BRITISH COLUMBIA

Ministry of Forests

FIA MECHANICAL SITE PREPARATION STANDARDS

Effective April 1, 2002

These standards apply, in addition to the General FIA Standards (FS 1001), to all mechanical site preparation activities funded under the Forest Investment Account (FIA).

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ARTICLE 1: DEFINITIONS

1.1 In this document, the following words shall have the following meanings.

"Approved Site Preparation Quality Inspection System" or **"Approved SPQI System"** means the inspection system contained in this document **or** another similar system approved in writing by the District Manager prior to the commencement of Work.

"No Treatment Zone" means an area within which no site preparation takes place.

"Specified" means, as the context so requires, specified in an Approved Plan or Work Plan, in a FIA Standard, or by a District Manager.

"Soil Disturbance" means the soil disturbance caused by a forest practice on an area covered by an Approved Plan including:

(a) areas occupied by excavated or bladed trails of a temporary nature;

(b) areas occupied by corduroyed trails;

(c) areas of dispersed disturbance;

(d) compact areas; and

(e) as further defined in the *Soil Disturbance Definition Document* (FS 759E) which forms part of these standards.

"Treatment Type" means a particular method of mechanical site preparation to be applied to a Work Area, and may include equipment specifications, treatment objectives and treatment specifications.

"Treatment Unit" means a Work Area, or any similar area which is individually identified as requiring a particular silviculture treatment.

ARTICLE 2: SITE PREPARATION STANDARDS

General Requirements

2.1 Despite any requirement that is Specified on a per hectare basis, all standards and requirements must be met throughout the entire Work Area, so that prepared sites are as well distributed as possible.

2.2 Unless otherwise specified in an Approved Plan or a Work Plan, sites must be prepared in accordance with the standards and practices in the *Silviculture Manual* (http://www.for.gov.bc.ca/hfp/pubs/silvman).

Work Plans

2.3 Where any of the following is not specified in an Approved Plan for Mechanical Site Preparation it must be specified by Treatment Unit in a Work Plan:

(a) a Work Plan map showing

i) the boundaries of Treatment Types,

ii) No Treatment Zones,

iii) riparian management areas,

iv) wildlife retention patches,

v) designated stream crossings,

vi) machine-free zones, and

vii) any other areas which must be avoided;

(b) treatment specifics for each Treatment Type, including

i) the maximum limits for Soil Disturbance (including limits that may be temporarily exceeded),

ii) equipment type and standards,

iii) treatment objectives, including the target number of prepared spots/ha, and

iv) treatment specifications, including the minimum size of a prepared spot.

Mistletoe Eradication

2.4 Where the Treatment Type is mistletoe eradication, all trees that are designated for cutting must be completely cut or girdled at a point below the lowest live limb or below a Specified maximum treatment height, whichever is lower.

2.5 If a maximum treatment height for mistletoe eradication is not Specified, it must be 50 centimetres above the point of germination.

2.6 A girdle must consist of a single, continuous girdle band around the entire tree that is a minimum of 1.5 cm in vertical width and that completely severs the bark and cambium over its entire width.

ARTICLE 3: INSPECTION & NOTIFICATION

Quality Inspection - General

3.1 Unless otherwise Specified, the methodology given in this Article shall form the basis for the Approved Site Preparation Quality Inspection System.

3.2 All Work must be inspected by a person (the “Inspector”) who is:

(a) the Registered Professional Forester (RPF), or operates under the direction of the RPF, who will sign and professionally seal reports for the Work,

(b) experienced and competent in conducting inspections of site preparation operations,

(c) familiar with the Approved Plans and Work Plans for the Work Areas, and

(d) not engaged in the direct conduct of the site preparation operations.

3.3 An Inspector must inspect the Work in accordance with an Approved SPQI System in a timely manner to ensure all Work is performed to the FIA Standards.

Quality Inspection - by Treatment Objective

3.4 Where a quality inspection method below requires the installation of quality inspection plots, the Inspector must:

(a) install plots in accordance with the *Silviculture Surveys Guidebook*;

(b) systematically establish and evenly distribute the plots throughout the Work Area;

(c) mark quality inspection plots in the field and record them on a survey map such that the District Manager can locate the plots for a period of up to three months after their establishment or until they may be covered for an extended period by snow, whichever is sooner; and

(d) record the required information for each plot on a plot card.

3.5 Where obtaining natural regeneration from **adjacent seed** or from **seed-on-site** is the objective of the Treatment Type, the Inspector must evaluate performance quality by means of a Cone and Seedbed Survey and:

(a) must install plots of 0.0005 ha (5m² - 1.26 m radius) in size;

(b) may declare a plot satisfactorily scarified if there are at least, in the case of regeneration from adjacent seed - 900 cm² (17 cm radius) or, in the case of regeneration from seed on site - 225 cm² of mineral soil, mixed mineral soil/humus, or scarified forest floor where the L and a portion of the F layers have been removed within the plot; and

(c) may declare an area satisfactorily treated when at least seventy percent (70%) of the sample plots established meet the above criteria, and the satisfactorily treated plots are well distributed throughout the Work Area.

3.6 Where preparing the site for **planting** is the objective of the Treatment Type, the Inspector must evaluate performance quality by means of a Plantability Survey and:

(a) for the purposes of this section, must define a prepared spot as an area which has been mechanically modified by removing slash, vegetation, and exposing mineral soil or a favourable mixture of mineral soil and organic matter in a configuration that will promote seedling survival and growth and as may be further Specified;

(b) must install plots of 0.005 ha (50m² - 3.99 m radius) in size;

(c) must at each plot, measure,

i) the total number of satisfactorily prepared spots, and

ii) the potential number of prepared spots which could have been prepared given the site conditions, to a maximum per plot based on the Specified target number of prepared spots per hectare;

(d) for each area, must determine performance quality by dividing the total number of satisfactorily prepared spots by the total number of potentially preparable spots, and express this number as a percentage; and

(e) may declare an area satisfactorily prepared when the average performance quality of all plots in the area is 85% or higher, and there are no contiguous areas of unsatisfactory Work greater than one tenth (1/10) hectare.

3.7 Where the eradication of **mistletoe** is the objective of the Treatment Type, the Inspector:

(a) must install plots of 0.01 ha. (100m² - 5.64m radius) in size;

(b) may declare a plot satisfactorily treated if all trees which are designated for cutting which are greater than a Specified height have been cut off below the Specified maximum cutting height or satisfactorily girdled; and

(c) may declare an area satisfactorily treated when at least 85% of the sample plots are satisfactorily treated, and the satisfactorily treated plots are well distributed throughout the Work Area.

Requirement to Notify the District Manager

3.8 Further to the notification requirements contained in the FIA General Standards (FS 1001) a Recipient must immediately notify the District Manager whenever:

(a) an inspection reveals unsatisfactory performance on any contiguous area greater than one-tenth (1/10) hectare (or other minimum area that may be Specified), and the nature and extent of the errors are such that performance quality cannot be raised to at least this level; or

(b) a limit for Soil Disturbance has been exceeded on an area.