5 Proposed Logging

5.1 Mapped Information

The following required information for areas affected by proposed operations is shown on the accompanying development plan maps:

- Location of proposed cutblocks
- Riparian class of streams and wetlands
- Location of sensitive slopes
- Approximate location of road construction operations to be carried out under the plan to provide access to the proposed cutblocks

5.2 Cutblock Information

Table 5 lists the area, logging method, and interaction with riparian zones for the cut blocks proposed in this Forest Development Plan.

The majority of harvesting proposed under this FDP will be intermediate cuttings. WLFMR defines intermediate cuttings as the harvesting of timber, other than minor salvage and minor harvesting operations, where

> (a) the harvesting takes place before the final harvest or regeneration cut, and does not result in a requirement to regenerate the area, and
>
> (b) the majority of the pre-harvest volume is not removed.

Small openings may also be created in some areas for the following reasons:

- The Winlaw Watershed Committee has requested that both uniform retention and grouped retention silvicultural systems be used in order to enhance forest diversity and biodiversity.
- Salvage of bark beetle killed trees, and the possible use of trap trees to attempt to reduce beetle populations. Opening size envisioned is approximately 2 tree lengths in diameter.

If small openings are created, the openings may be large enough to require reforestation. Contingency reforestation plans will be proposed for these potential small openings in the Site Plan.

5.3 Logging Method

All harvesting under this development plan will be ground based harvesting methods. Permanent skid trails which will serve as access routes for repeated timber harvesting operations will be located in the field prior to logging.

5.4 Greenup

No existing cutblocks which are not greened-up occur on the Crown portion of W1832.

The stocking status, regeneration status and/or green-up status of past logging on the private land portion of W1832 have not been assessed at this time. No harvesting is proposed on the private land portion of W1832 under this FDP.

Cutting Unit	Total Area (ha)	Non-Forested (ha)	Riparian Reserves (ha)	Wildlife Tree Patches (ha)	Net Harvesting Area (ha)	Silvicultural System	Logging Method	Harvesting in Riparian Management Zone?	Harvesting in Riparian Reserve Zone?
Crown Land Portion									
CP A Block 1	21.2	0.9	1.2	0.8	18.3	Intermediate (Partial) Cutting with possible Group Selection - Small Openings	Ground Based	Yes	No
CP A Block 2	10.6	0.0	0.0	1.4	9.2	Intermediate (Partial) Cutting with possible Group Selection - Small Openings	Ground Based	Yes	No
Private Land Portion									
No Logging Proposed								No	No
Total Area:	**31.7**	**0.9**	**1.2**	**2.2**	**27.5**				

Table 5: Proposed Cutblock Information Table.

5.5 Riparian Management

This Forest Development Plan proposes logging activity in Riparian Management Zones within CP A Block 1. Our general objective is to maintain a fully functioning forest ecosystem in these locations, with a full complement of ecological structures and functions. The basal area retention goal is to retain a minimum of 50% of the current basal area of standing timber in these locations, well distributed across species and diameter classes, following harvesting. Riparian management is discussed in more detail in Section 4.4.

5.6 Minor Salvage Operations

5.6.1 General Description

During the term of this Forest Development Plan minor salvage operations may be undertaken to harvest timber that is dead or damaged as a result of wind, fire, insects, disease or other causes. These operations will be carried out in a manner that limits the removal of healthy timber, soil disturbance, and damage to existing regeneration or residual standing timber.

Minor salvage operations may involve the harvesting of single trees, small patches of timber, or larger areas depending on the particular situation requiring salvage.

A map of any proposed minor salvage operation will be presented to the Forest Service in order to confirm operational planning requirements and to receive authority to harvest.

5.6.2 Purpose

The salvage portion of this FDP is designed to facilitate the timely harvesting of small volumes of dead, dying, or insect attacked timber that:

- are a safety hazard to workers due to location hear roads or operating areas, and/or
- are in imminent danger of being significantly reduced in economic value by decay or weathering, and/or
- are to be harvested as part of a program to control the spread of bark beetles or other tree bole dwelling insects by reducing windthrow densities, harvesting infested trees, and/or harvesting trap trees.

5.6.3 Maximum Volumes

The maximum volume of timber to be cut under the salvage provision of this Forest Development Plan is 2000 m^3, excluding any volume from a road clearing width that is required to facilitate the salvage. Wherever practical, the timber will be recovered on a single-tree, selection basis, with the objective being to minimize the amount of healthy timber that is also removed or damaged.

5.6.4 Salvage Management Priorities

First priority is to meet the ecosystem management objectives contained in the Management Plan and in Section 4.5 of this Forest Development Plan . These objectives

include maintaining functioning forest ecosystems, maintaining wildlife tree and snag populations, maintaining and restoring CWD populations, and maintaining water quality, quantity and timing of flow. Over time, many trees in W1832 will die of natural causes (insects and disease) and will not be salvaged.

Second priority is to harvest trees that are currently attacked by bark beetles or other destructive tree bole dwelling insects. Expedited harvest under the salvage provisions of this Forest Development Plan will be considered where it is reasonably believed that the insect population present will both kill the affected trees, and, if un-harvested, will increase and spread to adjacent areas. The infected trees will normally be scheduled for harvest prior to the next flight of the insect, where operationally possible.

Third priority is to harvest blowdown trees and/or other damaged trees that are of a species and are in a location where they reasonably be expected to be attacked by bark beetles or other tree bole dwelling insects, and where such an attack can reasonably be expected to result in insect population increases and the subsequent spread of insects to currently undamaged trees. These trees will be harvested as soon as possible, and if found to be infested by a bark beetle, will be scheduled for harvest prior to the next flight of the insect, where operationally possible.

The fourth priority is to salvage concentrations of damaged timber where insect management is not an objective, and where the quantity of the damaged timber exceeds a reasonable interpretation of ecosystem needs for snag and CWD inputs. These trees will be harvested, where possible, prior to significant deterioration of timber.

The fifth priority is to harvest concentrations of dead or damaged trees which are unstable and which are located near roads, trails, work sites, or recreational use areas and which compromise worker or public safety.

5.6.5 Protection of Other Resources

All forest management provisions and operational constraints in the Management Plan for W1832 and in Section 4 of this Forest Development Plan will be followed during salvage operations to ensure that other resource values are adequately protected.

5.6.6 Notice and Review

Salvage situations harvestable under this portion of the FDP can not be predicted in advance, and some instances may require timely response. An hypothetical example of this would be the removal of a concentration of trees windthrown Douglas-fir trees, which were actively infested with bark beetles. Fresh Douglas-fir windthrow is ideal breeding habitat for Douglas-fir bark beetles. A reasonable management approach would be to try and reduce current beetle populations and ideal breeding habitat by removing these trees prior to the next flight of the insect.

Because of the urgent nature of some salvage situations, a formal public notice and review procedure is not required for salvage harvesting. Notice of all proposed salvage harvesting in W1832 will be provided to the Winlaw Watershed Committee, and provision made for review and input from the Winlaw Watershed Committee. The exact process and time frame for review will vary with the urgency of the proposed salvage.

Where a party has requested, individual salvage proposals will be referred to them. Referrals will be submitted to the Designated Environment Official in the following situations:

- within Wildlife Habitat Areas and ungulate winter ranges identified in the FDP;
- within wildlife tree patches identified in a site plan; or
- within a riparian reserve zone.

5.7 Minor Harvesting Operations

Minor harvesting operations may be undertaken during the term of this development plan to harvest up to 500m^3 or 10% of the volume specified for the 5 year cut control period, whichever is greater. Under the provisions of Management Plan #1 for W1832, the 500m^3 option is the greater of the two.

The purpose of the minor harvesting provision is to allow the licensee to take advantage of potential markets for small volumes of specialty products such as building logs and poles.

All forest management provisions and operational constraints in the Management Plan for W1832 and in Section 4 of this Forest Development Plan will be followed during salvage operations to ensure that other resource values are adequately protected.

A map of any proposed minor harvesting operation will be presented to the MoF prior to harvesting to confirm operational planning requirements and to request authority to harvest.