



MINISTRY OF FORESTS

Revelstoke Timber Supply Area

Timber Supply Review
Summary of Public Input
August 1994

This is a summary of the public input that has been received on the Timber Supply Review in the Revelstoke Timber Supply Area. This summary does not assess the feasibility or validity of the input or whether it relates to the clearly defined mandate of the chief forester in the allowable annual cut determination.



Province of
British Columbia
Ministry
of Forests

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Introduction

Timber Supply Review process

The British Columbia Forest Service is reviewing the timber supply for all timber supply areas* and tree farm licence* areas in the province. The review examines the impacts of current integrated resource management practices* and the implications of alternative rates of harvest on the short- and long-term timber supply and the economy of B.C., among other things. Based on the results of this review, the chief forester may decide to adjust the allowable annual cut* for the Revelstoke Timber Supply Area.

In the Revelstoke Timber Supply Area, a *Timber Supply Analysis Report* was released in June 1993. This was followed in March 1994 by the release of a *Socio-Economic Assessment and Public Discussion Paper*. The Discussion Paper summarized the two technical reports and encouraged public input. This *Summary of Public Input* reflects the input received by the Revelstoke Forest District.

The chief forester's responsibility

Determining the allowable annual cuts for Crown forest lands in British Columbia is the responsibility of the province's chief forester. The *Forest Act* requires the chief forester to determine an allowable annual cut for each timber supply area and tree farm licence area at least every five years. Section 7 of the *Act* defines the following factors which the chief forester must consider in the determination:

- a) the rate of timber production that may be sustained from the area taking into account:
 - the composition of the forest;
 - the time in which the forest will become re-established following disturbance;
 - silvicultural treatments, including reforestation;
 - standards of timber utilization;
 - constraints on the amount of timber produced from the area by use for purposes other than timber production; and,
 - any other information which relates to the capability of the area to produce timber;
- b) the short and long-term implications to the province of alternative rates of timber harvesting from the area;
- c) the nature, production capabilities, and timber requirements of established and proposed processing facilities;
- d) the economic and social objectives of the Crown for the area, the region and the province, as expressed by the minister of forests; and,
- e) abnormal insect or disease infestations and major salvage programs planned for the timber on the area.

Some of these factors can be measured and analyzed—others cannot. Ultimately, the chief forester's allowable annual cut determination is an independent, professional judgement using the best information available at the time. By law, the chief forester is independent of the political process and is not directed by the minister of forests in determining allowable annual cuts. While the chief forester does not consider the advocacy efforts of lobby groups, consideration is given to relevant information from any source.

The objective of the public review and input process in the Timber Supply Review is to ensure the information provided in the technical reports is as accurate as possible. This *Summary of Public Input* and copies of the major submissions that have been received for the Revelstoke Timber Supply Area will be provided to the chief forester for his consideration in the allowable annual cut determination.

Public review and input process

Revelstoke Forest District staff actively solicited public input to the Revelstoke Timber Supply Area Timber Supply Review through the following actions:

- A direct mail-out of the three documents to over fifty organizations and businesses active within and adjacent to the forest district. The *Public Discussion Paper* included a response form which readers were encouraged to complete and return to the forest district manager.
- Provided information for a series of newspaper articles in the local paper. The articles included background information on the Timber Supply Review process, how allowable annual cuts are determined, and how to obtain further information from the Forest Service.
- Conducted nine information sessions with key stakeholders and the public. They also held one open house and one public meeting, both of which were advertised extensively. Table 1 details the dates and number of participants at these sessions. District staff also contacted several groups which declined the offer of an information session, including the local First Nations organizations (the Shuswap Nation Tribal Council and the Ktunaxa/Kinbasket Tribal Council).

* Throughout this document, an asterisk at the end of a phrase indicates the phrase is defined in the definitions at the end of this document.

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Table 1: Participation at the information sessions, open house and public meeting

Organization (No. of participants)	Date
Information sessions	
Revelstoke City Council (12)	March 8, 1994
Revelstoke Economic Development Commission Chamber of Commerce, Small Business Development, Community Futures (8)	March 9, 1994
North Columbia Resource Council, M.L.A., Columbia Shuswap Regional Council (15)	March 10, 1994
Heritage Canada Parks Service, Friends of Mt. Revelstoke and Glacier National Parks (12)	March 11, 1994
Timber tenure holders (12)	March 15, 1994
Contractors, mill workers (37)	March 15, 1994
Revelstoke Environmental Action Committee (2)	March 17, 1994
Rotary Club (30)	March 24, 1994
General open house (17)	April 5, 1994
General public meeting (48)	April 12, 1994

Those involved in the public input process indicated they were pleased with the approach of the Revelstoke Forest District staff. The Chair of the Friends of Mt. Revelstoke and Glacier said, "Your method of bringing this process into the community was excellent, and I wish to acknowledge the effort and time commitment made (by Revelstoke Forest District staff) to present the analysis so thoroughly."

Public response

Seventeen response forms and 12 written submissions (see list in Appendix 1) were received from individuals, businesses, organizations and government departments. The Revelstoke Timber Supply Area Licensee Group, which consists of Downie Street Sawmills Ltd., Joe Kozek Sawmills Ltd., Arrow Lakes Cedar Pole Co. Ltd. and Bell Pole Company Ltd., provided a response to the *Public Discussion Paper*, and contracted Timberline Forest Inventory Consulting Ltd. to conduct a critique of the *Timber Supply Analysis Report*. The Interior Lumber Manufacturers Association provided a critique of the *Socio-Economic Assessment* and a report entitled "Employee Transitions and Risks following Timber Harvest Reductions: Preliminary Estimates and Suggested Methodology" which also evaluates components of the *Socio-Economic Assessment*. As well, over 150 individuals attended the information sessions, the open house and the public meeting.

The following is a summary of the public input that was received. It does not assess the feasibility or validity of the input or whether it relates to the clearly defined mandate of the chief forester in the allowable annual cut determination.

Summary of public input

Timber Supply Analysis Report

The Timber Supply Review provides an assessment of the impacts of current forest management practices on short- and long-term timber supply. In the Revelstoke Timber Supply Area, these practices were defined by the criteria developed in October 1991 to evaluate and approve timber harvesting development plans for the area.

Based on these practices, and the best available information at the time the timber supply analysis was completed, the analysis indicated if the current allowable annual cut was maintained for the next 10 years, followed by a decline in harvest level of 10 per cent per decade (a guideline used in timber supply modelling to ensure a gradual change in supply), the timber supply is predicted to drop below the long-term level of 98,000 cubic metres per year in 70 years. Supply is predicted to reach a low of approximately 40,000 cubic metres per year in 90 years, and return in 100 years to the long-term level of 98,000 cubic metres, which can be maintained for at least 200 years.

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In order to avoid a timber supply shortage in 70 to 100 years, and maintain a 10 per cent decline per decade until the long-term timber supply is reached, an immediate allowable annual cut reduction of 16 per cent is indicated. The base case forecast*, which balances the short- and long-term impacts, indicates an immediate 5.6 per cent reduction in the harvest level, followed by a 12 per cent rate of reduction each decade for 70 years until the long-term timber supply level is reached.

When the timber supply analysis was completed, it was recognized that there was uncertainty about some of the available data. Tests were completed to examine how different data for some factors would change the timber supply forecasts. In these tests the short-term timber supply varied greatly depending on the estimates used for:

- the amount of merchantable timber in the existing forest; and,
- the forest cover requirements used to depict forest management practices designed to protect non-timber resources.

In the *Public Discussion Paper*, readers were encouraged to comment on these factors and as well as potential opportunities to offset the projected timber supply reduction. These responses, and comments on topics raised by the respondents, are summarized below.

General input

Timber productivity estimates for managed, second-growth forests

The critique of the *Timber Supply Analysis Report* commissioned by the licensee group contends that the Forest Service has under-estimated the timber productivity of second-growth forests. The authors of the critique believe the estimates used in the timber supply analysis fail to account for higher crown closure and higher average site indices which are appropriate for second-growth forests. These authors also argue that the Forest Service analysis fails to consider the timber productivity impacts of density and competition control measures (such as juvenile spacing) used in tending managed stands. For these reasons, the authors of the critique conclude that "yields in managed stands can be as much as 74 per cent higher than those used in the Forest Service analysis."

However, submissions from Canadian Heritage - Parks Canada and the Friends of Mt. Revelstoke and Glacier National Parks counter this perspective with the view that the current body of knowledge regarding root rot and other fungal diseases suggests that appropriate timber productivity estimates for

second-growth forests under intensive management may be lower than those used in the analysis. As well, practices aimed at increasing the productivity of second-growth forests may have the opposite effect by encouraging conditions that promote the growth of fungal diseases. Canadian Heritage - Parks Canada also suggests that site degradation resulting from harvesting activities may further reduce timber yields from second-growth forests.

Uncertainty in the data and computer modelling techniques

The licensee group expressed skepticism about some of the data used in the Forest Service analysis. In addition to questions about the timber productivity estimates for second-growth forests, they suggested that:

- the forest inventory data aggregation procedures may have lead to higher minimum harvesting ages than are appropriate;
- the estimate of future losses in timber productivity due to roads, trails and landings appears to be too high;
- too much area was deducted from the timber harvesting land base for non-merchantable forest types; and,
- the decay, waste and breakage factors underestimate the true losses.

Because of this perceived uncertainty in the data and concern about the computer modelling approach used in the Forest Service analysis, this group recommends the allowable annual cut be maintained for the next five years until:

- the assumptions used to project the available timber supply are adjusted to be consistent with those used in other timber supply areas and tree farm licence areas that are currently being analyzed; and,
- the input data can be upgraded to reduce uncertainty about the current analysis.

The licensee group believes a "greater than normal emphasis should be placed on the socio-economic aspects of the review." Their preferred option would be to slowly reduce the allowable annual cut to minimize the socio-economic impacts of a sharp decline in the timber supply.

The licensee group also proposes joint Forest Service-Industry research initiatives to improve the data and assumptions for the next Timber Supply Review.

Although they did not identify the reasons for this perspective, several other survey respondents expressed concern the Forest Service analysis may be too optimistic. They urged the chief forester to act

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conservatively and err on the side of caution by imposing significant allowable annual cut reductions immediately.

Projected long-term timber supply

The concerns outlined above about the timber productivity estimates for managed second-growth forests, and uncertainty about other data and the modelling approaches used in the timber supply analysis led four of the authors of written submissions to dispute the long-term timber supply level of 98,000 cubic metres per year projected in the Forest Service analysis. The licensee group in particular, expressed concern that the analysis grossly underestimates the long-term timber supply. The analysis completed by this group indicates a much higher level—approximately 200,000 cubic meters per year—is possible.

Input on the *Public Discussion Paper*

Factors indicating a possible further reduction in short-term timber supply

In the *Public Discussion Paper*, Forest Service staff identified several factors that indicate further reductions in timber supply maybe necessary over the next five years, in addition to the reductions identified in the base case forecast. The following is a summary of public comments on these factors.

- **amount of merchantable timber in the existing mature forests**
Most respondents agree that the amount of merchantable timber existing in the Timber Supply Area has been overestimated in the past. Many also believe that the estimated amount of merchantable timber is greater than the amount that is actually harvested from each hectare. Again, many respondents called for the chief forester to act prudently and err on the side of conservation by reducing the allowable annual cut.

Although background data is not provided, the Canadian Heritage - Parks Canada submission states that the Timber Supply Review overestimates the amount of merchantable timber in the remaining old-growth forests. They recommend the chief forester impose significant, phased-in reductions in the allowable annual cut to ensure a sustainable wood supply until the second-growth timber, whatever its yield, is ready to harvest.

The licensee group agrees that timber volumes for existing forests may be over-estimated. They do not believe statistical evidence exists to support this view, but they think the observation deserves consideration.

- **combined impacts of integrated resource management practices designed to protect non-timber values**

In the timber supply analysis, the current harvesting guidelines that are followed to protect non-timber resources were translated into modelling rules based on an assessment by Forest Service staff when the data package was created. These modelling rules define the amount of area that can be harvested at any one time and the length of time (green-up period) between harvesting entries.

While Canadian Heritage - Parks Canada does not have concerns about how current practices to protect non-timber resources were modelled in the timber supply review, they do question whether the practices themselves are adequate to protect wildlife habitats. Canadian Heritage - Parks Canada argues that green-up periods alone do not address old growth, old-growth caribou habitat, biodiversity values, or fisheries and water quality considerations. About fifty wildlife species, including mountain caribou and grizzly bears, appear dependent on old-growth forests. Once the old growth is gone, the remaining immature to mature forests are expected to provide little support for wildlife, hence the need for riparian* and stream-side reserves and wildlife tree retention on, or at the edge of cut overs, as well as the green-up periods.

Similarly, BC Parks criticized current practices for “not considering old-growth values and purposely under-representing riparian, water quality and wildlife concerns.”

- **managing for mountain caribou**
The location of important mountain caribou habitat in the Revelstoke Timber Supply Area, and the appropriate management practices within these habitats, including whether any harvesting is acceptable, appears to be the subject of debate among biologists. A Wildlife Zone was defined in the timber supply analysis with specific practices to protect low-elevation winter habitat in the timber supply area.

Several individuals suggested that the numbers of mountain caribou have declined significantly over the past few decades and their protection in southern British Columbia is an important provincial objective. Several respondents believe that without changes to the allowable annual cut and designation of protected habitat, the mountain caribou is in danger of extinction in the Selkirk Range.

Canadian Heritage - Parks Canada cautioned the Forest Service that Mt. Revelstoke and Glacier National Parks are too small to support a self-

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sustaining caribou population without habitat protection on adjacent provincial lands. They cite research which they claim substantiates the dependence of mountain caribou on low and mid-elevation old-growth forests in the Revelstoke Timber Supply Area, particularly in early winter. They believe "at least 25 per cent (of the Timber Supply Area) may need to be maintained as functional caribou habitat to maintain current populations." Alternate forest practices such as "longer rotations with open spacing and retention of wildlife trees" may offset some of this requirement, but protected habitat remains critical to sustaining the caribou population. They estimate that even if "50 per cent of the caribou's old-growth habitat requirement can be met by inoperable forests (forests that are not economical or feasible to harvest and are not within the land base used in the timber supply analysis)", protecting caribou habitat is likely to result in an additional 12 per cent reduction in the allowable annual cut from that projected in the timber supply analysis.

Over 80 per cent of the survey respondents called for immediate reductions in the allowable annual cut to protect mountain caribou habitat.

- **protecting riparian habitats**
In the timber supply analysis, two per cent of the timber management land base* was deducted from the data base to represent protection of riparian areas—streams, swamps and other wetlands that provide important wildlife habitats.

Many respondents believe that riparian habitats are critical for the maintenance of biodiversity, wildlife and water quality. They feel that insufficient protection and poor forest practices have led to considerable degradation of riparian areas. Many respondents support the establishment of "riparian buffers" to provide shelter, forage and wildlife trees (large diameter snags and fallen logs). A significant majority of respondents believe retention of riparian areas, avalanche chutes and old-growth forests with small ponds and rich herb understories is critical for maintaining biodiversity and sustaining wildlife. The vast majority of survey respondents supported a reduced allowable annual cut to protect riparian habitats.

Other respondents believe that forest practices, particularly of late, adequately protect streams and lake front habitat. They further note that, if sufficient amounts of particular habitats are not protected, they should be addressed through the Commission On Resources and Environment (CORE)* or Land and Resource Management Planning* processes. These respondents do not believe the chief forester should specifically

determine adjustments to the allowable annual cut to protect riparian areas further.

Potential opportunities to partially off-set short-term timber supply reductions

In the *Public Discussion Paper*, Forest Service staff identified several opportunities that may be implemented to partially off-set the projected timber supply reductions. The following is a summary of public comments on these factors.

- **intensive silviculture treatments**
Very few of the survey respondents mentioned increased silviculture or intensive forest management as a means to offset allowable annual cut reductions. Those that did mention intensive treatments had made an interpretation that the Forest Service waited five years after harvesting before reforesting areas. These individuals suggested immediate replanting was more appropriate. They also suggest increased commercial thinning as a means to increase harvested timber volumes. Canadian Heritage - Parks Canada offered some concerns about intensive management including:
 - treatments result in reduced bio-diversity; and,
 - rapid re-establishment of stands with commercial species and intensive thinning will increase the area's chronic *Armillaria* root rot problems.
- **increasing the area that is economically feasible to harvest and harvesting forest types that currently are not harvested**

The timber management land base defined for this analysis includes the area that is currently economical and feasible to harvest and reforest in the Revelstoke Timber Supply Area based on current operations within the area. Steep 'V' shaped valleys with difficult access, high elevation areas, deciduous forests, some very old, pure hemlock and balsam stands and other forest types were not included in this area because they currently are not harvested.

Several survey respondents and participants at the public meeting argue that areas currently excluded from the timber management land base could be reintroduced if alternative harvesting methods are employed. An employee of Tundra Helicopters suggests that heli-logging could provide access into previously inaccessible terrain and create less environmental damage than current logging practices. If industry used more heli-logging, it could help off-set reductions to the allowable annual cut and lessen industry's conflict with other forest users. In a separate submission, a local contractor suggests that full aerial suspension skyline logging will provide greater access to

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currently inoperable areas and could remove the need to reduce the allowable annual cut.

However, 79 per cent of the survey respondents indicated the timber industry should first prove its ability to harvest and market currently uneconomical timber before it is factored into the allowable annual cut. They are concerned that serious environmental and economic consequences may occur without proven, operational experience. If it proves difficult or uneconomical for industry to harvest these types, the timber supply problem will be exacerbated in the future by setting an unrealistically high allowable annual cut now.

- **reducing losses to fire, insects, disease and blowdown**

In the timber supply analysis, 29,820 cubic metres of timber are projected to be lost and not salvaged each year due to fire, insects, disease and blowdown. This is 11 per cent of the current allowable annual cut, and 30 per cent of the projected long-term timber supply.

The licensee group suggests that a reduced estimate of non-salvageable losses to fire, insects, disease and blowdown should be used in determining the short-term allowable annual cut. They point out that the Forest Service analysis treats these losses as a constant amount each year, resulting in an increasing percentage of the projected timber supply being lost each year. They also claim that the predicted loss is high compared to other timber supply areas. They recommend that the loss estimate be reduced to account for improved fire and pest management techniques, and that the losses be modelled as a percentage of the total timber biomass on the timber management land base. They believe that changing these assumptions will increase the projected timber supply.

However, both Canadian Heritage - Parks Canada and the Friends of Mt. Revelstoke and Glacier National Parks cite research on the role of Armillaria root rots in wet belt forest areas which contradicts the preceding assertions. Submissions from both groups cite literature that indicates root rots and other fungal diseases will reduce second-growth timber volumes significantly. Canadian Heritage - Parks Canada also believes that current silviculture practices contribute to growth reductions and tree mortality from fungal diseases.

Sixty-nine per cent of the survey respondents suggest more information is necessary before the chief forester should consider using reduced estimates of losses due to fire, insects, disease and blowdown in the allowable annual cut determination.

Socio-Economic Assessment

The Revelstoke Timber Supply Area is sparsely populated with over 90 per cent of the population in the City of Revelstoke. The economy is relatively diversified with the public sector, railroad and forestry being the major sources of employment. The current allowable annual cut from the Revelstoke Timber Supply Area is estimated to generate 288 person-years* of direct forestry employment in the area, approximately 50 per cent of the total forestry employment. An additional 225 person-years of employment is estimated to be generated in the service industries in the area, with 290 more person-years created elsewhere in the province. Approximately \$6.45 million in provincial revenues are generated annually by harvesting and processing timber from the Revelstoke Timber Supply Area.

Reductions in timber supply are projected to result in the loss of 1.12 person-years of direct forestry employment for every 1,000 cubic metres of timber that is removed from the allowable annual cut. For example, a 10 per cent reduction in the allowable annual cut would mean the amount of timber harvested annually would decline by approximately 26,900 cubic meters, which is estimated to cause a loss of 30 person-years of direct forestry employment.

Summary of public input

Methodology

The Interior Lumber Manufacturers' Association commissioned an independent consultant to review the *Socio-Economic Assessment for the Revelstoke Timber Supply Area* for its "compliance with generally accepted principles of economic evaluation...and in terms of the accuracy and quality of the information and estimates adopted." The key findings of this review regarding the methodology used in the Assessment include:

- lack of a clear statement of objectives and no explanation of the derivation and rationale of the accounts used in the assessment;
- the use of timber supply forecasts from the timber supply analysis "severely constrained" the alternatives that were examined and prevented the assessment from "investigating the full range of options that should be considered";
- errors and omissions such as failure to incorporate employment losses from reduced volumes of chips produced as a by-product of lumber manufacturing and within the Forest Service, lack of clarity in distinguishing indirect and induced employment impacts, and others;
- incorporation of value judgements "that are inappropriate in an economic evaluation";

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- lack of consideration of the timing of impacts and the concept of the current value of costs and benefits compared to future impacts; and
- lack of sensitivity analysis to test the impacts of changing assumptions in the analysis.

Special problems of the local timber industry

The licensee group submission points out that operators in the Interior wet-belt, which includes the Revelstoke Timber Supply Area, face special economic problems in comparison to most other operators in the southern interior of British Columbia because of the difficult terrain, wet climate and very old, often partially rotted timber in these forests.

These problems create higher operating costs, lower profit margins, less capital investment and greater administrative costs for operators. The licensee group argues that, because of these conditions, they face a competitive disadvantage when buying logs from the open market. Operators in areas that enjoy lower costs for Crown wood have a lower average raw material cost, giving them the ability to outbid Revelstoke operators on the open market. This group further contends that the existing log shortage and high prices on the open market is currently threatening the viability of their mills.

The licensee group feels that an allowable annual cut reduction in the Revelstoke Timber Supply Area will cause mills to be more dependent on timber purchased from the open market. This will aggravate an already significant disadvantage. They offer two recommendations to help off-set the current log shortage situation in Revelstoke:

1. The chief forester should entertain proposals by established timber tenure holders in the Revelstoke Timber Supply Area to harvest timber that was excluded from the timber supply analysis in the Timber Supply Review.
2. The minister of forests should preferentially direct Forest Renewal Plan* monies, intended to promote remanufacturing, to localities such as Revelstoke where timber supply adjustments are projected.

The licensee group believes these remedies would enable mills facing log shortages to maintain their current earnings and sustain employment levels. They suggest that the allowable annual cut should not be reduced so operators in the Revelstoke Timber Supply Area can maintain some measure of competitiveness until government can address their concerns. If a reduction is implemented, they recommend the chief forester consider redistributing the allowable annual cut to reduce the Forest Service Reserve, which has not been harvested in the past, from the current 4.4 per cent of the allowable annual cut to approximately one per cent.

The author of the critique completed for the Interior Lumber Manufacturers Association is critical of the suggestion in the *Socio-Economic Assessment* that provincial objectives of encouraging value-added production to offset job losses from allowable annual cut reductions be considered for local timber mills. He asserts that private sector businesses conduct their operations to maximize the return to their shareholders and should not be expected to assume the multiple objectives of the provincial government. However, many survey respondents suggested increasing local value-added manufacturing. In the submission from the City of Revelstoke, the City cited a Downie Street Sawmills statement that a significant opportunity exists to increase employment by 100 to 125 jobs in their mills through further processing and value-added production.

Concern that the industry have some certainty in their timber supply during the transition to the long-term level prompted 60 per cent of the survey respondents to recommend that the allowable cut reductions be of equal amounts during the transition period.

Employment and economic impacts

The employment projections in the *Socio-Economic Assessment* are based on the assumption that employment losses will be directly proportional to reductions in timber supply. While the possibility of 'threshold levels'—a timber supply reduction which forces companies to restructure (e.g., to close entire shifts in their mills)—is recognized, the author of the Assessment contends that attempting to predict these levels is "highly speculative". The Interior Lumber Manufacturers Association's critique of the Assessment questions the validity of this assumption and the lack of consideration of threshold levels. The critique suggests this approach under-estimates the employment losses and economic impact of timber supply reductions in Revelstoke.

In addition to the critique of the *Socio-Economic Assessment*, the Interior Lumber Manufacturers Association also submitted a socio-economic impact report prepared by Dr. Robert G. Lee, from the University of Washington. Dr. Lee believes that more severe impacts on employment than those predicted in the *Socio-Economic Assessment* are likely to occur through threshold effects. Although Dr. Lee admits that the method for estimating transition probabilities contained in his report is preliminary, he feels it demonstrates a defensible approach for social impact assessment.

The licensee group also expressed concerns about the economic impact of allowable annual cut reductions. They believe that, given the broader picture of socio-economic impacts of other changes in

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the economy of the community, Revelstoke's economic outlook is grim. This group and the forestry workers argue that given the foreseeable adjustments in other sectors such as mining and the Canadian Pacific Railway and possible job losses resulting from allowable annual cut reductions in nearby tree farm licences, the chief forester should give greater attention to the employment and socio-economic impacts of allowable annual cut reductions in the timber supply area, particularly in light of the uncertainty surrounding the timber supply analysis.

While the licensee group finds the suggestion that they consider value-added manufacturing inappropriate as an alternative to offset job losses, they indicate in their submission that there may be other employment opportunities within the forest industry when they recommend: "the chief forester consider the need to manage the transformation of the forest industry in Revelstoke through the application of benefits under the Forest Renewal Plan in a manner that ensures that jobs lost to changing timber supplies are supplanted by alternatives without interruption," and that "it will take some time to develop retraining programs, build remanufacturing facilities and implement community transition strategies that are probable key benefits of the Plan as it applies to Revelstoke." Both the licensee group and the forest workers want the allowable annual cut to be maintained for at least five years to maintain forest sector employment during the transition from the current industry profile to a modified profile that is expected to result in part from initiatives under the Forest Renewal Plan. Canadian Heritage - Parks Canada also supported a phased-in allowable annual cut reduction, "with support from the Forest Renewal Program and other initiatives aimed at minimizing socio-economic impacts, both short- and long-term."

BC Parks expressed concern that the *Socio-Economic Assessment* concentrated on timber extraction jobs. They believe the Forest Service should have analyzed the impacts on secondary wood processing and tourism potentials more fully. To make more informed decisions on local economic impacts, BC Parks recommends the Forest Service undertake more discussion with community leaders.

The issue of job loss was cited in the Chamber of Commerce and City Council submissions. They noted that Revelstoke has already lost employment in the forest industry and the restructuring of the Canadian Pacific Railway, and expects further losses from the impending closure of the Goldstream Mine. The chamber believes Revelstoke needs time to develop appropriate transition strategies and retraining programs. They urge the chief forester to "minimize the short-term reduction of the allowable annual cut to the 5.6 per cent option shown in the (Forest Service) base case (forecast)".

City Council initially agreed with this perspective, but near the end of the review they made a different recommendation: "If an immediate reduction (in allowable annual cut) is required, Council strongly asserts that no reduction to the annual allowable cut proceed until there is a corresponding replacement of any job losses with new forestry jobs and/or programs in the community to create new jobs, re-train and otherwise directly and meaningfully support those in transition."

Concern about the potential impact of visual quality management practices on the allowable annual cut, and consequently employment, was expressed by a forest worker at the public meeting. This individual was angry that 30 forestry jobs may be sacrificed to minimize the visual impact to those travelling along the Trans-Canada highway. The Forest Service analysis had suggested a reduction of approximately 15,000 cubic metres of timber supply to manage non-timber values, e.g., viewscapes and wildlife.

Many respondents suggested increased employment ratios be encouraged in all forest operations through increasing local value-added manufacturing. The Chamber of Commerce and a local forestry consulting firm recommended better timber utilization, intensive silviculture treatments, increased local value-added processing, and better use of the by-products from timber manufacturing as means to offset potential allowable annual cut reductions.

Two perspectives emerged about the current land-use and forestry practices that are implemented in the timber supply area:

- several respondents argue that timber extraction is only one of many important economic and social contributions provided by the forests in the Revelstoke area. Tourism, both backcountry and in-transit, contributes significantly to the Revelstoke economy. The industry provides approximately 200 person-years of full-time employment in the Revelstoke area. Tourism operators emphasized the importance of a standing forest to the tourism attraction of the Revelstoke area.
- a written submission from the Arrow Mushroom Company of Nakusp states that the harvesting and processing of non-timber forest products is one of the fastest growing industries in British Columbia. In 1992, approximately \$1.5 million worth of mushrooms was exported from the Revelstoke area. Companies that rely on the forest for non-timber products have asked for a reduced allowable annual cut, greater controls and less

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intrusive timber harvesting practices.

Several respondents urged the Forest Service and the community to face the inevitable. They believe that the most important factor to consider when determining the allowable annual cut is the available timber supply, and the current allowable annual cut is just not sustainable. Revelstoke, like all other jurisdictions, will soon be going through economic changes that occur when primary resources, forests in this case, are depleted. Harvesting of second-growth forests will not be as bountiful. These respondents contend that forestry employment will continue to decrease in British Columbia and that other industries will increase as the economy matures and diversifies. Many feel that deferral of allowable annual cut reductions to avoid potential short-term impacts on employment will not be in Revelstoke's interest in the end.

Community impacts

The City of Revelstoke is concerned about the impacts of allowable annual cut adjustments on its social and economic fabric. In its original submission, the Council reluctantly agreed that reductions in the allowable annual cut were necessary. However, they strongly urge the chief forester to reduce the allowable annual cut by no more than five per cent at this time. The City wants time to plan and solicit real and direct support for general community adjustment and community economic development strategies to replace lost jobs resulting from a decreased allowable annual cut. They also expect the province to provide support in this transition, particularly in view of the collective impacts of previous decisions regarding local resource use such as the damming of local rivers to produce hydro power. However, after further public input, the City wrote a letter to the Premier retracting their original position, stating they would not support any decrease in the allowable annual cut at this time.

Eighty-eight per cent of the survey respondents believe that harvesting has occurred at unsustainable levels for some time and, if current practices continue, future generations of British Columbians will be deprived of a vibrant and productive forest. These individuals advocate a reduction in the allowable annual cut. They believe failure or delay in reducing the allowable annual cut will only raise conflicts and make the eventual reductions much more difficult and disruptive for the industry and the citizens of Revelstoke. Canadian Heritage - Parks Canada also contends that "... delaying the reduction in the allowable annual cut is likely to make further reductions larger and more difficult for communities to adjust to." At the public meeting, a local tourist attraction operator drew parallels between unsustainable harvesting levels and the debt burden being passed on to future generations. He

argued that if the allowable annual cut is not significantly reduced, British Columbia's forest sector will run into the same problems experienced by Newfoundland's fishing industry.

In several submissions it was recognized that timber supply reviews are also underway for the three tree farm licence areas within the Revelstoke Forest District. Concern was expressed about the combined impacts of timber supply reductions from the tree farm licences and the timber supply area. The author of one submission suggested the allowable annual cut determinations for all these areas should be coordinated so the impacts can be considered at one time.

Despite the apprehension about job loss, much of the input suggests that Revelstoke is a resilient community and will withstand the economic and social adjustments that will accompany a reduced allowable annual cut. Survey respondents said that the community has adapted to economic shifts over the years. Provided the Forest Service reduces the allowable annual cut over time, the community can plan and adjust to changes. They assert that industry, the community and government require time to plan and adjust for the reduced harvest levels. While they recognize that planning and a transition period is necessary to soften the social and economic impacts resulting from allowable annual cut reductions, they also believe that delaying the adjustments will only compound the problem in the future.

In their response to the *Public Discussion Paper*, the licensee group expressed concern that the Forest Service may have dampened the community's perspective of its future by publishing the pessimistic long-term timber supply of 98,000 cubic meters per year—67 per cent below the current allowable annual cut. They feel the public has accepted the Forest Service's "dismal" future projections with resignation. If presented with an "optimistic" projection, the industry contends people would be more likely to participate in a process to develop the community's vision of forestry in Revelstoke.

Environmental concerns

Many of the responses provided comments on the environmental impacts of current land-use and forest management practices. In general, the respondents support immediate action to protect non-timber forest values and the ecological integrity of the timber supply area. They see both ecological and economic importance in non-timber resources. Many believe that, in the past, the Forest Service and the timber industry have paid little attention to the protection of biodiversity, visual impacts, wildlife and water quality. Several respondents noted that protection of these factors are required in the Forest Service's mandate and British Columbia's laws. At

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the public meeting, the Revelstoke Environmental Action Committee urged the government to care for the basic biological sustainability of forests before establishing harvesting levels for timber.

There is particular concern about whether there is adequate protection of old-growth forests in the Revelstoke Timber Supply Area. Comments on the need for old-growth forests to provide mountain caribou habitat are summarized in a previous section of this document. In addition, the Revelstoke Environmental Action Committee believes that the preservation and maturation of old-growth are vital to the health of future forests in the Revelstoke area. The ecological protection of old-growth forests is also highlighted in the submission from Canadian Heritage - Parks Canada, and several survey respondents called for the protection of much more of the remaining old-growth forest.

Many respondents believe that tourism, both in-transit and back-country, will benefit from the protection of non-timber forest values. The critique of the *Socio-Economic Assessment* completed for the Interior Lumber Manufacturers Association challenges this perspective. The critique contends that, if logging is only occurring on 11.6 per cent of the land base in the Revelstoke Timber Supply Area, it seems unlikely that "better preservation of the area's wilderness qualities" will result from reduced logging levels and strengthened multiple-use guidelines. Examples of positive relationships between logging and both winter and summer recreational activities are cited in the critique. In addition, the licensee group and forest workers contend that appropriately managed logging can co-exist with other forest values without having to reduce the allowable annual cut. Furthermore, they feel that these factors are better addressed through various other planning mechanisms that are currently, or will soon be, underway.

The proponents of increased protection of non-timber resources believe the forest is at risk, justifying immediate reductions in the allowable annual cut, and that deferring these reductions will only make current problems worse. Most survey respondents suggested that only a reduced allowable annual cut and better forest management practices can protect the area's biodiversity, wildlife habitat, ecological sustainability and the future health of the forest industry. Those advocating reductions express concern over the sustainability of current timber harvesting levels and the detrimental impact it is having on the forest ecosystem. The Friends of Mt. Revelstoke and Glacier National Parks call on the Forest Service to "husband our resources" and harvest at a slower rate that protects non-timber values and supports a smaller, but sustainable, forest industry.

Many survey respondents called on the chief forester to err on the side of caution when considering the protection of non-timber values in determining the allowable annual cut. The Revelstoke Environmental Action Committee requests that the chief forester make substantial reductions to the allowable annual cut now, and that reductions for other land use planning processes and other factors be incorporated later. Many other individuals and organizations counselled the chief forester to protect non-timber resources by making significant reductions to the allowable annual cut now.

Impacts of other government initiatives

Another area of concern to many respondents is the accumulated impacts of other government initiatives that may affect the size of the timber management land base where timber harvesting is permitted, and the forestry practices that are acceptable in these areas. The ongoing processes of the Commission On Resources and Environment (CORE) in the Kootenay region, and the related Protected Areas Strategy*, could result in additional lands being unavailable for timber harvesting in the Revelstoke Timber Supply Area. Several respondents, particularly Canadian Heritage - Parks Canada, expect that the Forest Practices Code* will prompt changes in forest management practices in the area that will impact the timber supply. Because decisions have not been made in these processes, they are not reflected in this timber supply review. Subsequent reviews, which must be completed at least every five years, will take them into account, as well as new information and other changes in government policies.

The Revelstoke Chamber of Commerce, and several other respondents, urge the Forest Service to ensure the social impacts of these other initiatives are fully understood before carrying out reductions in the allowable annual cut in this review. Other respondents counter this argument. They urge the chief forester to reduce the allowable annual cut further so that the magnitude of change is lessened once these processes inevitably reduce the land available for timber extraction, or change forest management practices. In view of these other processes, some respondents urge the chief forester to "bite the bullet" and reduce the allowable annual cut to the sustainable level of 98,000 cubic metres in the Timber Supply Review.

A Land and Resource Management Plan will be developed in the Revelstoke Timber Supply Area sometime after this timber supply review is completed. This planning process provides an opportunity for the public and stakeholder groups to work with government agencies to make choices

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about forest management objectives and practices. This plan may also have a significant impact on the timber supply in the Revelstoke Timber Supply Area and could prompt a review of the allowable annual cut in less than five years.

The licensee group believes that adapting to a new allowable annual cut will be a significant process, and that the public must be involved in this transformation. They state, "the timber supply forecast for the Revelstoke Timber Supply Area, which suggests that a radical transformation of the local forest industry is both inevitable and imminent, indicates the need for the immediate involvement of the local public in planning that transformation." They appeal to the chief forester to begin a Land and Resource Management Plan for the Revelstoke Timber Supply Area to meet this need. Other respondents also support the development of a Land and Resource Management Plan for the Revelstoke Timber Supply Area that will reflect the community's vision for forest land-use.

Allowable annual cut determination

This summary and copies of the major submissions will be provided to the chief forester. In making the allowable annual cut determination, the chief forester will consider:

- the *Timber Supply Analysis Report*;
- the *Socio-Economic Assessment*;
- the comments on technical forestry matters and the implications of alternative rates of harvest included in this *Summary of Public Input*;
- the social and economic objectives of the government provided by the minister of forests; and,
- any other information considered to be necessary.

After weighing these factors, the chief forester will use his judgement to determine the allowable annual cut. The chief forester is expected to determine the allowable annual cut for the Revelstoke Timber Supply Area during the summer of 1994. This determination will be announced publicly. The factors that are considered in the determination will be explained in a *Rationale Statement* and will be available to the public with this *Summary of Public Input*.

Revelstoke Timber Supply Area - Summary of Public Input

Appendix 1

Written submissions received by the Revelstoke Forest District

Arrow Mushroom Company Ltd., Nakusp

BC Parks, Ministry of Environment, Lands and
Parks, Kamloops

Canadian Heritage - Parks Canada, Mount
Revelstoke and Glacier National Park, Revelstoke

City of Revelstoke

Friends of Mount Revelstoke and Glacier National
Parks, Revelstoke

Ralph Edgett, Revelstoke

Enchanted Forest Ltd., Revelstoke

G.H. Murray and Associates Inc., Revelstoke

Interior Lumber Manufacturers' Association,
Kelowna

Revelstoke Chamber of Commerce

Revelstoke Environmental Action Committee

Revelstoke Snowmobile Club, Revelstoke

Revelstoke Timber Supply Area Licensee Group

Murray Sanders, Revelstoke

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Definitions

Allowable annual cut

The rate of timber harvest permitted each year from a specified area of land, usually expressed as cubic metres of wood per year.

Base case forecast

The timber supply forecast which illustrates the effects of current integrated resource management practices on timber supply using the best information that was available when the data package was prepared.

Commission on Resources and Environment (CORE)

An independent commission established to develop and test land use planning processes in consultation with stakeholders. Regional and sub-regional processes have been implemented by CORE in various areas of the province.

Current integrated resource management practices

The forest management practices that were being approved and implemented in the timber supply area when this review was initiated. These practices are based on the principles of integrated resource management which requires the identification and consideration of all resource values, including social, economic and environmental needs, in land use and development decisions.

Forest Practices Code

A draft *Forest Practices Code for British Columbia Act* which requires better forest practices, with heavy penalties for violators, was recently passed in the B.C. Legislature. The final code is currently planned for implementation in late 1994.

Forest Renewal Plan

A partnership of all the forest interests, working together to invest in increasing the value of the forest and strengthening the forest sector economy.

Land and Resource Management Plan

A consensus-building process involving a cross-section of the public, interest groups and government agencies to establish resource management objectives and strategies for a management area (usually a timber supply area).

Person-year

One person working the equivalent of one full year. If someone works full time for six months, he or she accounts for 0.50 person years.

Protected Areas Strategy

A provincial government initiative to protect representative areas within each ecological region of the province. Decisions on candidate areas are expected before the year 2000.

Riparian area

The stream bank and flood plain adjacent to streams or water bodies.

Timber management land base

Crown forest land which is economical and environmentally feasible to access and harvest.

Timber supply area

An area of Crown land defined by an established pattern of wood flow from the forest to the primary timber-using industries.

Tree farm licence

An agreement entered into with the provincial government which provides for the establishment, management and harvesting of timber by a private interest on a described area of Crown land.

