JBLM has a "Fast Access Gate Program," which contractors may inquire about through the FBO website.</p>
<p>Social concerns</p>	
<p>JBLM remains easy to work with, they are pretty reasonable.</p>	<p>Noted as further evidence of conformance.</p>
<p>In general the JBLM forestry program remains a strong leader with good intentions. The challenge that remains is enacting the needed changes in a timely and transparent way, with sufficient communication to interested parties.</p>	<p>SCS is aware that frequent, open stakeholder consultation and transparent communication with independent experts and interested parties remains a challenge for JBLM. This issue has been noted as an area of weakness in overall conformance to the standard. There are many places in the standard where specific measures for communication with interested parties are required, but the most relevant requirement for JBLM is listed under Indicator 4.4 DOD/DOE 1. SCS issued an observation for this indicator, the findings for which read: While the level of non-compliance with this indicator does not rise to the level of non-conformity, the auditors noted that CARs have already been issued under several criteria referenced within this requirement, including Criteria 4.4, 7.1 and 9.1. The prevalence of these CARs may be indicative of a more systemic problem of adequately incorporating sufficient public consultative processes into management planning and operations</p>
<p>While there has been some opportunity for review of management plans, when there are disagreements about the course of certain actions, affecting change has been incredibly difficult, often</p>	

<p>requiring years of follow-up; changes that are made are poorly communicated.</p>	<p>that involve public input.</p> <p>Please see the CAR/OBS form for the full description of the Observation.</p> <p>JBLM is aware of their challenges regarding public consultation and sufficient communication at a variety of levels, and has undertaken the update of the forest management plan with the explicit goal of increased stakeholder involvement and consultation on the final plan.</p>
<p>Although communication efforts between the forestry branch and other divisions on the base affected by forest management have been improving, there are still information gaps and challenges associated with getting all affected parties the necessary information on forest management activities, so that appropriate scheduling needs can be met.</p>	<p>Adequate communication with stakeholders on the installation also remains a challenge for JBLM forestry. After interviews with a variety of on-base stakeholders, including the Cultural Resources program and Range Control, SCS auditors issued two observations related to information sharing, education and communication with the community on the installation, including other branches and divisions affected by forestry operations. The observations included the suggestions that JBLM consider some additional or alternative means of disseminating information to the larger community on base regarding their forestry goals, operations and practices, and review information dissemination techniques to those likely to be affected by forest management activities. Targeted information sessions on topics of interest to stakeholders, such as clear cutting or management options for Laminated root rot may improve the larger community's understanding of forest resources on base, and increase support of forest management practices.</p> <p>For a full description of the associated findings, please see the CAR/OBS form, OBS 2012.3 and OBS 2012.4.</p>
<p>Environmental concerns</p>	
<p>Archaeological concerns are more likely to drive protection zones than are the needs of rare species. In spite of efforts to move toward a more? harvest approach that results in variable spacing and variable tree size, too often, the end result continues to be too many even-aged, evenly-spaced stands.</p>	<p>SCS is in agreement that JBLM is in exemplary conformance with the criteria of the standard that require measures to protect archeological sites and sites of cultural significance that may be affected by forestry operations, and is aware that these requirements drive protection measures to some extent. However, the recent HCVF and Representative Sample Area analysis conducted by the forest ecologist is more than adequate to ensure that reserve areas and protected zones are being established on the installation to meet the habitat needs of any RTE species. It is important to note that this HCVF analysis was recently completed,</p>

<p>Such stands are typically of very limited use to wildlife due to the lack of canopy structure and general cover. They are also less likely to produce the seed needed by many conifer-associated species for food. Forested stands on JBLM are typically lacking or nearly so, in snags, hence little to retain.</p>	<p>and has not yet gone through consultation with stakeholders or outside experts. It is therefore unlikely that most JBLM stakeholders are aware of JBLM’s efforts regarding HCVF. SCS extended a CAR from last year’s audit specifying that the consultative phase of the HCVF analysis shall take place prior to the new certificate being issued. Please see the associated CAR/OBS form for the full findings related to CAR 2011.6.</p> <p>Regarding stand composition and spacing and snag retention, site visits by auditors did not yield evidence that JBLM is in non-conformity with any of the standard requirements related to these topics. The increased presence of Laminated Root Rot (LRR) is actually creating small gaps in many forested areas, creating a more patchy landscape than was previously found on JBLM. Even age management practices in response to LRR are no longer employed. Snag retention was found to be adequate at the sites visited, though SCS notes that the because the forest is used extensively for training purposes, JBLM is under pressure from Range Control to remove as many snags and hazard trees and slash as possible, to ensure troop safety during training. This has resulted in fewer snags and less slash than would ordinarily be found for an operation in the Pacific Northwest, though not at a level to incur a non-conformity with the standard.</p>
---	--

4.0 Results of the Evaluation

Table 4.1.1 below, contains the evaluation team’s findings as to the strengths and weaknesses of the subject forest management operation relative to the FSC Principles of forest stewardship. Weaknesses are noted as Corrective Action Requests (CARs) related to each principle.

Table 4.1.1 Notable strengths and weaknesses of the forest management enterprise relative to the FSC P&C.

Principle/ Subject Area	Strengths Relative to the Standard	Weaknesses Relative to the Standard
P1: FSC Commitment and Legal Compliance	Staff are knowledgeable about state, federal, and military codes and regulations.	CAR 2012.1 – Indicator 1.3.a CAR 2012.2 – Indicator 1.4.a
P2: Tenure & Use Rights & Responsibilities	JBLM demonstrates excellent consideration of tenure and use rights allocated to local tribes in managing its forest resource.	None.

P3: Indigenous Peoples' Rights	Cooperation with the Cultural Resources Program is effective in identifying sites of cultural significance, and a variety of measures are implemented to ensure consultation and protection of significant sites and resources occurs.	None.
P4: Community Relations & Workers' Rights	Contracts include reference to safety requirements. Contractors systematically implement changes in response to findings of OSHA inspections.	CAR 2011.2 – Indicator 4.4.a OBS 2012.3 – Indicator 4.1.f OBS 2012.4 – Indicator 4.4.c OBS 2012.5 - Indicator 4.4 DOD/DOE1 CAR 2012.6 - Indicator 4.4 DOD/DOE2 Stakeholder consultation and subsequent CARs and Observations indicate that community relations and consultative processes are an area of relative weakness for JBLM.
P5: Benefits from the Forest	JBLM forestry maintains several detailed inventory systems, and collects an impressive amount of data to assess management impacts over time and plan future harvests.	None.
P6: Environmental Impact	JBLM maintains a network of RSAs that fulfill the need for ecological reference conditions. Management of protected areas is frequently geared toward RTE species maintenance and recovery. Managers document experimental silvicultural practices that are used to design future silvicultural practices.	CAR 2012.8 – Indicator 6.4.a CAR 2012.9 - Indicator 6.6.d and 6.6.e
P7: Management Plan	Despite some CARs related to the management plan, JBLM has clearly spent considerable effort and made progress on revisions to their forest management plan.	CAR 2011.3 – Indicator 7.1 CAR 2012.10 - Indicator 7.1.q
P8: Monitoring & Assessment	JBLM implements exemplary monitoring programs, particularly related to inventory systems, and	CAR 2011.4 – Indicator 8.2.d.3, 8.2.d.4

	collects extensive data on the effects of management and the achievement of management goals. Numerous studies are undertaken to inform forest management techniques and results are incorporated into management planning in a timely and creative manner. CARs are only in relation to social impacts monitoring.	
P9: High Conservation Value Forests	JBLM's recent HCVF analysis is extremely well written and thoroughly covers all HCV types enumerated in the standard. The only weakness was in the public consultation phase, as noted by the CAR.	Major CAR 2011.6 – Indicator 9.1.b
Chain of custody		OBS 2012.11 - Indicator 8.3

4.2 Process of Determining Conformance*

4.2.1 Structure of standard and degrees of non-conformance

FSC-accredited forest stewardship standards consist of a three-level hierarchy: principle, the criteria that correspond to that principle, and then the performance indicators that elaborate each criterion. Consistent with SCS Forest Conservation Program evaluation protocols, the team collectively determines whether or not the subject forest management operation is in conformance with every applicable indicator of the relevant forest stewardship standard. Each non-conformance must be evaluated to determine whether it constitutes a major or minor non-conformance at the level of the associated criterion or sub-criterion. Not all indicators are equally important, and there is no simple numerical formula to determine whether an operation is in non-conformance. The team therefore must use their collective judgment to assess each criterion and determine if the FME is in conformance. If the FME is determined to be in non-conformance at the criterion level, then at least one of the applicable indicators must be in major non-conformance.

Corrective action requests (CARs) are issued for every instance of a non-conformance. Major non-conformances trigger major CARs and minor non-conformances trigger minor CARs.

Box 4.2.1 - Interpretations of Major CARs (Preconditions), Minor CARs and Observations

<i>Major CARs/Preconditions:</i> Major non-conformances, either alone or in combination with non-

conformances of all other applicable indicators, result (or are likely to result) in a fundamental failure to achieve the objectives of the relevant FSC Criterion given the uniqueness and fragility of each forest resource. These are corrective actions that must be resolved or closed out before a certificate can be awarded. If Major CARs arise after an operation is certified, the timeframe for correcting these non-conformances is typically shorter than for minor CARs. Certification is contingent on the certified FME's response to the CAR within the stipulated time frame.

Minor CARs: These are corrective action requests in response to minor non-conformances, which are typically limited in scale or can be characterized as an unusual lapse in the system. Most minor CARs are the result of non-conformity at the indicator-level. Corrective actions must be closed out within a specified time period of award of the certificate.

Observations: These are subject areas where the audit team concludes that there is conformance, but either future non-conformance may result due to inaction or the FME could achieve exemplary status through further refinement. Action on observations is voluntary and does not affect the maintenance of the certificate. However, observations can become CARs if performance with respect to the indicator(s) triggering the observation falls into non-conformance.

4.2.2 Preconditions

<input type="checkbox"/>	No preconditions were placed on FME during the evaluation. Any and all minor CARs from previous surveillance audits have been reviewed and closed prior to the issuance of a certificate. The disposition of any of these minor CARs is described in the separate CAR report file included as part of the public summary on the FSC certificate database.
<input type="checkbox"/>	Preconditions were placed on the FME during the evaluation, which have all been closed to the satisfaction of the audit team and meet the requirements of the standards. These are described in the separate CAR report file included as part of the public summary on the FSC certificate database.
<input checked="" type="checkbox"/>	Preconditions were placed on the FME during the evaluation and the FME has not yet satisfactorily closed all preconditions.
<i>Check ONLY one of the boxes above.</i>	

4.2.3 Minor Corrective Action Requests (CARs) and Observations (OBSs)

To view CARs and OBSs assigned during the evaluation, refer to the separate CAR report file.

5.0 Certification Decision

Certification Recommendation	
FME be awarded FSC certification as a “Well-Managed Forest” subject to the minor corrective action requests stated in Section 4.2.3.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

