



WHAT LIES BENEATH: Responding to Forest Development Plans - A Guide for First Nations

Doug Hopwood | Ecotrust Canada
February, 2002



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1.0 OVERVIEW

1.1 INTRODUCTION

Throughout British Columbia, the forest industry operates on lands that are the traditional territories of First Nations. Because road-building and logging can have serious impacts on resources that are critical to their economic and cultural well-being, it is important for First Nations to influence the way forestry is practiced. One means of doing so is by responding to forest development plans that are referred to First Nations for comment or review. The catch here, however, is that many First Nations are now being overwhelmed with requests to comment on how development takes place in their territories. These external pressures are mounting, and to date, there has been very little in the way of resource materials to help First Nation technicians deal with these pressures, especially in the area of forestry.

This guide has been prepared in response to this need. It is intended as a reference tool for First Nations in responding to forest development plan referrals from the BC Ministry of Forests or forest licensees. It provides a brief explanation of the main factors First Nations may want to consider in responding to a forest development plan. Not every item covered in this publication is relevant in all cases.

Significant changes may occur in many of the key subject areas of this document, including possible revisions to the forest practices code and provincial policies concerning consultation with First Nations. Future court cases may add new legal considerations. To keep up with such changes, this document will be periodically reviewed and revised.

Across BC, relations between First Nations and the Ministry of Forests and licensees range from collaborative to confrontational. This document is not intended to recommend any particular style of interaction nor should it be construed as legal advice.

Readers are encouraged to offer comments, corrections and suggestions for new material to be incorporated into future versions. This can be done by contacting the Aboriginal Mapping Network or Ecotrust Canada at the coordinates listed on the inside of the front cover of this document.

1.2 WHAT IS A FOREST DEVELOPMENT PLAN?

A forest development plan (FDP) is an operational plan consisting of maps and documents that show where and how proposed road-building and logging will take place. Such plans usually cover a period of five years. The FDP is the main vehicle for public input into the planning of logging on Crown land. An FDP is usually required for logging on Crown land, although some small tree-cutting operations, such as cone collection or recreation site development, are exempt. An FDP is not required for logging on fee simple (private) land, an important consideration in certain parts of the province, particularly southern Vancouver Island.

The process of reviewing an FDP raises many issues. In responding to an FDP First Nations people often want to express their views on the whole range of land use issues they face.

One important purpose of the FDP is to document how companies intend to manage for resources and values associated with forest and range, including timber, water, wildlife, fisheries, recreation, botanical forest products, forage and biological diversity.

The process of reviewing an FDP raises many issues. In responding to an FDP First Nations people often want to express their views on the whole range of land use issues they face. However, many issues are beyond what can be addressed in the FDP process.

The main issues dealt with in an FDP are the location and size of proposed cutblocks and roads. An FDP is only one of a wide array of planning processes employed by the Ministry of Forests and licensees to plan for uses of forest land. In reviewing an FDP, issues often arise that are not actually part of the FDP. For example, First Nations reviewing an FDP may express the view that there is too much timber being cut in their territory. While this comment arises directly from reviewing the FDP, the Ministry of Forest and licensees are unlikely to respond to it in the FDP process insisting that it is more properly addressed in earlier processes such as timber supply reviews and allowable annual cut determinations.

The division of forestry issues into separate planning processes often seems arbitrary; however, it is based on legal requirements contained in the Forest Act, Forest Practices Code of British Columbia Act, and other statutes and regulations. First Nations can increase their effectiveness in dealing with forestry issues by understanding some of the main forest planning processes, and knowing which issues to address in which process.

1.3 BASIS FOR CONSULTATION

There are three distinct legal bases for the review of FDPs by First Nations. One is specified by the Forest Practices Code of British Columbia Act and Regulations (“the Code”). The Code requires that every FDP be made available for public comment. It also specifies the types of information an FDP must contain, and the time frame and process for public review. This process would seem on the surface to provide an opportunity for First Nations to bring some of their issues forward, but in reality, this seldom occurs. Forest companies (and to varying degrees the Ministry of Forests) may view this legal requirement as the main basis for referring FDPs to First Nations, and they often claim that their consultation duty is fulfilled by following Forest Practices Code procedures.

The second basis for consultation is the common law duty to consult imposed on the federal and provincial governments whenever an aboriginal or treaty right may be infringed. Aboriginal and treaty rights are specifically protected under section 35 of the Canadian Constitution. Section 35 of the Constitution Act, 1982 states that “existing aboriginal and treaty rights are hereby recognized and affirmed”. Such rights may only be infringed if governments can justify it. A key component of the justification test is for governments to show that they have consulted in a meaningful

manner with the First Nations whose aboriginal rights (which includes aboriginal title) or treaty rights may be affected. This duty flows from the Crown's fiduciary duty and was first expressed in the Sparrow case and then further elaborated upon in the Gladstone case (with respect to aboriginal rights) and the Delgamuukw case (with respect to aboriginal title). In many parts of Canada, treaties that were intended to resolve potential land ownership and use conflicts were signed with First Nations shortly after contact. In BC, Treaty 8 (which extends into north-eastern BC) and the so-called Douglas Treaties (signed with some of the First Nations on Vancouver Island) were the only treaties that existed until the very recent Nisga'a Final Agreement (available online at http://www.gov.bc.ca/tnotreaty/nisga/docs/nisga_agreement.stm.) Throughout most of BC, First Nations never ceded or surrendered their aboriginal rights or title. While the courts have concluded in Delgamuukw that aboriginal title exists as a legal concept, no First Nation has yet proved that it has aboriginal title to a specific parcel of land. The result is tremendous uncertainty that will only be resolved by future decisions of the courts or through negotiated settlements, including treaties.

The common-law duty to consult First Nations is more comprehensive than the public comment requirements of the Forest Practices Code. Consequently, First Nations do not have to restrict their comments on an FDP to the topics listed in the Code and may insist that the time frames specified by the Code be extended to conduct a proper review of the FDP. However, the Crown is only required to consult First Nations on matters that may relate to aboriginal or treaty rights, not necessarily on general issues of resource management that are not in some way tied to aboriginal or treaty rights, although most issues of resource management are arguably related to these rights.

A third basis for consultation is contractual. The Government of British Columbia has committed to follow specified consultation processes through a range of agreements from treaties to more narrowly-focused agreements, such as consultation protocols or interim measures. In the case of commitments made in a treaty, the right to be consulted is constitutionally-protected.

1.4 DIFFERING INTERPRETATIONS OF ABORIGINAL RIGHTS

First Nations' perspective on their proper role in an FDP review is frequently in sharp contrast to that of the Ministry of Forests and forest companies. In general, First Nations hold the view that they are the owners of their traditional territories, that they traditionally used most or all of the land within these territories, and that their culture and way of life depend on maintaining the ecological integrity of the entire landscape. In contrast, the Ministry of Forests and companies generally hold the view that aboriginal rights are restricted to specific local features, and that industrial forestry can proceed on the rest of the landscape without affecting First Nations rights. They

First Nations do not have to restrict their comments on an FDP to the topics listed in the Code and may insist that the time frames specified by the Code be extended to conduct a proper review of the FDP.

also often claim that all resources are adequately conserved and managed by legislation such as the Forest Practices Code, and by agencies such as the Ministry of Forests, Ministry of Water, Land and Air Protection, and the federal Department of Fisheries and Oceans. However, First Nations throughout British Columbia have found that government agencies do not always adequately protect the overall ecological health of the ecosystems and resources that First Nations depend upon, such as fish and wildlife. For this reason, First Nations often want to address a wide range of issues in FDP responses.

The Ministry of Forests policy that outlines its view of aboriginal rights and title and treaty rights, and sets the basis for consultation is Policy 15.1, Aboriginal Rights and Title. online at <http://www.for.gov.bc.ca/tasb/manuals/policy/resmngmt/rm15-1.htm> This policy also includes an Appendix called Consultation Guidelines. First Nations involved in FDP reviews should be familiar with these documents. This policy applies to operational plans such as FDPs. The policy does not address how First Nations will be consulted in other processes, such as regional land use planning or determination of Allowable Annual Cuts. The Ministry of Forests' policy clearly identifies consultation as the primary tool by which the Ministry will deal with issues of aboriginal rights and title, and with potential infringements caused by forestry operations.

1.4.1 Aboriginal rights

The Ministry of Forests maintains that to qualify as an aboriginal rights, a practice, tradition, or custom must have been a central and significant part of the First Nation's distinctive culture prior to European contact. Mere presence on the land is insufficient. There must have been use of land or resources in a defined area for purposes integral to the culture. The traditional activity may be practiced in a modernized form, but non-integral uses that arose as a result of contact do not qualify as aboriginal rights. This view is a distillation of the B.C. Government's assessment of current aboriginal rights case law.

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1.4.2 Aboriginal title

The Ministry of Forests notes in its policy that, according to Delgamuukw, aboriginal title is a right to the land itself, which, when proven, entitles a First Nation to choose how the land is used, as long as the land's ability to support the traditional use is not destroyed. According to Ministry of Forests, to establish aboriginal title, a First Nation must prove three things:

- ▶ pre-sovereignty occupancy (i.e. pre-1846),
- ▶ if present occupation is relied on as proof of pre-sovereignty occupation, continuity of occupation from pre-sovereignty to the present, and
- ▶ exclusive occupation of traditional lands or shared exclusivity.

1.4.3 Treaty rights

The Ministry of Forests' policy also notes that treaty rights are constitutionally protected and vary in scope from one treaty to the next and particularly between historic and modern ones.

1.4.4 Infringement

The Ministry of Forests' policy states that an "infringement" of an aboriginal right occurs where a proposed forest management activity physically prevents, precludes, or significantly impairs the exercise of an aboriginal right. However, the District Manager may approve such an activity as long as the aboriginal right can still be practiced in the preferred manner without undue hardship in the rest of the territory unaffected by the forest activity. This policy creates the potential for the progressive erosion of aboriginal rights and the aboriginal way of life, since it can always be argued that any one cutblock does not significantly impair aboriginal use, because other areas can be used. Over time, this limits the areas where First Nations can exercise their rights. For this reason, it is critical that First Nations look beyond individual cutblocks and assess the cumulative and long-term effects of all forestry activities in their territories on their ability to exercise their aboriginal or treaty rights.

When it comes to infringement of aboriginal title, the consultation guidelines recommend that decision-makers evaluate the extent to which the proposed activity affects the landbase, including whether the proposed activity limits what the First Nation can do with or on the land now and in the future. The Consultation guidelines do not specifically address infringement of treaty rights, instead the Policy Manual directs staff to consult the Ministry of Forests' Aboriginal Issues Binder or contact the Ministry of Aboriginal Affairs or the Ministry of the Attorney General.

1.4.5 Proof of rights

Since the onus of proving aboriginal rights, including title, rests with First Nations, the Crown will not assume that they exist unless it is legally proven. This has caused considerable frustration to First Nations who are given no choice but to take the matter of proving their aboriginal rights to the courts. This is a very unsatisfactory outcome for First Nations who would prefer not to spend their limited resources proving their historic connection to the land through lengthy and expensive trials.

Many people find the Ministry of Forests' view of aboriginal rights and title contradictory and confusing. Ministry of Forests staff (including the District Manager) must assess the land for potential aboriginal rights or title, decide whether a proposed logging plan creates a potential infringement of aboriginal rights and title, and whether the infringement is justified. At the same time, Ministry of Forests staff are told they must not confirm or deny the existence of aboriginal rights or title.

For this reason, it is critical that First Nations look beyond individual cutblocks and assess the cumulative and long-term effects of all forestry activities in their territories on their ability to exercise their aboriginal or treaty rights.

First Nations should not expect the FDP review process to lead to any formal recognition of aboriginal rights or title.

1.5 MEANINGFUL CONSULTATION

The word “consultation” has been used to describe a wide range of processes. Some of these processes amount to nothing more than an opportunity for First Nations to receive information or to provide comments that are then disregarded. This is not meaningful consultation. In the context of forestry and aboriginal rights and title, one Coastal First Nation defines meaningful consultation as consultation that:

- ▶ aims to protect or reconcile aboriginal and treaty rights, not merely to justify their infringement;
- ▶ substantially addresses the concerns of the First Nation whose lands/rights are at issue;
- ▶ involves sharing of necessary information in an understandable format and with sufficient time to thoroughly review the information;
- ▶ ensures First Nations have the necessary capacity to participate in the consultation process;
- ▶ is in good faith;
- ▶ is ongoing; and
- ▶ takes place as early in the planning process as possible and before any decision which may affect aboriginal or treaty rights is taken.

Responding to Forest Development Plan referrals is important for First Nations in defending their aboriginal or treaty rights. An efficient system for making effective responses is needed, since this is one of many tasks that First Nations must accomplish with limited resources.



1.6 SEVERAL CAUTIONS

First Nations should carefully evaluate how much effort to put into FDP review processes. The processes can be frustrating and may divert scarce resources from other activities that could bring greater benefits. The Ministry of Forests and licensees often seem to ignore or discount the comments made by First Nations, even when these are well documented and relate to genuine issues of aboriginal rights or title or treaty rights.

It is not recommended that First Nations address all issues listed in this document for every FDP they review. For First Nations with limited capacity and resources available to respond to FDPs, the first priority should probably be to comment on how the FDP will affect site-specific cultural heritage resources or aboriginal or treaty rights, because the Ministry of Forests and licensees are more likely to alter their plans in response to comments of this kind than comments on broad issues of ecosystem health and resource sustainability.

It is recommended that First Nations focus primarily on issues where there is a clear impact on aboriginal rights or title or treaty rights, and on issues where there are opportunities to make improvements in forestry practices.

For First Nations that have the capacity and can afford the resources to do so, it may be useful to review the FDP from a broader perspective of ecological sustainability. The FDP process is one of the few formal opportunities a First Nation has to highlight concerns to forest companies and the Ministry of Forests. Raising issues at the FDP stage can open the door to working on these issues in other processes. In some cases, the Ministry of Forests or companies may be eager to gain the approval and cooperation of First Nations, and may make a genuine effort to respond to First Nations concerns. Addressing a wide range of concerns in an FDP response can also help First Nations build capacity in forest management skills.

First Nations should also recognize that the right to be consulted does not guarantee that they will be able to determine the final outcome of the issue in question. Even where a First Nation succeeds in proving that the Ministry of Forests did not adequately consult with them, the Ministry may simply be directed to go back and do a better job of consulting. In the end, the activity may still go ahead. To the extent that the Ministry improves its consultation process, there is a greater chance that it will be able to meet the justification test. Ministry decisions made following a meaningful consultation process will be difficult to challenge in the courts, regardless of whether these decisions satisfactorily address First Nation's concerns. First Nations must also recognize that refusal to participate in consultation processes will be a disadvantage if a matter goes to court. The courts have held that First Nations cannot argue that they were not consulted in circumstances where they refused to participate (Footnote: *Ryan v. British Columbia* (1994), 40 B.C.A.C. 91 (BCCA)).

2.0 GETTING STARTED WITH FDP REFERRALS

2.1 SOURCES OF MORE INFORMATION ON FDPS

There is no single document that tells all that First Nations need to know about the legal requirements of an FDP. However, the following Ministry of Forests documents are relevant, and available at www.for.gov.bc.ca.

- ▶ The basic content requirements and time frame of an FDP are specified in Sections 10, 17, 18, and 19 of the Forest Practices Code of British Columbia Act.
- ▶ Additional details on the time frame for review and approval of an FDP are in Part 2 of the Operational Planning Regulation (a regulation under the Forest Practices Code). Most of the legal requirements for contents of an FDP are in Part 3 of the Operational Planning Regulation.
- ▶ Some basic guidance on the structure and contents of an FDP are provided in the Forest Development Plan Guidebook. (Some aspects of this guidebook are already out of date).
- ▶ The document that outlines the Ministry of Forests view of aboriginal rights and title and treaty rights, and sets the basis for consultation is the Ministry of Forests Policy 15.1, Aboriginal Rights and Title. This policy also includes an Appendix called Consultation Guidelines.
- ▶ Other information relating to the content of an FDP is found in various guidebooks, such as the Riparian Management Area Guidebook.

West Coast Environmental Law Association's Guide to Forest Land Use Planning provides a comprehensive source of information on the laws and policies respecting the use of public forest land in BC. This document is updated periodically, and is available at online www.wcel.org.

Forest Watch BC has published a report titled Evaluation of Forestry Plans: A Practical Guide. Part One gives a checklist of all the required items to be covered in an FDP, with references to applicable parts of the Forest Practices Code Act or Regulations. Part Two is a checklist for evaluating the plan from the point of view of Ecosystem-Based Management. This document is available from:

Forest Watch of British Columbia

Suite 214 – 131 Water Street,

Vancouver, BC V6B 4M3

Tel: (604) 665-5618

2.2 CLARITY OF COMMUNITY GOALS

Participation in a consultation process is most likely to succeed when a First Nation has well-defined strategies with respect to resources and rights and title. Broad community support is important, including elected leaders, elders, and hereditary chiefs.

2.3 COMPREHENSIVE RESEARCH

Effective consultation depends on good information about the land. Well-documented data on traditional uses is especially important. While many First Nations have been involved in Traditional Use Studies (TUS), some do not meet the needs of First Nations in defending their rights and title against outside interests. An effective approach to collecting traditional use data is comprehensive research, a “research strategy that links a number of key research products together to produce data which prove that mapped land use and occupancy information represents living cultural systems.”

In contrast to comprehensive research, the “museum approach” is “industry and government’s typical interpretation of mapped First Nation cultural features, which is that they represent isolated remnants of a dead or dying tradition, instead of representing parts of living cultural systems.”

Adopting a comprehensive research strategy is one of the most effective steps a First Nation can take towards regaining control over their land. Some First Nations have had success in influencing land use decisions by developing their own vision and land use plan for their territories. Comprehensive research can form a good basis for such plans. For more information on the comprehensive research approach see *Chief Kerry’s Moose* (Tobias, 2000).

2.4 SEEING THE BIG PICTURE

The effects of an FDP should be considered over an extended period of time. For example, in the short-term a clear-cut may provide increased forage for deer. The long term impact, however, may be loss of deer forage as clear-cuts change to dense second-growth with few browse plants for wildlife.

Always consider the cumulative effect that numerous cutblocks and their associated roads are likely to have. For example, in a watershed where logging-related landslides are a source of sediments into a river, fish habitat in the stream channel can be damaged by the combined sediment load resulting from numerous landslides, washouts, etc., even though one or two such sources might not cause significant harm.

Always consider the cumulative effect that numerous cutblocks and their associated roads are likely to have.

2.5 DESIGNING A RESPONSE SYSTEM

To respond effectively to an FDP requires a well-organized administrative system. In many cases, the response is made by a team, usually led by the First Nation’s resource

officer or GIS technician. It can also include staff, councilors, chiefs and elders, community members, and outside consultants. Good systems of internal communication are necessary, and all team members should have clearly defined roles. A coordinated response also helps to ensure that responding to an FDP does not become a sinkhole for limited resources.

An efficient system is needed to organize papers, retrieve information, and document all communications. All major communications should be in writing. For telephone conversations, the date, time, person spoken to, and brief summary notes should be recorded. A First Nation's response to an FDP should be presented under the signature of a person authorized to speak for the community. Keep records of communications with government and companies. This will prove important in the event of litigation. For example, any important verbal commitment should be confirmed in writing.

First Nations should also apply the concept of meaningful consultation to their own internal consultations with community members and with others outside their communities. Consultation about FDPs should canvass the community as thoroughly as possible without overloading community members by providing too much technical information and too many plans and maps to look at.

2.6 WRITING THE RESPONSE

Meaningful consultation cannot occur unless First Nations have access to all the information they need. In many cases, FDPs are submitted without the details necessary to develop informed responses. The first response to the FDP may simply consist of requests for more information. At this stage, it is best to ask questions. Avoid providing informal preliminary responses to the content of the FDP.

First Nations comments are more likely to be taken into account if they make it clear how the proposed activity infringes on aboriginal rights and title or treaty rights. The FDP response should answer three very specific questions:

- ▶ How does the FDP affect the First Nation's rights, title, or other interests?
- ▶ Why is the impact on rights, title, or other interests an important issue?
- ▶ What changes does the First Nation want? Explain why these changes are needed to protect the right, title or interest in question.

EXAMPLE: "Proposed cutblock XYZ999 contains a small fish-bearing (S4) stream where coho fry have been found. Logging over this stream will damage or eliminate the habitat. Our people have depended on fish from this system for countless generations, and any loss of fish habitat is an unjustifiable infringement of our aboriginal rights. The cutblock boundary must be amended to avoid any impact on fish habitat."

Note that in this example, the proposed logging is not prohibited under the Forest Practices Code, but could still constitute a potential infringement of aboriginal or treaty rights.

First Nations comments are more likely to be taken into account if they make it clear how the proposed activity infringes on aboriginal rights and title or treaty rights.

In addition, important points that are often included in a First Nation's response to an FDP include:

- ▶ background information that describes who the First Nation is, where its traditional territory is located, and other information related to aboriginal rights and title or treaty rights;
- ▶ a clear statement of the First Nation's position on ownership of land and resources;
- ▶ an overview of specific "off-limit" areas that are to be protected by the First Nation; and
- ▶ a critical analysis of the consultation process, including barriers that limit the First Nation's ability to participate in it, and resources needed for meaningful consultation.

It is usually helpful to deal with issues in the same order as in the FDP.

3.0 ISSUES TO CONSIDER IN FDP REFERRALS

A proposed forestry activity can affect a First Nation's rights and interests in many ways. In the following sections, the contents of an FDP are discussed from the point of view of process, information, legal, cultural, and economic issues.

3.1 PROCESS ISSUES

3.1.1 Consultation protocols

Some First Nations have negotiated formal consultation agreements or protocols that clarify the duties and expectation of all parties. These agreements may be bilateral - between the First Nation and the Ministry of Forests or between the First Nation and a company. They may also include all three parties, perhaps more. When negotiating an agreement, be specific about everything that is important to the First Nation in the consultation process. This might include timelines, information needs, provisions for field visits and archaeological and other types of assessments, confidentiality concerns, funding and fees for consultation services, meeting protocols, dispute resolution processes, etc. An agreement based on the standard Ministry of Forests' consultation policy may not serve a First Nation's interests. A comprehensive consultation agreement should include a commitment by the company or the Ministry to: negotiate in good faith, substantially address the First Nation's issues, and take all reasonable steps to avoid infringement. If the commitment is not there, it may not be a good investment of time and effort to respond to FDPs. However, if a First Nation does not participate in the consultation process or at least in some way register its concerns, that refusal to respond will likely be used against it if it later decides to challenge the forestry activities under the FDP through the courts.

3.1.2 Fees for Consultation

Companies are in the business of logging to make money, and they must consult with First Nations before they can log. In other words, by consulting with licensees, First Nations are providing a service they need, and helping them make money. There is no reason to do this for free. Many First Nations charge the licensee a negotiated fee for consultation services, to cover the time spent by staff or consultants such as archaeologists, foresters, or biologists. Transportation should also be provided by licensees for site visits.

3.1.3 Capacity Building

Both the federal and provincial government have allocated funds to build capacity in First Nations communities. In some cases licensees have supported capacity-building initiatives.



Field visits provide an opportunity for First Nations to see for themselves how logging operations will affect the resources of their traditional territory.

3.1.4 Consultation Time Frame

The ordinary prescribed period for public review of an FDP is 60 days. The Ministry of Forests' consultation policy recommends a set of consultation stages that add up to 120 days. However, meaningful consultation with First Nations should allow time for the referral to be reviewed by various interested members of the general community, to collect relevant information, and to consult specialists (such as a fisheries biologist, forester, archaeologist, etc.). If more time is needed, it is best to negotiate an extension of the review period as early as possible.

3.1.5 Ongoing Consultation

Meaningful consultation involves ongoing communication. First Nations should be informed and, if they wish, involved at all stages of the process that leads to the preparation of the FDP. This includes making management plans, determining the Allowable Annual Cut, awarding of tenures and defining operating areas, Landscape Unit Planning, etc. Early involvement may reduce the number of conflicts that arise later. Approval of the FDP does not necessarily end the consultation process. If there is a potential for infringement of aboriginal rights or title or treaty rights, consultation on specific details of a cut block can continue through the Silviculture Prescription stage to on-the-ground operations.

In cases where a good working relationship exists, licensees may work with one or more First Nations in creating the FDP, rather than waiting for the formal review process before sharing the FDP with First Nations.

Some Ministry of Forests Districts have a technical sub-committee, consisting of company representatives, Ministry staff, and, in some cases, First Nations representatives. These committees typically meet several times a year to discuss technical forestry issues. Participation by First Nations is a good method of promoting information sharing among all parties.

3.2 INFORMATION ISSUES

3.2.1 Quality of Information

Section 18 of the Operational Planning Regulation specifies the information requirements for an FDP and associated maps. At a minimum, all these items should be provided with the FDP. In addition, the Ministry of Forests' consultation policy states that Ministry staff must take all reasonable steps to provide First Nations with relevant information regarding the proposed management activity and an understanding of its on-the-ground impacts.

Background documents, such as reports on terrain stability, forest health, archaeological impacts, watershed assessments, wildlife inventories and total resource plans should be made available to the First Nation as necessary. Due to changes in the Forest Practices Code, the various assessments that may be required are not routinely included for public review. However, a First Nation can request that these be provided for any cutblocks or roads of concern, such as a road close to an important fish stream, or a cutblock on steep ground.

Forest cover maps and data should be up-to-date, showing recent cutblocks, burned areas, etc., and information should be included on recent landslides, road washouts, etc. If there are doubts about critical information, the company should arrange (and pay for) a field visit by First Nation personnel. It is useful to develop a standard form to record data and observations from field visits.

3.2.2 "Known Information"

The term "known information" has a special meaning under the Forest Practices Code, which is "a feature, objective or other thing that is contained in a higher level plan, or otherwise made available by the district manager or designated environment official at least 4 months before the operational plan is submitted for approval."

There are many items of information that must be included and considered in an FDP, provided they are "known," but according to the above definition, information that is common knowledge may not be legally "known," and can be ignored. To ensure that important information is considered, First Nations can request that the

District Manager make specific information “known.” Regardless of whether information is legally “known” it should be considered in the FDP if it is relevant to aboriginal rights and title or treaty rights, or to sound resource management and conservation.

3.2.3 Maps

Company or government maps should be complete, correct, and easy for non-specialists to understand. For example, the forest cover labels should be legible, and the legend should explain all the symbols on the map.

Maps and text must be consistent. For example, proposed and existing blocks should have the same status on maps as in the text. If necessary, request that the company provide a map reading workshop, to improve skills in the community. This can also show company staff the difficulties ordinary people have in reading technical forestry maps. If more than one company operates in the territory, they should present maps in a consistent format, to facilitate understanding by community members.

The impact of proposed roads and logging can only be assessed by considering them in the context of the larger landscape (i.e., a watershed or other large area). FDP maps should show the conditions of the whole landscape (e.g., how much has already been logged, where the roads are, where other companies are planning to log, etc.).

In cases where proposed operations cover more than one map sheet, there should be a map provided to show the whole area on one sheet (e.g., at 1:50,000 scale). This makes it easier to understand the extent and location of the proposed logging, and to assess the cumulative effect of the FDP on the landscape.

First Nations that have GIS capability may want to get the FDP maps in digital form. This enables First Nations to create their own maps to help the community understand the FDP, or to analyze the effect of the FDP on resources such as traditional use sites. For First Nations that receive many FDPs covering large areas, digital data is essential for meaningful consultation. Insist that licensees provide the maps in digital form.

There is currently very little support for communities to build capacity in the field of mapping and GIS; most communities are struggling in isolation. To address this issue, Ecotrust Canada joined together with technicians from the Gitksan and Ahousaht Nations and created the Aboriginal Mapping Network. The AMN is a venue where people can share experiences, information and ideas on topics ranging from basic data collection through to advanced GIS and spatial analysis. The AMN is structured with five main activity areas: (1) a dynamic WEB page (<http://www.nativemaps.org>); (2) informal round-table workshops; (3) international mapping conference; (4) a publication series; and (5) informal exchanges with First Nations practitioners. See the AMN web site or contact the address on the inside of the front cover for more information on this program.

3.2.4 Other Agencies

FDPs are reviewed by the Ministry of Forests, the Ministry of Water, Land, and Air Protection, and the federal Department of Fisheries and Oceans. Consider requesting copies of their review comments, as these may identify issues of concern that would otherwise be missed. It may also be useful to develop lines of communication with other groups in the area that take an interest in forestry issues.

3.2.5 Decision Rationale

The decision to approve an FDP lies with the Ministry of Forests District Manager. Before approving an FDP, the District Manager must be satisfied that it will “adequately manage and conserve the forest resources.” Request that the District Manager provide a written rationale for the decision, with a clear explanation of how all First Nations concerns were addressed.

3.3 LEGAL ISSUES

3.3.1 Assertion of Rights and Title

Every FDP response provides an opportunity for First Nations to assert:

- ▶ aboriginal rights
- ▶ title
- ▶ treaty rights
- ▶ full and meaningful consultation.

These points should therefore be made in an FDP response.

3.3.2 Relationship to the treaty process and court cases

In determining how to respond to an FDP, a First Nation must consider the potential impact of its response on ongoing or future court cases, as well as treaty or interim measures negotiations. These concerns are frequently addressed by developing a “without prejudice” clause in the FDP. The intent of such clauses is to indicate that the parties in question agree that their actions are not intended to have a negative impact on or in any way limit the assertion or exercise of aboriginal rights. However, the effect of “without prejudice” clauses used in this manner has not yet been tested by the courts.

In particular, there is a concern that giving permission for logging in an area where the First Nation may have aboriginal title or other aboriginal rights (or even just remaining silent) could jeopardize these rights. According to the Delgamuukw decision, aboriginal title is subject to the limitation that land must be used in a manner consistent with the special connection of the people with the land. For example, a First Nation could not develop a gravel pit on land traditionally used for gathering

Granting consent for any activities that damages the land for traditional uses may result in the First Nation losing its aboriginal title to the lands in question.

edible bulbs without putting at risk its Aboriginal title over the land in question. Granting consent for any activities that damages the land for traditional uses may result in the First Nation losing its aboriginal title to the lands in question.

One First Nation, if it does not object to the cutblock, uses the wording “at this time, the proposed development will not affect any known archaeological features or aboriginal rights.” This at least leaves some room for raising concerns if unanticipated issues arise at a later time.

If in doubt about the legal implications of a response to an FDP, it would be wise to get legal advice.

3.3.3 Forest Practices Code

The contents and process of an FDP must comply with the Forest Practices Code and other legislation. However, a plan may comply fully with the Code and still cause an unjustifiable infringement of aboriginal rights. Companies or the Ministry of Forests often dismiss First Nations concerns by stating that the proposed activity complies with the requirement of the Forest Practices Code, as though this were the only legal requirement that forest management activities must meet. It is not necessary to accept “it complies with the Code” as a response to First Nations concerns.

If there is an apparent violation of the Code, the usual first step is to bring the matter to the attention of the Ministry of Forests or the company. If the issue is not satisfactorily resolved, a complaint can be brought to the Forest Practices Board. Note that the Forest Practices Code covers planning processes as well as on-the-ground practices. For example, failure to include required information in a forest development plan can be a violation of the Forest Practices Code.

3.3.4 Consultation with the Crown

The FDP review process requires the licensee to get comments from First Nations. However, the fundamental duty to consult lies with the Crown (represented by the Ministry of Forests in this case) and the authority to approve an FDP lies with the Ministry of Forests District Manager. For this reason all important communication with the licensee should be copied to the District Manager.

3.4 CULTURAL ISSUES

3.4.1 Traditional Use Study

For First Nations that complete a Traditional Use Study (TUS), the value and usefulness of the TUS data is increased by developing a system for using the TUS information in the consultation process. Ensure that information retrieval is efficient, that the people using the data understand it, and that confidential or sensitive information is protected.

If a TUS is not completed, it is still possible to assess the potential impact of the proposed activities on aboriginal rights and title or treaty rights by consulting elders and other First Nation members who know the area.

If funds become available to collect traditional use data, it is wise to ensure that the data is collected in a way that most effectively supports the First Nation's interest in establishing its rights and/or title to land and resources. (See Section 2.3 on Comprehensive Research.)

3.4.2 Policy on Cultural Resources

First Nations can streamline and strengthen their internal process of commenting on FDPs by developing a policy on the protection, management, or research of cultural resources (such as culturally modified trees [CMTs], archaeological sites, spiritual sites, etc.) rather than addressing these issues on an ad hoc basis.

3.4.3 Sensitive Information

Meaningful consultation requires a two-way exchange of information. This means that First Nations must share information so that the Ministry of Forests and licensees can understand how proposed forest management activities may affect aboriginal rights or title, treaty rights, or other First Nation interests. At the same time, there may be many reasons to protect sensitive sites or confidential information. One option is to refer to “cultural values at risk” without specifying exactly what and where they are. Some First Nations draw a large circle on the map, with the sensitive spot somewhere inside the circle (not at the centre).

Another option is to develop a confidentiality agreement with the Ministry of Forests and the companies. This agreement requires that information received from the First Nation is handled in a confidential manner and not made public. However, such an agreement is only effective if it is consistent with the relevant access to information legislation.

3.4.4 Cultural Heritage Resources and Archaeological Sites

The Heritage Conservation Act provides for protection and conservation of heritage sites and objects. In particular, Section 13 of the Heritage Conservation Act states that, except as authorized by a permit issued by the Director of

Culturally modified trees can help to establish the case for aboriginal rights on the land by providing physical evidence of past land uses. CMTs can also help to foster a sense of cultural connection for First Nations' young people. Many First Nations use the FDP referral process to ensure protection of CMTs.



the provincial Archaeology Branch, a person must not:

- ▶ damage, desecrate or alter a burial place that has historical or archaeological value or remove human remains or any heritage object from a burial place that has historical or archaeological value;
- ▶ damage, alter, cover or move an aboriginal rock painting or aboriginal rock carving that has historical or archaeological value; and
- ▶ damage, excavate, dig in or alter, or remove any heritage object from, a site that contains artifacts, features, materials or other physical evidence of human habitation or use before 1846.

However, this legislation does not guarantee protection of all archaeological features as permits are sometimes issued despite First Nations' objections.

Two levels of assessment are used to gather information about archaeological resources. An archaeological overview assessment (AOA) may be done by government to identify and assess archaeological site potential and the need for an archaeological impact assessment (AIA).

The District Manager has the authority to require an AIA before approving a Silviculture Prescription, but an AIA is not required at the FDP stage. First Nations should ask the District Manager to require an AIA for any cutblock where they believe there are archaeological resources at risk, and ask to see the AIA before commenting on the FDP. First Nations can also request the opportunity to review the AIA before approval of the Silviculture Prescription. The AIA should be done by an archaeologist whose work the First Nation trusts and respects.

An alternative to an AIA is a reconnaissance tour. The licensee pays qualified First Nations workers or designated contractors to walk the block looking for Culturally Modified Trees, ground exposures, terraces, or other features that may signal the need for an AIA on specific blocks, which is then requested if needed. Because the reconnaissance tour is cheaper than an AIA, it is possible to cover more blocks for the same cost.

Cultural and archaeological survey work should be done by First Nations workers as much as possible. Request that the company provide relevant training for First Nations workers if needed.

3.5 ECONOMIC ISSUES

In the Sparrow case, the Supreme Court of Canada noted that payment of fair compensation was one of the potential factors to consider in determining whether an infringement of aboriginal rights could meet the justification test. In *Delgamuukw*, the Court went even further in concluding that aboriginal title has an “inescapably economic aspect” and that fair compensation will generally be required when aboriginal title is infringed. Some First Nations use the FDP review process as an opportunity to raise issues such as compensation, employment and training, accessing tenure,

entering into joint ventures, or setting up value-added processing in the local area. These discussions can then be continued beyond the FDP process.

3.5.1 Economic Benefits

Consider the value of timber leaving the territory, its end-product value, employment benefits, and the stumpage paid to government. Compare that to the benefit to the First Nation and/or local community. Although the FDP process is not designed to address these issues, analysis of this kind can strengthen a First Nation's case for more economic benefits.

3.5.2 Alternate Values

Consider the economic value of land uses other than logging, such as tourism or non-timber forest products (NTFPs). Will logging affect them? Some areas may have higher value for NTFPs such as pine mushrooms than timber, and harvesting such products may be more compatible with First Nations uses of the land than logging.

4.0 DETAILS OF AN FDP REFERRALS REVIEW

In the following section, resource issues are listed in the same order that they usually appear in an FDP.

4.1 TIMBER RESOURCES

4.1.1 Harvest Summary Table

Most FDPs contain a Harvest Summary Table based on a standard template suggested in the Forest Development Plan Guidebook. This provides an overview of important factors for each cutblock in the plan.

4.1.2 Categories of Cutblocks and Roads

An FDP can contain several categories of cutblock.:

- ▶ **Category I** cutblocks are blocks the company is considering, but not seeking approval for. They are not legally part of the FDP, and are included for information purposes only. Category I cutblocks provide an opportunity for early comment and consultation.
- ▶ **Proposed Category A** cutblocks are blocks for which the company is seeking approval. According to the Code, these blocks are at the stage where comments and consultation are most appropriate.
- ▶ **Approved Category A** cutblocks are blocks that already were shown, and approved, in a previous FDP. According to the Code, comment on these blocks is limited to a terrain stability field assessment required under section 16 or 17 that was not completed for the cutblock before the approval of the FDP.
- ▶ **Expedited Major Salvage** cutblocks are defined as blocks containing more than 2000 m³ that must be quickly logged to prevent the spread of insects or loss of timber value. In this situation cutblock sizes may exceed ordinary limits. The period for public review of an FDP is reduced from 60 days to 10 days. Similarly, the Ministry of Forests' Consultation guidelines state that time frames for First Nations consultation may be shortened if required for a speeded up salvage operation.

As with cutblocks, roads shown on an FDP can be proposed, approved, or for information only. In addition, existing roads that are not part of the FDP (such as Forest Service roads and public highways) are shown.

4.1.3 Cutblock Size

The maximum permitted cutblock size is 40 ha in Vancouver, Nelson and Kamloops



The ecological effects of variable retention logging depend on how the system is applied. Here, Heiltsuk forestry coordinator Brett Waterfall (third from left) inspects a variable retention cut-block in Heiltsuk traditional territory with Ministry of Forests personnel.

Regions, and 60 ha elsewhere. However, the District Manager may reject a proposed cutblock of the maximum permitted size, if a smaller cutblock is needed for any of the following reasons:

- ▶ hydrological reasons;
- ▶ to manage wildlife values;
- ▶ to manage recreation or scenic values; or
- ▶ other similar reasons.

The District Manager may also approve a cutblock larger than the above limits for the following reasons:

- ▶ to salvage burnt or damaged trees;
- ▶ to mimic natural disturbance;
- ▶ if the silvicultural system is not a clear-cut or seed tree and retains 40% or more of the pre-harvest basal area; or
- ▶ if a larger area is specified by a higher level plan.

A First Nation could request that the District Manager reject a proposed cutblock that is too large, on the basis that it would infringe on an aboriginal or treaty right. For example, large cutblocks can be detrimental to certain wildlife species important to First Nations, such as deer or caribou.

4.1.4 Timber Volume

The volume of timber to be removed is usually listed for each cutblock. It can be useful to add up the total volume to be logged for each year and compare it to the volume that the company is entitled to cut under the licence in question. (This may not be feasible if there is more than one FDP for the licence, or if the FDP covers more than one licence). If the total volume is significantly more than the company is entitled to cut, there may be several explanations. It may be that the company is trying to build a stockpile of approved blocks so they can pick and choose which ones to log, and thereby increase their operating flexibility. It may be that the FDP contains blocks that are crudely mapped with much larger dimensions than they will likely have after the on-site engineering work is complete. To some extent these practices are reasonable, but if done to extreme, they are unfair to First Nations, since the result is an FDP that inaccurately describes the proposed logging, and requires First Nations to waste time consulting on blocks that won't be logged.

4.1.5 Harvest Methods and Silvicultural System

Harvest method refers to the logging method (cable, ground-based, helicopter, horse, etc.). The choice of harvest method can be very significant in determining the environmental impact of a cutblock. Determining the likely environmental impact of a proposed harvest method requires knowledge of site-specific conditions and experience with various logging methods.

Silviculture system refers to the system for removing, regenerating, and growing trees (clear-cut, seed tree, shelterwood, selection, etc.) Variable retention systems are increasingly used to maintain a higher level of habitat values and ecological function than clear-cutting. Variable retention also has less visual impact than clear-cutting. A clear and credible rationale should be given for whatever system is chosen.

In general, the trend towards partial cutting (versus clear-cutting) is good for First Nations values in the forest. However, with partial cutting more length of road is often needed than to log the same volume by clear-cutting, and this can lead to increased impacts on water quality and fish habitat. Also it may be more difficult to regenerate certain trees species, particularly Douglas-fir and in some cases cedar, in the partial shade under retained trees.

If partial cutting is proposed, the FDP should specify the details of the partial cutting system, such as what kinds of trees will be retained, whether the retained trees will be dispersed or in clumps, and whether the trees will be permanently reserved or logged a little while later. In variable retention, the trees retained should include good representation of naturally occurring species, of various sizes and ages. Otherwise, it is of marginal long-term ecological or economic benefit. In some cases, the terms variable retention, seed tree, or shelterwood may be applied to systems that are really just clear-cutting with a few trees left standing.

If the partial cutting system retains more than 40% of the basal area within the block, the company is allowed to exceed the usual size limits for a cutblock, and to place blocks adjacent to others that are not yet “greened-up” (i.e., the young trees on the site reached a specified minimum height, usually 3 metres). For this reason, where partial cutting is used, check the overall rate-of-cut and degree of impact at the watershed level.

4.1.6 Forest Health

The Ministry of Forests and logging companies often talk about forest health. When they do, they are usually referring to insects and diseases that attack commercially valuable trees. Although insects and disease can destroy valuable timber, they also play a useful role in the forest ecosystem. For example, root diseases kill patches of coniferous trees, creating openings filled with brushy vegetation. These in turn provide forage for ungulates and habitat for song-birds. The objective of sound forest management is not to eradicate insects and disease, but to manage for acceptable levels of them.

The Forest Practices Code has special provisions for “salvage” logging of timber killed or damaged by insects, disease, wind or fire. (See “Expedited Major Salvage Operations” under “Categories of Cutblocks” above.)

In some cases, forest health issues are used to justify logging more timber than is necessary to address the problem. There are often biologically sound alternatives to clear-cutting the entire affected area. If extensive salvage logging threatens aboriginal or treaty rights, insist that the company and the Ministry of Forests investigate all options for addressing the situation, and provide a sound rationale for the option chosen.

4.2 WATER RESOURCES

4.2.1 Water Quality

Most water quality issues should be addressed at the watershed level, through a watershed assessment. That’s because water quality is affected by activities that occur throughout a watershed. However, there may be site-specific water quality issues, for example, if logging or road building occur in the vicinity of a water intake, well or spring.

Water quality issues are of heightened concern to First Nations in B.C. because of the potential damage that logging and road-building activities can do to salmon streams. Also, a disproportionately large number of First Nations communities in Canada suffer from damaged drinking water supplies and/or poor water treatment facilities. Such facilities are highly susceptible to breaking down if water supplies are damaged by logging-related siltation.

Riparian (streamside) forests are essential for fish habitat, providing shade, bank stabilization, sources of nutrients, and large fallen logs that create pools. They are also important habitat for many kinds of wildlife. Protection of these areas under the forest practices code is not always adequate to protect aboriginal rights, so First Nations may want to comment on any logging or road-building proposed near streams.

4.2.2 Riparian Areas

Forests next to streams are critical in maintaining fish habitat. Riparian forests provide shade and stabilize stream banks. Old forests are important next to streams to provide the large organic debris (fallen trees and logs) that stabilize stream channels, retain spawning gravels in stream beds, and create pools, hiding cover, and other habitat features for fish. Riparian areas are also important for many wildlife species that use riparian forests for feeding, travel or nesting.

Under the Code, Riparian Reserve Zones or Riparian Management Zones of varying width are required depending on the stream class. The Riparian Reserve Zone and the Riparian Management Zone together are called the Riparian Management Area. (See Table 1 in the Riparian Management Area Guidebook.)

Logging is not permitted in Riparian Reserve Zones. Logging is permitted in Riparian Management Zones, but is somewhat constrained. It is important that the Riparian Management Area be managed according to the objectives specified in the Riparian Management Area Guidebook.

For example, the Riparian Management Zone should be managed to help reduce windthrow in the Reserve Zone, as well as to sustain biodiversity and wildlife habitat. Risk of windthrow is often cited as a reason for clear-cutting the Riparian Management Zone, especially where no Reserve Zone is required. However, a certain amount of windthrow is not always harmful, and there are logging techniques that reduce windthrow.

An FDP must specify the general objectives for riparian management zones, including the range of basal area retention by riparian class. The “basal area retention” indicates roughly what percentage of the trees will be retained. (See Table 4 in the Riparian Management Area Guidebook).

Unfortunately, the Code requirements for managing riparian areas are inadequate to fully protect fish habitat and other hydrological, wildlife, and biodiversity functions. The Code permits logging up to the boundaries of S4 streams (small fish-bearing streams) which often provide valuable rearing habitat for salmon fry. The Code also permits logging of S5 and S6 streams which,



although they do not have fish, may be directly upstream from fish-bearing reaches. Sediment introduced into S5 or S6 streams may damage fish habitat downstream.

Given that salmon is at the heart of many BC First Nations cultures for its value as a food source and as an important part of their social and cultural ties and ceremonies, any logging practice that damages salmon habitat may constitute an infringement of an aboriginal or treaty right. First Nations are on solid ground in demanding detailed consultation on any practice that has the potential to damage fish habitat, and to insist that plans be modified to minimize the risk of damage.

4.2.3 Stream, Lake and Wetland Mapping and Classification

Under the Forest Practices Code, streams are classed into six categories, from S1 to S6, depending on the stream width and whether fish are present. Correct classification of streams, lakes and wetlands is extremely important, because it determines the width of unlogged streamside forests known as riparian reserve zones and/or riparian management zones that are required to protect the fish habitat and other ecological functions of the water body and riparian area. Of these, stream classifications are usually the most critical.

Under the Code, classification of streams, lakes and wetlands is required at the Silviculture Prescription stage, not the FDP, unless this information has been made “known”. However, this information is often critical for First Nations to understand. First Nations can request to see the stream classifications related to specific blocks in the FDP before the Silviculture Prescription is approved.

Errors in stream classification are not uncommon, and can be detrimental to fish habitat. Stream classifications can be checked by field visits and community review of maps. Elders and other community members often have detailed knowledge of which streams have which species of fish. Many First Nations have their own skilled and qualified crews who do stream classification, and have secured employment for these people doing classification work for licensees.

Stream classification under the Code is based on fish presence and stream width, and does not require assessment of factors such as habitat condition, impacts of past practices, and needs for restoration of the stream channel and riparian areas. However, stream classification surveys can provide an opportunity to collect useful additional information of this kind.

4.3 RECREATION

FDPs generally deal with specific recreation features that may be affected by logging and roads. An FDP may include measures to enhance recreational uses in ways that impact on First Nations uses. For example, a new road will provide access, perhaps

Many First Nations have their own skilled and qualified crews who do stream classification, and have secured employment for these people doing classification work for licensees.

increasing hunting by non-natives, or increasing recreational access to culturally sensitive sites (burial, pictographs, etc.).

4.3.1 Visual Quality

Visual quality concerns are usually covered under Recreation in an FDP, or sometimes under Cultural Heritage Resources.

Under the Code, the FDP must identify the location of “known” scenic areas, and describe measures to manage or protect the visual features. When operations are proposed in scenic areas where visual quality objectives (VQOs) have been established, a visual impact assessment must be completed to show how the proposed operations will achieve the VQOs for the area. The results of the assessment must be incorporated in the Silviculture Prescription. Visual Impact Assessments are not ordinarily referred to First Nations, but can be requested in areas of interest. If there are no VQOs, there may be recommended Visual Quality Classes, which are similar but allow more discretion in achieving them.

This process indicates that the main opportunities for First Nations to influence decisions about visual management occur before the FDP, when scenic areas and Visual Quality Objectives are designated. These are designated either by the District Manager or in a higher level plan, such as an LRMP. The process for establishing known scenic areas or Visual Quality Objectives does not always take adequate account of how First Nations perceive and value the visual qualities of the forest landscape, so it is important to insist on consultation when scenic areas or VQOs are established.

4.4 NON-TIMBER FOREST PRODUCTS

The FDP area often contains potential for non-timber forest products (such as mushrooms or floral greens). Such resources can be easily damaged by logging and are often poorly documented, even though their economic value may in some cases be equal to or greater than the timber. If First Nation members harvest these products, be sure that these resources are considered in the FDP.

4.5 FORAGE AND RANGE USE

In the Interior, land is often used for cattle range after logging. The Ministry of Forests, which approves logging, also issues grazing permits. Grazing can destroy or diminish food plants such as berries and bulbs. Grazing can also damage water quality and fish habitat, if range animals are allowed access to stream side areas, where they may eat or trample streamside vegetation, erode the stream banks, and pollute the water. The Crown’s duty to consult with First Nations applies to range use in the same manner as it does to logging.

4.6 CULTURAL HERITAGE RESOURCES AND ARCHAEOLOGICAL SITES

See discussion under Cultural Issues.

4.7 TERRAIN STABILITY AND SOILS

Logging and road-building on unstable terrain can cause various types of slope failure. This can damage other resources, especially water and fish.

Several forms of information about terrain may be available. Terrain mapping shows the different types of surface materials, landforms, and geological processes within a landscape. It does not specifically assess the risk of slope failure, but it can be interpreted for this purpose.

Terrain stability mapping is more focused on the occurrence and risks of slope failure.

In Reconnaissance Terrain Stability Mapping, usually done at a scale of 1:20,000 to 1:50,000, the land is classed as stable, potentially unstable, and unstable terrain.

In Detailed Terrain Stability Mapping, usually done at a scale of 1:20,000, the land is typically placed in 5 classes. Class IV terrain is expected to contain areas with a moderate likelihood of landslide initiation following timber harvesting or road construction, while Class V terrain is expected to contain areas with a high likelihood of landslide initiation following logging or road construction.

An FDP map must provide basic information on terrain stability. This can be any of the following:

- ▶ terrain stability hazard maps showing areas with moderate or high likelihood of landslides;
- ▶ reconnaissance terrain stability maps showing unstable or potentially unstable terrain; or
- ▶ areas with a slope gradient greater than 60%.

Terrain stability mapping is required for an FDP in a community watershed or in other areas where the FDP requires the joint approval of the District Manager and the designated environmental official (Operational Planning Regulation, Section 12).

A terrain stability field assessment is an on-site assessment of the potential impact of logging or roads on terrain stability. It should:

- ▶ describe the terrain within a proposed cutblock or along a proposed road;
- ▶ evaluate the likely effect of logging or road construction on terrain stability; and
- ▶ recommend site-specific actions to reduce the likelihood of landslides including modification of the cutblock layout, logging method, road location, trail location, construction methods, or rehabilitation methods.

A terrain stability field assessment is not part of the FDP. For proposed cutblocks or roads that appear to pose a threat to an aboriginal or treaty right (e.g., a road block on steep ground located above a fish-bearing stream), a First Nation can request to see the terrain stability field assessment and notify the Ministry of Forests that they should be consulted before the Ministry of Forests approves the Silviculture Prescription, Cutting Permit, or road.

Reviewing the terrain stability field assessment can help to clarify what needs to happen to protect the aboriginal or treaty right in question. For instance, the assessment may state there is some risk of a slope failure that could impact on fish habitat. To avoid an unjustifiable infringement of the aboriginal or treaty right, it might be necessary to amend or delete the cutblock. For more information about terrain stability mapping and field assessments, see the Mapping and Assessing Terrain Stability Guidebook.

Certain types of soils are sensitive to forestry operations. In particular, fine-textured soils (clay or silt) are subject to surface erosion and/or slope failure. They may also become compacted by ground-based machinery, leading to regeneration problems or reduced growth. Coarse-textured soils, such as steep talus slopes or river gravels, can be difficult to regenerate because of lack of water-holding capacity. Soils that consist of a shallow layer of soil over bedrock are sensitive, as are very wet soils, and soils composed primarily of organic matter. Some soils are too sensitive for any logging, while others require special practices.

4.8 ROADS

Some of the most serious environmental impacts of logging are associated with roads. On steep terrain, landslides often start at the road cut or side cast. Roads increase the transfer of sediment into streams. Roads also intercept sub-surface water flow and channel overland flow into ditches, leading to higher peak flows. The more roads in a forested watershed, the greater the risks to water. Problems to look for include:

- ▶ excessive or unnecessary roads (e.g., roads extending beyond a cutblock, more than one road accessing an area, too many active roads in a watershed, or dense road networks associated with ground-based harvesting or grapple yarding);
- ▶ roads located close to streams (especially in the Riparian Management Area of a fish-bearing stream); and
- ▶ roads on steep or unstable terrain, or on floodplains or wetlands.

Stream crossings (bridges and culverts) are high risk areas for damage to water quality or fish habitat. Sometimes detailed site inspections of these areas are warranted.

The FDP must show the approximate location of all roads providing access to a cutblock, but not necessarily road locations within a cutblock. Other required information is whether the road is to be temporary or permanent, and the nature and timing of any planned deactivation.

A variety of road-building methods are used. On a hillside, “side-casting” means placing the excavated material on the downhill slope to build up the road base. On steep slopes, side-casting increases the risk of slope failure and landslides. “End-hauling” (trucking the material away to less steep ground) is better on steep slopes. This information is included in the road layout and design, not in the FDP.

Roads may also affect heritage or cultural resources. For example, construction of a proposed road may require removal of culturally modified trees, or disturbance of spiritually significant sites.

Sections 4 and 5 of the Forest Road Regulation specify some of the basic requirements for road layout and design, and list the assessments that may be required before the road layout and design is approved, including:

- ▶ Terrain Stability Field Assessment;
- ▶ Riparian Assessment;
- ▶ Visual Impact Assessment;
- ▶ Archaeological Impact Assessment; and
- ▶ Soil Erosion Field Assessment.

These assessments are not part of the FDP. However, if an aboriginal or treaty right is at risk a First Nation can ask to see these assessments and notify the Ministry of Forests that they should be consulted before the road is approved.

5.0 BEYOND THE FOREST DEVELOPMENT PLAN

This part of this document covers a number of issues that may arise when First Nations review an FDP, but are not within the scope of issues that are ordinarily addressed during the FDP review process.

5.1 SPATIAL SCALES

Forest and land issues related to an FDP can be viewed at several spatial scales. At each of these spatial scales, different issues arise. Some of these are explicitly addressed in an FDP. Others are dealt with in other levels of the planning system. First Nations have the right to insist on consultation on any plans that have the potential to infringe on aboriginal or treaty rights, regardless of whether they are covered in the FDP, but some of these issues may have to be dealt with in other processes. Table 1 describes three levels of spatial scale, typical map scales associated with each of these perspectives, and examples of processes where First Nations issues may be addressed.

Table 1. Spatial Scales in Forest and Land Issues

Spatial Scale	Typical Map Scale	Processes or Plans
Territory or Region	1:50,000 – 1:250,000	<ul style="list-style-type: none"> ▶ Land and Resource Management Plan ▶ Timber Supply Review and AAC ▶ TFL Management Plan
Watershed or Landscape	1:20,000 – 1:100,000	<ul style="list-style-type: none"> ▶ Forest Development Plan ▶ Landscape Unit Plan ▶ Total Resource Plan
Site	1:2,000 – 1:10,000	<ul style="list-style-type: none"> ▶ Silviculture Prescription ▶ Site-level assessments (e.g., Archaeological Impact Assessment)

Treaty negotiations, or other government to government processes, may address issues at any spatial scale, from the entire First Nations territory to very small specific sites.

5.2 TERRITORY OR REGIONAL LEVEL

Many of the problems that First Nations find with FDPs are the result of decisions made earlier in the planning hierarchy. Such decisions generally apply to the whole territory or region, not just the FDP area. Commenting on these issues in an FDP

response seldom results in satisfactory resolution. For example, the District Manager, who has the authority to approve FDPs, has no authority to adjust an Allowable Annual Cut. However, the FDP process is one of the few opportunities available for a First Nation to have the ear of the licensees and the Ministry of Forests, so raising these issues in an FDP response can initiate a process to address the issues.

5.2.1 Regional Land Use Plans

Broad land use designations, such as the boundaries of Provincial Parks, are usually decided in a regional land use plan, such as a Land and Resource Management Plan (LRMP) or the Land Use Plans for Vancouver Island, the Kootenays, and the Cariboo-Chilcotin. These plans are complete in some regions and still in progress elsewhere. Analysis of the FDP may show that there is a problem with protected areas, special management zones, resources zones, or conservation strategies. Such issues are unlikely to be addressed in an FDP process, because the District Manager has no authority to alter land use decisions of this kind.

5.2.2 First Nations “Protected Areas”

Some First Nations have identified areas which they have designated as not available for any logging, mining or similar uses, even though these areas are not designated as Protected Areas by the Provincial government. These may be areas of special spiritual importance, critical areas for hunting or food-gathering, or simply the last unlogged area remaining where traditional uses can still be practiced. Although the licensees and the Ministry of Forests do not officially recognize these designations, some of these areas have been unofficially respected and logging in these areas has not occurred.

For example, fourteen areas on Haida Gwaii have been declared by the Council of the Haida Nation as “Haida declared protected areas” since the early 1980s. The Haida consider them to be significant because of cultural, spiritual and environmental values. The “Haida declared protected areas” cover 12.9 percent of the timber harvesting land base of Block 6 of TFL 39. The company has not harvested in any of these areas since 1995.

One difficulty is that a First Nations protected area of this kind is not normally deleted from the Timber Harvesting Land Base (THLB) that is used in determination of the AAC, unless the Provincial government designates the area as an official Protected Area. This means that the AAC will be set at a level that cannot be maintained without eventually logging the area in question. The pressure to log will increase over time, especially if there is valuable timber. In the mean time, the AAC for the area will be transferred to other parts of the timber supply unit, possible causing unacceptable impacts. To achieve long term security for First Nations protected areas, and to avoid excessive environmental impacts in other areas, it is best to have the area deleted from the Timber Harvesting Land Base.

Many of the problems that First Nations find with FDPs are the result of decisions made earlier in the planning hierarchy. Such decisions generally apply to the whole territory or region, not just the FDP area.

Probably the most secure form of protection for areas of critical importance to First Nations is designation as a protected area by either the Federal government (e.g., Gwaii Haanas National Park Reserve) or the Provincial government (e.g., Stein Valley Nlaka'pamux Provincial Park). However, designation as a National or Provincial Park may not satisfy First Nations desire for jurisdiction and traditional land uses within the area.

There are several mechanisms to temporarily remove an area from the THLB. The provincial government may specify a “designated area” under Part 13 of the Forest Act, and the Chief Forester may then reduce the AAC to account for the timber unavailable in the designated area. This was done in the Duu Guusd area within the Queen Charlotte TSA (Baker 2001).

Another option for addressing the AAC implications of unofficial protected areas was used in the 2001 AAC determination for TFL 39, in which a “partition cut” of 125,000 cubic metres per year was established for the Haida declared protected areas. A “partition” has the effect of separating the AAC from that area from the general AAC for a TSA or TFL. In other words, the partitioned volume of timber can only be harvested from the specified timber type or geographic area. A partition cut is not legally binding unless it is incorporated into the Management Plan or a License document, but is usually an effective way of ensuring that AAC is not transferred from an unharvestable timber type or area to other areas.

5.2.3 Allowable Annual Cut

One of the most important factors controlling logging in a First Nations territory is the Allowable Annual Cut (AAC) set for any Timber Supply Area (TSA) or Tree Farm License (TFL) within the First Nations territory. If an FDP review reveals one or more of the following:

- ▶ heavy logging throughout the territory;
- ▶ very large cut blocks;
- ▶ logging in areas already heavily cut;
- ▶ a high rate of cut in watersheds;
- ▶ logging in very sensitive areas; or
- ▶ logging small remnant patches of old growth, there is probably a problem with the AAC.

Careful review of the documents related to the most recent AAC is often very revealing, especially the timber supply analysis report. This report will help to show whether a serious “falldown” in timber supply is anticipated, whether companies are currently cutting the “timber profile,” and what the critical forest management issues in the TSA or TFL are. However, it may be difficult to analyze how it relates to a particular territory, because First Nations territories do not usually coincide with

timber supply units of land (Tree Farm Licenses or Timber Supply Areas).

Often, AACs are set higher than long-term harvest levels, and neither the quality nor quantity of trees being logged now can be maintained over the long term. AACs are often also too high to maintain ecosystem functions or First Nations traditional values in the long run, because AACs depend on logging most of the available old growth forest and converting it to second growth.

AACs must be reviewed every five years. New AACs are set, in a process called a Timber Supply Review. If a high AAC is leading to forestry operations that infringe on aboriginal or treaty rights, insist on being fully consulted during the Timber Supply Review process. As with land use plans, the District Manager has no authority to revise AAC determinations in the FDP process. However, it can be useful to express concerns about the AAC in the FDP response, so that the Ministry of Forests and companies are aware of First Nations concerns at the outset of the Timber Supply Review process. Within Tree Farm Licenses, the Timber Supply Review is incorporated into the Management Plan process for the TFL.

For more information on AAC and timber supply, see *A Citizen's Guide to Allowable Annual Cut Determinations* by Greg Utzig and Donna Macdonald.

5.2.4 Timber Profile

The “timber profile” refers to the full range of species, ages, sizes, and quality of timber considered available to log in an operating area, as well as the kind of land the trees are on (rugged or gentle terrain, remote or accessible, etc.). It is important that the company log approximately the same mix of timber types as is found on the land base that contributes to the AAC to avoid over-cutting any particular tree species or timber type.. However, many companies prefer to harvest more of the valuable species and grades, and operate on easy and accessible terrain. This practice is called “high-grading.” High-grading depletes the value of the forest resource and threatens the economic viability of the local forest economy. In some cases, these valuable types are also important for wildlife habitat, such as large spruce trees growing on flood-plains used by bears. High-grading threatens these non-timber resource values. In the long run it may lead to environmental abuses, as the industry struggles to make profits logging the depleted forest. High-grading can be detrimental to aboriginal rights if the target species is important for traditional uses (e.g., cedar). It can also harm the economic prospects of a First Nation by depleting the resource base that might otherwise support a First Nations economy in the future.

High-grading can be difficult to detect, because the FDP does not directly state the harvest profile. One way around this is to walk the proposed cut blocks, comparing the timber types of proposed cutblocks with surrounding areas. This can also be done by examining the forest cover map, comparing timber type labels. If the FDP is submitted in digital form, this process can be done more reliably with GIS.

High-grading depletes the value of the forest resource and threatens the economic viability of the local forest economy. In some cases, these valuable types are also important for wildlife habitat, such as large spruce trees growing on flood-plains used by bears.

However, the poor quality of forest inventory in many areas makes this process less certain than it should be.

If high-grading is occurring (i.e. if a certain valuable timber type is being over-cut) this means that some other, low-value or otherwise problematic timber type is being avoided. One option is to request that the Chief Forester delete the types that are being avoided from the Timber Harvesting Land Base. This will lead to a reduction in the AAC, and will reduce the opportunity for high-grading to continue.

5.2.5 Tenures

Forest tenures are the mechanism by which the Government of BC makes the Crown-controlled forests available for logging. There are many forms of tenure, but the most common are Tree Farm Licenses, Forest Licenses, Woodlot Licenses, Timber Licenses and Timber Sale Licenses. Most tenure holders or “licensees” are private companies, but the Ministry of Forest’s Small Business Forest Enterprise Program (SBFEP) is also considered a licensee, and a few licenses are held by local governments, communities, and First Nations. One of the fundamental objections many First Nations have with the forest industry in BC is that the rights to the timber are arbitrarily and unfairly assigned to outside interests, leaving First Nations with extremely limited access to forest resources. The FDP process offers no formal opportunity to address these issues, but some First Nations have used the FDP process to initiate discussions leading to joint ventures or other agreements with licensees.

The Ministry of Forests has a Community Forest Pilot Project and one First Nation has been chosen to participate so far. For more information on forest tenures see <http://www.for.gov.bc.ca/RTE/timten/publication/publication.htm>, and Tenure Reform for Ecologically and Socially Responsible Forest Use in British Columbia by Jessica Clogg (1997).

5.3 LANDSCAPE/WATERSHED LEVEL ISSUES

Many issues in forest resource management can only be addressed by considering a large area of land as a whole. Two examples are the impact of logging on deer habitat, and the impact of a road on fish habitat in streams.

Many wildlife species use a variety of different habitat types in a forest landscape. For example, deer may use recently disturbed areas for feeding on shrubs, dense forest for hiding or thermal cover, and old growth forest on south-facing slopes for winter range. A small increase in the amount of land recently logged can be beneficial to deer. However, if too much old growth habitat is lost, deer populations will likely decline, especially in the longer term, as the canopy closes in the young second-growth stands and browse plants are shaded out. In other words, the impact of a proposed cutblock on deer populations depends on how much recently logged area

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The rate of cut in a watershed (how much land is disturbed in a short period of time) can affect water quality, the stability of the channels, and the timing and magnitude of peak and low flows. Limiting the rate of cut and the number of active roads is essential to protecting the integrity of the watershed.

there already is, how much old growth remains in the vicinity, and how much logging is planned in the long term.

The quality of fish habitat in a stream or river depends on a supply of sands and gravels being transported down the river. A small amount of such material is necessary, but too much can be disastrous, causing siltation of spawning gravels or a build-up of coarse rubble in the stream channel that completely buries the late summer water flow, blocking fish access up the stream. Forest roads always cause some amount of sediments to enter a stream. The question of whether it is too much depends on how many roads there already are in the watershed and what condition they are in.

If there is a concern with watershed level issues, it is reasonable to ask the licensee for a map showing existing forest cover and roads, and proposed logging and roads for the whole watershed.

The following three processes, Total Resource Plans, Landscape Unit Plans, and Watershed Assessments, deal with forest management issues at a watershed level.

5.3.1 Total Resource Plans

A Total Resource Plan is a comprehensive resource management plan for an area of land, usually one watershed, or several small watersheds, or a sub-basin of a large watershed. The purpose is to identify the full range of resources in the area and develop plans that ensure all resource values are adequately conserved and managed

over the long-term. A Total Resource Plan should address such watershed-scale issues as maintaining hydrologic integrity and designing an efficient access system that minimizes road impacts. This is in contrast to an FDP, which generally only covers a five-year period, and only addresses impacts on resource values in a superficial way. A TRP is not legally required, but it should be encouraged in most circumstances, especially when entering an un-logged drainage or logging in sensitive areas. Generally, companies only do TRPs if the area is contentious.

One of the significant advantages of a Total Resource Plan is the opportunity to plan the road system for a whole watershed for the long term, rather than the piecemeal, short-term approach of an FDP. This can help to minimize environmental impacts of the road system, and to allow for efficient access to all of the available timber in the watershed. Road density (kilometres of road per square kilometre of land) is a useful indicator of possible road impact.

Typical industrial logging involves a number of “passes.” A “pass” is one of a sequence of operations used to log a watershed or similar unit over a period of time. For example, a watershed might be logged on a “three-pass system” with fifteen years between passes. This means that about one third of the available timber is logged in several cutblocks over one or a few seasons. After fifteen years, another third is logged. Fifteen years later, the final volume is logged.

The number of passes, how long they take, and the wait between them are important factors that influence the impact of logging in watersheds. Other important factors are the size and locations of cutblocks and leave areas.

In cases where watershed level issues (such as retention of old growth or protection of watershed integrity) are important for aboriginal rights and title or treaty rights, it is reasonable to insist that a Total Resource Plan be completed at the watershed level, with full First Nations participation, before an FDP is approved in the watershed.

5.3.2 Landscape Unit Plans

Landscape Unit Planning is a strategic level of planning under the Forest Practices Code. Landscape Units (LU) are areas of land, usually in the range of 50,000 to 100,000 ha, and usually one or several watersheds. Landscape Unit Planning is at various stages of completion in BC, but most Districts have established Landscape Unit boundaries and assigned to each Landscape Unit a Biodiversity Emphasis Option (BEO), according to the provincial policy that 45% of all Landscape Units should have a Low Biodiversity Emphasis, 45% Intermediate, and 10% High.

Currently, the priorities for Landscape Unit Planning are to locate Old Growth Management Areas (OGMA) and set objectives for Wildlife Tree Retention. Other biodiversity objectives may be set for connectivity, stand structure, species composition and patch size. If these are done it is called full biodiversity planning. Landscape

Unit Planning can also address timber, water, wildlife, recreation, botanical forest products, forage, and fisheries.

Landscape Unit Planning was originally conceived as a planning tool to ensure that all resource values are well managed and conserved at a landscape level, and specifically to ensure that biodiversity was conserved at the landscape level. In practice, Landscape Unit Planning is mostly a process of planning for a few biodiversity objectives, largely in isolation from other resource values and development issues, and under limitations to ensure minimal impact on timber production. As such, it often fails to create a rational plan to protect all forest values.

If a First Nation is concerned about what patches of old growth will be reserved for biodiversity, it should insist on full consultation in the Landscape Unit Planning process. More information on Landscape Unit Planning is available in the Landscape Unit Planning Guide, available online at http://www.for.gov.bc.ca/hfp/Planning/LUP/lup_landscape.htm.

5.3.3 Watershed Assessment

In assessing the impact of an FDP, watersheds are natural units of land to consider, because logging and roads can have a significant impact on water quality, and the timing and volume of water flows in the stream or river.

The Forest Practices Code requires certain specific measures to protect drinking water quality in designated “community watersheds.” For more information see the Forest Practices Code Community Watersheds Guidebook. An area supplying water to a community should be designated as a community watershed. For First Nations planning for population growth, consider seeking community watershed designation for watersheds to supply future needs, such as old settlement sites that the First Nation plans to re-inhabit.

A major tool for watershed management under the Forest Practices Code is the Watershed Assessment Procedure (WAP). A watershed assessment is required before any forest development plan is prepared for a community watershed. Assessments may also be requested jointly by a Ministry of Forests district manager and a designated environment official in watersheds that are determined to have significant sensitivity, significant downstream fisheries values, or licensed domestic water users. A district manager can also require a watershed assessment for any situations in which he or she deems it to be necessary, e.g., where at least 20% of the watershed area has been logged during the past 25 years (or the 25 years that include the 5 years of proposed development) and other problems exist such as significant landslides, channel instability, or unstable terrain.

Watershed Assessments can recommend a number of measures including:

- ▶ reducing the rate of cut in a watershed

The impact of a proposed cut-block or road must be considered in the context of other past or proposed logging, because it is the cumulative impact of all changes to the land that determine the quality of wildlife habitat, the integrity of stream channels, and other factors that are important to First Nations.



- ▶ deferring logging until forests have recovered
- ▶ avoiding sensitive areas
- ▶ de-activation of roads
- ▶ stabilization of slopes
- ▶ and restoration of riparian vegetation.

In watersheds where heavy logging has occurred or is proposed, and seems likely to harm fish habitat or drinking water quality, a First Nation should request that a watershed assessment be completed. It is important to insist that the consultant who undertakes the assessment is one whose work the First Nation trusts and respects, and that First Nations issues are addressed.

5.3.4 Wildlife Habitat

Forestry activities can have major impacts on wildlife habitat. The main approach to managing wildlife habitat under the Forest Practices Code is the “coarse filter” approach. This means that if the landscape contains a wide range of different ages and types of forest, most wildlife species are likely to find enough suitable habitat. This theory is generally sound, but in practice forestry operations do not always maintain enough old growth forest or riparian habitat. This poses a direct threat to certain species, mule deer being but one example. In addition, building roads in a forest landscape can have significant effects on wildlife. Roads provide access for hunting and poaching, and can alter ecological relations between predators and prey (e.g., wolves use logging roads to hunt woodland caribou).

For a few selected “species at risk,” the Identified Wildlife Management Strategy provides a fine filter approach of managing the specific habitats required by those species. The definition of “species at risk” includes endangered, threatened or vulnerable species of vertebrates and invertebrates, endangered or threatened plants and plant communities, and regionally important vertebrates.

Some of First Nations most significant and recognized aboriginal and treaty rights, including the right to hunt and to trap, are associated with wildlife. Where such rights are potentially affected, the Ministry of Forests and companies should consult First Nations in detail about any logging or road-building plans that may affect wildlife habitats or populations. For meaningful consultation to take place, all the parties should understand how proposed activities will affect wildlife and habitats. Two forms of information are helpful: habitat mapping, and habitat supply modeling. Habitat mapping provides a snapshot of how much habitat there is at present. Habitat supply modeling predicts how much habitat will exist at various times in the future, depending on what logging strategy is used. With this information in place, biologists can begin to estimate the future abundance of the wildlife species in question, and recommend logging strategies that will maintain necessary habitat. Traditional ecological knowledge of First Nations can be an important component of habitat mapping and modeling, so it is important that First Nations be involved in the design of mapping and modeling projects.

In considering the effects of logging on wildlife habitats, it is important to take a long-term perspective. Short term habitat supply sometimes increases after logging, but may decline in the long term.

Old growth forests at low elevations are important habitat for many wildlife species that are used by First Nations, such as this Roosevelt Elk on Vancouver Island.



5.3.5 Biodiversity

Biodiversity (biological diversity) is the diversity of plants, animals, and other living organisms in all their forms and levels of organization, including genes, species, ecosystems, and the evolutionary and functional processes that link them. From a First Nations perspective, biodiversity is important for several reasons:

In considering the effects of logging on wildlife habitats, it is important to take a long-term perspective. Short term habitat supply sometimes increases after logging, but may decline in the long term.

- ▶ traditional uses encompass a wide range of living things;
- ▶ biodiversity is essential to maintain all the ecological functions that keep the forest productive; and
- ▶ protecting biodiversity is consistent with First Nations' philosophies of respect for all life forms.

Under the Forest Practices Code, management of biodiversity follows the “coarse filter” approach, using the Biodiversity Guidebook, Riparian Management Area Guidebook, and the Landscape Unit Planning Guidebook. This approach focuses not on the living things themselves, but on the structural diversity of the forest at two spatial scales:

1. stand level diversity involves the diversity of tree species, number of canopy layers, presence of canopy gaps where brush can grow, and the abundance and size of snags and downed logs;
2. landscape level diversity involves the diversity of forest stands within the landscape (stands of different ages and species), a range of different patch sizes, and connectivity (the degree to which old forests are linked to form a network).

There is a lot of natural variability in these factors between different ecological regions. For example, forests over 250 years old are naturally predominant on the central coast, whereas on the southern Interior plateau, forests under 120 years are more common due to more frequent natural fires.

In most FDPs, biodiversity management is done by achieving the minimum required levels of stand and landscape diversity as set out in the Forest Practices Code. Each Landscape Unit is given a Biodiversity Emphasis Option (High, Intermediate, or Low) and objectives are set for key biodiversity factors including the minimum amount of old forest that must be retained. In the absence of Landscape Unit objectives, the defaults are those of the Low Biodiversity Emphasis Option.

In reviewing an FDP, there are some warning signals that may indicate biodiversity is at significant risk. These include:

- ▶ the remaining area of old forest is close to the minimum required;
- ▶ the patches of old forest are relatively small and isolated;
- ▶ the landscape is dominated by young stands; or
- ▶ a high proportion of stands lack structural diversity (e.g., plantations regenerated after clear-cutting).

First Nations' concerns about biodiversity are most likely to be considered when they relate to an aboriginal or treaty right. For example, depletion of old forests may impair the practice of collecting traditional medicinal plants that are not abundant in logged areas or second-growth forests, or may affect wildlife populations used by First Nations.

5.4 SITE LEVEL

5.4.1 Silviculture Prescriptions and Assessments

Many of the site-specific details of logging are contained in the Silvicultural Prescription, which is a "lower level" of planning than the FDP. (In other words, the Silviculture Prescription is more detailed and site-specific, and it comes after the approval of the FDP.) In addition, more information may be available from the following assessments:

- ▶ terrain stability assessment;
- ▶ riparian assessment;
- ▶ visual impact assessment;
- ▶ archaeological assessment;
- ▶ pest incidence survey; and
- ▶ gully assessment.

These assessments may be required for the silviculture prescription, depending on conditions specified in Sections 16, 17, and 37 of the Operational Planning Regulation. The silviculture prescription and the above assessments are not ordinarily referred to First Nations or others. However, some of the details in these documents may be relevant to aboriginal rights or title or treaty rights, in which case First Nations can request to see these assessments and have consultation at the silviculture prescription stage. Some assessments may be required at the discretion of the district manager. A First Nation can request an assessment be done if it needs the information to understand the impact of the proposed cutblock or road.

Some First Nations have found that consultation at the site level is an effective way to deal with specific issues such as protection of fish habitat or Culturally Modified Trees, and a good way to get some employment for First Nation members working on CMT surveys, stream assessments, etc.

5.5 FOLLOW-UP AND RELATED ISSUES

5.5.1 Reforestation

Many things can lead to difficulty in regenerating trees after logging: high brush hazard sites, coarse-textured soils, thin soils, drought, cold soils, high elevation sites, cold air, snow press, snow creep, and browsing or other damage by wildlife. This information is included in the silviculture prescription, which is not ordinarily referred to First Nations or others. In some cases First Nations values are tied to a particular tree

species (such as cedar) or to having a mix of species that support wildlife habitat diversity. First Nations may wish to consult on silviculture prescriptions where such values are at stake. Silviculture is also an area where many First Nations have skilled crews employed in planting and stand tending.

5.5.2 Performance Monitoring

It is usually beyond the financial capacity of First Nations to monitor on the ground performance of all logging and road-building. Nevertheless, performance monitoring can be very beneficial in situations where important resource values or aboriginal or treaty rights are at risk. For example, if a cutblock contains culturally modified trees and the licensee commits to protect these with a buffer, it may be important to check if the buffer is adequate and conforms to the Silviculture Prescription.

Most of the details of how resources will be managed are contained in operational plans at a more site-specific level than the FDP, such as the logging plan or silviculture prescription. Detailed recommendations on how to manage and conserve particular resources are often contained in specific assessments. Note that the professional who signed certain documents is accountable for the results. For example, a professional who signs a terrain stability field assessment for an area may be accountable if a significant landslide occurs and damages fish habitat, if the assessment failed to properly identify the risk of the landslide.

5.5.3 Certification

Enquire whether the licensee is applying for Forest Stewardship Council (FSC) or other certification, or intends to do so. FSC Principle 3 requires that: “The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.” This principle is enacted through more detailed regional standards. Draft 2 of the Regional Certification Standards for British Columbia (2001) is available online at www.fsc-bc.org.

If the licensee is seeking certification, a First Nation can contact the organization doing the assessment to be sure that their concerns are fully accounted for in the certification assessment. More information on the Forest Stewardship Council is available at <http://www.fscanada.org/> and <http://www.fsc-bc.org/>.

6.0 CONCLUSION

Crown land referrals and external development pressures will always be a burden for First Nation communities. Many Nations are frustrated by the increasing demands being placed on their administrations, and by the failure of the referral process to listen to their concerns. Yet scattered throughout Indian lands, there are some unique and compelling success stories in how these pressures are being dealt with. These stories need to be shared, to help break the isolation and build on the strength of First Nations experiences across B.C. If you have a success story in dealing with referrals or a FDP, share it with your neighbouring Nations, or make your story public by sharing the experience within forums like the Aboriginal Mapping Network.

This guidebook is intended as a reference tool for First Nations in responding to forest development plan referrals from the BC Ministry of Forests or forest licensees. It provided a brief explanation of the main factors First Nations may want to consider in responding to a forest development plan. It should be regarded as only one of many tools in your referrals toolbox. Readers are encouraged to offer comments, corrections and suggestions for new material to be incorporated into future versions. This can be done by contacting the Aboriginal Mapping Network or Ecotrust Canada at the coordinates listed on the inside of the front cover of this document.

The struggle for recognition of First Nations rights, and for stewardship and conservation of forests, is a long and difficult road. But those who travel it are inspired by the belief that every CMT saved, every patch of streamside old growth protected, is important. And more than that, they know that developing the skills and capacity to respond to forestry plans is an investment in the strength of their Nation. There are setbacks and disappointments, but there are victories and successes too. First Nations are slowly winning the struggle to reclaim their forest heritage, and to protect it for generations yet to come.

7.0 REFERENCES

- BC Ministry of Forests. 1995. **Forest Practices Code: Forest Development Plan Guidebook**. Online at <http://www.for.gov.bc.ca/TASB/LEGSREGS/FPC/FPCGUIDE/FORDEV/Fdp-toc.htm>
- BC Ministry of Forests. 1995. **Forest Practices Code: Riparian Management Area Guidebook**. Online at <http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/riparian/rip-toc.htm>
- BC Ministry of Forests. 1995. **Forest Practices Code: Biodiversity Guidebook**. Online at <http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/biodiv/biotoc.htm>
- BC Ministry of Forests. 1996. **Forest Practices Code: Community Watersheds Guidebook**. Online at <http://www.for.gov.bc.ca/TASB/LEGSREGS/FPC/FPCGUIDE/WATRSHED/Watertoc.htm>
- BC Ministry of Forests. 1999. **Forest Practices Code: Mapping and Assessing Terrain Stability Guidebook – Second Edition**. Online at <http://www.for.gov.bc.ca/TASB/LEGSREGS/FPC/FPCGUIDE/terrain/index.htm>
- BC Ministry of Forests. 1999. **Policy 15.1, Aboriginal Rights and Title**. Online at <http://www.for.gov.bc.ca/tasb/manuals/policy/resmngmt/rm15-1.htm>
- BC Ministry of Forests. 2000. **Forest Practices Code: Landscape Unit Planning Guidebook**. Online at http://www.for.gov.bc.ca/hfp/Planning/LUP/lup_landscape.htm
- BC Ministry of Forests. 2001. **What is the timber tenure system?** Online at <http://www.for.gov.bc.ca/RTE/timten/publication/publication.htm>
- Clogg, Jessica. 1997. **Tenure Reform for Ecologically and Socially Responsible Forest Use in British Columbia**. Online at www.wcel.org/forestry/11655/
- Delgamuukw/Gisday'wa National Process. 2001. **A Community Guide to Delgamuukw**. Online at <http://www.delgamuukw.org/community/guide.htm>
- Forest Stewardship Council of Canada**. Online at <http://www.fscCanada.org/>
- Forest Stewardship Council. 2001. **Regional Certification Standards for British Columbia- Draft 2**. Online at <http://www.fsc-bc.org/showpage.asp?pageid=254&menu=7>
- Forest Watch of BC. 2000. **Evaluation of Forestry Plans: A Practical Guide. Draft. Forest Watch of BC. A Project of the Sierra Legal Defence Fund.**

Hughes, J., and R. Drever. 2001. **Salvaging Solutions: Science-based management of B.C.'s pine beetle outbreak.** David Suzuki Foundation, Forest Watch of British Columbia Society, Canadian parks and Wilderness Society.

Province of British Columbia. 1997. **Heritage Conservation Act** Online at http://www.qp.gov.bc.ca/stat_reg/statutes/sup18700.htm

Province of British Columbia. 2001. **Forest Practices Code of British Columbia Act.** Online at <http://www.for.gov.bc.ca/tasb/legregs/fpc/fpcact/contfpc.htm>

Province of British Columbia. 2001. **Forest Practices Code of British Columbia Act: Operational Planning Regulation** Online at <http://www.for.gov.bc.ca/tasb/legregs/fpc/fpcaregs/oplanreg/opr.htm>

Supreme Court of Canada. 1997. **Delgamuukw vs. British Columbia (1997) 3 S.C.R.** Online at http://www.lexum.umontreal.ca/csc-scc/en/pub/1997/vol3/html/1997scr3_1010.html

Tobias, Terry N. 2000. **Chief Kerry's Moose: a guidebook to land use and occupancy mapping, research design and data collection.** Union of British Columbia Indian Chiefs and Ecotrust Canada. Online at <http://www.nativemaps.org/books.html#kerry>

Utzig, Greg, and Donna Macdonald. 2000. **A Citizen's Guide to Allowable Annual Cut Determinations.** BC Environmental Network Educational Foundation.

West Coast Environmental Law Association. 2001. **Guide to Forest Land Use Planning** Online at <http://www.wcel.org/frbc/>

8.0 LIST OF ACRONYMS

- AAC** – Allowable Annual Cut
- AIA** – Archaeological Impact Assessment
- AOA** – Archaeological Overview Assessment
- BEO** – Biodiversity Emphasis Option
- CMT** – culturally modified tree
- FDP** – Forest Development Plan
- FSC** – Forest Stewardship Council
- LRMP** – Land and Resource Management Plan
- LU** – Landscape Unit
- NTFP** – non-timber forest products
- OGMA** – Old Growth Management Areas
- SBFEP** – Small Business Forest Enterprise Program
- TFL** – Tree Farm License
- TSA** – Timber Supply Area
- TUS** – Traditional Use Study
- VQO** – Visual Quality Objective
- WAP** – Watershed Assessment Procedure

9.0 GLOSSARY

ALLOWABLE ANNUAL CUT (AAC): The allowable rate of logging from a specified area of land. The chief forester sets AACs for timber supply areas (TSAs) and tree farm licences (TFLs) in accordance with Section 8 of the Forest Act.

BASAL AREA: the area of the cross-section of tree stems near their base, generally at breast height and including bark, usually expressed in terms of square metres of basal area measured over 1 ha of land.

CLEARCUT: an area of forest from which all merchantable trees have recently been logged.

CONNECTIVITY: the degree to which patches of old forests are linked to one another to form an interconnected network.

CULTURALLY MODIFIED TREE: a tree that has been intentionally modified by aboriginal people as part of their traditional use of the forest.

CUTBLOCK: a specific area of land within which timber is to be or has been logged.

FALLDOWN EFFECT: a decline in timber supply or logging associated with the transition from logging the original stock of natural mature timber over one rotation to logging second growth.

FOREST COVER MAP: a map showing relatively homogeneous forest stands or cover types, produced from the interpretation of aerial photos and information collected in field surveys. Commonly includes information on species, age class, height class, site, and stocking level.

FOREST DEVELOPMENT PLAN (FDP): an operational plan that shows the logistics of logging and related activities over a period of usually five years. Methods, schedules, and responsibilities for accessing, logging, renewing, and protecting the resource are set out to enable site-specific operations to proceed.

GREENED-UP: a cutblock that supports a stand of trees that has attained a height specified in a higher level plan for the area, or in the absence of a higher level plan for the area, has attained a height that is 3 m or greater.

HARVESTING METHOD: the mix of felling, bucking, and yarding (skidding) systems used in logging a stand of timber.

LAND AND RESOURCE MANAGEMENT PLAN (LRMP): a strategic, multi-agency, integrated resource plan at the sub-regional level. It involves participation by government agencies and non-government “stakeholders” (persons or organizations who claim a social or economic interest in the land and resources of the area under consideration).

The main planning product is the designation of protected areas. An LRMP may also establish Resource Management Zones (areas with differing emphasis on various resources such as timber, wildlife, tourism, etc.)

LANDSCAPE UNIT (LU): an area of land and water for long-term planning of resource management activities with an initial priority for biodiversity conservation. They are important in creating objectives and strategies for landscape-level biodiversity and for managing other forest resources. Landscape units may be used by District Managers to establish objectives for any of the purposes listed under section 2(1) of the Act.

LANDSCAPE UNIT PLANNING: includes setting objectives for biodiversity and other forest resources, to guide forest management within a particular landscape unit. The provincial priorities for landscape unit planning are to set objectives for retention of old-growth forest, and wildlife tree patches.

PARTIAL CUTTING: Refers generically to stand entries, under any of the several silvi-cultural systems, to cut selected trees and leave desirable trees for various stand objectives. Partial cutting includes logging methods used for seed tree, shelterwood, selection, and clearcutting with reserves systems.

PATCH: a stand of similar-aged forest that differs in age from adjacent patches by more than 20 years. When used in the design of landscape patterns, the term refers to the size of either a natural disturbance opening that led to even-aged forests or an opening created by cutblocks.

PATCH SIZE DISTRIBUTION: the proportion of a watershed, Landscape Unit or operating area occupied various sizes of patches.

RIPARIAN: an area of land adjacent to a stream, river, lake or wetland that contains vegetation that, due to the presence of water, is distinctly different from the vegetation of adjacent upland areas.

RIPARIAN HABITAT: Vegetation growing close to a watercourse, lake, swamp, or spring that is generally critical for wildlife cover, fish food organisms, stream nutrients and large organic debris, and for streambank stability.

RIPARIAN MANAGEMENT AREA (RMA): Defined in the Forest Practices Code as an area adjacent to a stream, wetland or some classes of lake. The RMA consists of a riparian management zone and, depending on the riparian class of the stream, wetland or lake, a riparian reserve zone.

RIPARIAN MANAGEMENT ZONE (RMZ): The portion of the riparian management area where logging is permitted, subject to certain constraints. The width of the RMZ is determined in accordance with Part 10 or the Operational Planning Regulation.

RIPARIAN RESERVE ZONE (RRZ): The portion, if any, of the riparian management area or lakeshore management area where logging is not permitted. The width of the RRZ is determined in accordance with Part 10 of the Operational Planning Regulation.

SEED TREE SILVICULTURAL SYSTEM: an even-aged silvicultural system in which selected trees (seed trees) are left standing after logging to provide a seed source for natural regeneration. Seed trees can be left uniformly distributed or in small groups. Regeneration may be augmented by planting. Seed trees may be removed once regeneration is established or left as reserves.

SELECTION SILVICULTURAL SYSTEM: a silvicultural system that removes mature trees either as single individuals (single-tree selection) or in small groups (group selection). Logging occurs at relatively short intervals, repeated indefinitely. The continual establishment of regeneration is encouraged and an uneven-aged stand is maintained.

SHELTERWOOD SILVICULTURAL SYSTEM: a silvicultural system in which trees are removed in a series of cuts designed to achieve a new even-aged stand under the shelter of remaining trees.

SILVICULTURAL SYSTEM: a program of treatments throughout the life of the stand to achieve the desired stand attributes (species composition, tree spacing, tree diameter, presence of wildlife trees, etc.) A silvicultural system includes all logging, regeneration and stand-tending activities for the entire rotation or cutting cycle.

The major silvicultural systems used in BC include even-aged and uneven-aged systems. Even-aged systems include the clearcut, patch-cut, seed tree and shelterwood systems. Uneven-aged systems are called selection silvicultural systems. Variable retention is a relatively new silvicultural system.

STAND STRUCTURE: the distribution of trees and other vegetation in a stand, which can be described in terms of species composition, size of trees or tree parts, age, tree spacing, the vertical arrangement of canopy layers, or a combination of these.

TIMBER HARVESTING LAND BASE (THLB): the portion of the total area of a management unit considered to contribute to, and be available for, long-term timber supply. The harvesting land base is defined by reducing the total land base according to specified management assumptions.

TIMBER PROFILE: the full range of species, ages, sizes, and quality of timber considered available to log in an operating area, as well as the kind of land the trees are on (rugged or gentle terrain, remote or accessible, etc.).

TOTAL RESOURCE PLAN (TRP): a plan for long-term forest management over an entire area, such as a watershed. The plan identifies known resource values, capabilities and

sensitivities; confirms or refines management objectives for those values; and establishes detailed management guidelines by which to achieve those objectives on the ground.

VARIABLE RETENTION (DISPERSED, AGGREGATE): a relatively new silvicultural system that retains part of the forest after harvesting. Standing trees are left in a dispersed or aggregated form to meet objectives such as retaining old growth structure, habitat protection and visual quality. Variable retention retains structural features (snags, large woody debris, live trees of varying sizes and canopy levels) as habitat for forest organisms. Dispersed retention retains individual trees scattered throughout a cutblock, while aggregate (group) retention retains trees in clumps or clusters. A wide range of retention levels is possible, and should include permanent retention of trees and other structures after regeneration is established. Variable retention can be implemented with a range of harvesting systems and can be combined with traditional silvicultural systems such as shelterwood or selection.

VISUAL QUALITY OBJECTIVE (VQO): A resource management objective established by the district manager or contained in a higher level plan that reflects the desired level of visual quality based on the physical characteristics and social concern for the area. Five categories of VQO are commonly used: preservation; retention; partial retention; modification; and, maximum modification.

WATERSHED ASSESSMENT: evaluates the present state of watersheds and the cumulative impact of proposed development on peak flows, suspended sediment, bedload, and stream channel stability within the watershed.

WINDTHROW: uprooting of trees by the wind.

This guidebook is intended as a reference tool for First Nations in responding to forest development plan referrals from the B.C. Ministry of Forests or forest licensees. It provides a brief explanation of the main factors First Nations may want to consider in responding to a forest development plan. It is intended to be used by First Nations technicians, researchers and decision makers.