



General Bulletin

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Cutblock Size

Introduction

Review of harvesting practices in British Columbia has revealed that cutblocks are frequently much smaller than the maximum sizes prescribed in the *Forest Practices Code's Operational Planning Regulation*. This pattern has led to an increase in the development of small cutblocks, which, when combined with constraints on harvesting adjacent cutblocks, has significantly increased logging costs and may be impacting timber supply. Furthermore, if this trend leads to increased habitat fragmentation and active roads, the outcome is usually not desirable for wildlife, fish and water quality.

Although there are circumstances where small cutblocks may be required to adequately manage and conserve forest resources, there is a perception that the intent of the Code is to increase the number of small, dispersed cutblocks. This is not the case. The Code contains a number of provisions that allow considerable flexibility in designing cutblocks. The purpose of this letter is 1) to describe the intent of the Code regarding cutblock size, 2) to identify the provisions that allow for flexible implementation of the Code, 3) inform statutory decision makers on their authority to accept cutblocks that are consistent with the requirements of the Code and 4) provide licensees with a better understanding of Code regulations regarding cutblock sizes.

Statutory Decision Makers' Discretionary Powers

Section 11 (1) of the Operational Planning Regulation (OPR) sets out the maximum cutblock sizes for the province (40 ha in the Vancouver, Kamloops and Nelson forest regions and 60 ha in the Cariboo, Prince George and Prince Rupert forest regions). These size limits refer to the area within the boundaries of a specific cutblock from which timber has been harvested and do not include the following:

1. areas that are retained as reserves within the cutblock boundaries (e.g. wildlife tree patches and riparian reserves),
2. the area occupied by pre-existing roads, or
3. areas that are naturally non-productive and will not be harvested.

These default provisions are not based on biological or ecological criteria. Rather, they were established in legislation to convey government's "social" choice, and therefore

require no further justification beyond the fact that they are prescribed in the regulation. However, despite section 11(1), there are many situations where cutblocks that are smaller or larger than the default maximums are appropriate or preferred. These situations are provided for in the other subsections of section 11 which should be considered when planning or making a decision regarding cutblock size.

The provisions in section 11 of the OPR clearly specify the intent of government: a cutblock which meets the requirements of section 11 should generally satisfy the section 41 (1) (b) or 41 (7) (b) tests with respect to cutblock size. It should be a rare circumstance where section 41 (1) (b) or 41 (7) (b) is used to not approve a forest development plan for reasons related to cutblock size.

Provisions for Smaller Cutblocks

Section 11 (3) specifies the circumstances under which smaller openings than the default provisions may be required:

- for hydrological reasons,
- to manage wildlife values,
- to manage recreation or scenic values, or
- for other similar reasons

Flexibility to Approve Larger Cutblocks and to Create Larger Openings

It is generally accepted among ecologists that forested patches and openings should reflect the variability in sizes, shapes, patterns and age classes that is established through natural processes. To achieve this outcome, proactive planning and management decisions help to ensure that an appropriate balance between larger openings and larger forested areas with interior forest conditions are maintained through time. In areas where there has been a history of progressive clearcutting there may be no or very limited opportunities to establish this variability in the first rotation. However, in areas where a more dispersed harvesting pattern has been implemented, there will likely be many more opportunities to utilize the provisions established in the OPR and the Timber Harvesting Practices Regulation (THPR) which enable the creation of a greater variety of patch sizes within landscape units.

The maximum cutblock sizes prescribed in the OPR do not apply in areas where high retention silvicultural systems are being used or where harvesting is being carried out to recover damaged timber. Sections 11(3)(b)(ii) (cutblock size) of the OPR and 9(2)(f) (adjacency) of the THPR allow harvesting cutblocks that are larger than the default maximums if the cutblock is consistent with the structural characteristics and the temporal and spatial distribution of natural openings. These sections provide forest managers with the flexibility to establish harvest patterns that resemble natural

disturbance patterns caused by insects, windthrow and wildfire, with due consideration for potential conflict with other forest management objectives.

There is, however, some confusion about implementing the provisions of section 11(3)(b)(ii) to simulate natural disturbance patterns. Under natural conditions, the characteristic elements of natural openings vary from site to site and landscape to landscape. Therefore, it is appropriate to vary those same elements in managed forests. For example, the structural characteristics of natural openings can be addressed by incorporating the following types of strategies into cutblock design (consider more structural retention as cut block size increases):

- wildlife tree retention
- maintenance of tree species and understory vegetation diversity
- retention of coarse woody debris
- natural cutblock shape and edge irregularity
- forest cover retention in riparian management zones

To address the spatial and temporal distribution of natural openings, a patch size distribution regime should be established over large areas such as landscape units (spatial distribution), phased-in over a period of time, and maintained through time as part of the forest rotation (temporal distribution). Patch size refers to a single cutblock or an aggregation of cutblocks with similar habitat characteristics; e.g. an aggregation of cutblocks that were logged over a 20 year period may be very similar, depending on timber type, elevation, latitude and other factors.

To establish a suitable patch size distribution regime, it may be adequate in many areas to carry out an ocular assessment of historical and current forest cover patterns by individual mapsheet. Ultimately, a more detailed analysis should be undertaken by geographic area, but since many areas in the province have pursued a policy of smaller dispersed cutblocks for the past 10 or 20 years, it may be appropriate to proceed with larger aggregated blocks in suitable areas on an interim basis. Alternatively, the following tables may be considered as guidelines for the distribution of patch sizes, keeping in mind that the numbers are not absolute and should be implemented with sufficient flexibility to address conservation and economic goals. Where practical, comparably large unharvested areas should be maintained as long as possible in association with the larger cutblocks and aggregated openings.

Table 1: Ecosystems with Rare Stand-Initiating Events (NDT1)

Patch size (ha)	% Forest area within landscape unit
<40	30-40
40-80	30-40
80-250	20-40

Table 2: Ecosystems with Infrequent Stand-Initiating Events (NDT2)

Patch size (ha)	% Forest area within landscape unit
<40	30-40
40-80	30-40
80-250	20-40

Table 3: Ecosystems with Frequent Stand-Initiating Events (NDT3)

a) Biogeoclimatic Subzones with Douglas-fir Throughout Stands

Patch size (ha)	% Forest area within landscape unit
<40	20-30
40-80	25-40
80-250	30-50

b) Biogeoclimatic Subzones with Douglas-fir Restricted or Absent

Patch size (ha)	% Forest area within landscape unit
<40	10-20
40-250	10-20
250-1000	60-80

c) Alluvial Ecosystems in the BWBS Biogeoclimatic Zone

Patch size (ha)	% Forest area within landscape unit
<20	30-50
20-40	30-50
40-80	10-30

Table 4: Ecosystems with Frequent Stand-Maintaining Fires (NDT4)

Patch size (ha)	% Forest area within landscape unit
<40	30-40
40-80	30-40
80-250	20-30

Tables adapted from the *Landscape Unit Planning Guide*, Ministry of Forests & Ministry of Environment, Lands and Parks, 1999. Values represent a vision of desired future conditions. It is recognized that they will not be immediately achievable in LU's.

In addition to the ecological benefits, larger cutblocks may provide a number of other environmental and economic benefits, including:

- reduced logging costs, less initial access development and fewer roads kept in an active and maintained condition;
- an increased range of sizes for cutblocks and retention areas which should reduce forest fragmentation and the negative edge effects on wildlife;
- increased potential for maintaining biological diversity by implementing diverse management systems across the landscape, including size, shape and structural retention.
- reduced potential for disturbing wildlife, reduced vehicle related wildlife mortality, and fewer barriers to wildlife movement due to a less extensive active road network;
- reduced risk of stream sedimentation and potential for road related slope failures as a result of fewer roads kept in an open and active condition; and greater potential to rehabilitate access structures to recover site productivity where the structures will not be needed for further logging.

Note: Please note that this bulletin does not constitute legal advice. This guidance is provided by the Forest Practices Branch, Ministry of Forests, and the Resource Stewardship Branch, Ministry of Environment, Lands and Parks as advice for consideration by forest planners and statutory decision makers. Statutory decision makers are reminded that interpretation of the applicable sections of the Forest Practices Code is ultimately up to them, and that specific circumstances must always be considered.

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