

A SURVEY OF FISHERIES INFORMATION
COLLECTED BY FOREST COMPANIES
IN THE INTERIOR OF B.C.

By

Peter Bruce and Associates
R.R. 3 Tiesu Rd, Ladysmith BC V0R 2E0
April, 1993

ACKNOWLEDGMENTS

We wish to thank all the forest companies interviewed during this survey. Their time and interest were greatly appreciated. Also, we want to acknowledge the assistance given by the personnel on the Ministry of Environment, and the Ministry of Forests in regional and district offices throughout the interior. Their concerns and interest were extremely helpful.

1.0 Introduction

The Fisheries Inventory Task Force is responsible for the review and assessment of the current fisheries inventory systems and procedures in the province. The objective of this group is to develop standards and procedures for fisheries inventories in the province. Forest companies were found to be one source of inventory data on the B.C. coast, and were the subject of a report prepared for the Task Force in May 1992 (Bruce, P. 1992. A Preliminary Survey of Fisheries Information Collected by Forest Companies Operating in Coastal B.C. 24pp. Unpublished report submitted to MoE, Victoria.).

This present report was begun in March 1993, as a follow up of the coastal survey, to establish the extent of fisheries data collection, the procedures used, and the accessibility of the data gathered by forest companies in the interior of the province.

As in the coastal survey, a number of regional and district offices of the Ministry of Environment and Ministry of Forests were first contacted in order to include any companies known to (or required to) have collected this information. In addition, these contacts often provided insights into the status of non-timber resource information collection at a local level, as well as providing the names of contact people in companies operating within the area.

A sample of companies from this initial list were contacted and the purpose of the survey discussed. If any fisheries information had been collected by that company, they were asked to complete a short questionnaire. If we were told that no information had been collected, no questionnaire was sent, and we usually tried to determine why no data collection had occurred. In general, we tried to include most larger companies within a district or region, as well as a number of smaller ones. Without knowing the cut for each company, stratification of the sample was difficult.

2.0 Questionnaire

The questionnaire used was the same one employed in the coastal survey in 1992. It consisted of two pages; the first page contained an explanation of the questions asked in the table on page 2, as shown in Appendix I. The questionnaire asked the following questions.

1. for what areas of the companies tenure has fisheries information been collected?
2. what type of data was collected?
3. at what level of detail was the information collected?
4. at what scale was the data collected?
5. who collected the information?
6. how are the data stored?

3.0 Results

The following 5 Ministry of Forest Regional offices were contacted

- Prince Rupert Region
- Cariboo Region
- Nelson Region
- Prince George Region
- Kamloops Region

From the regional offices, we were frequently directed to specific Forest District Offices. In addition, the following Ministry of Environment offices (Regional and District) were contacted:

- Smithers
- Prince George
- Kamloops
- Nelson
- Cranbrook
- Fort St. John
- Williams Lake
- Penticton
- Invermere

From the information provided by these agencies, 51 forest companies were contacted, and asked whether they were collecting fisheries information as part of their development planning. The list of companies interviewed is given in Appendix 2. Companies that stated they were gathering fisheries information, no matter how minor, were asked to fill out and return a questionnaire. Of the 51 companies contacted, 9 stated that they were collecting data but only 7 companies returned filled out questionnaires. The breakdown of sampling effort is shown in the following table.

Forest Region	# Companies Interviewed	# Companies collecting fisheries information
1. Cariboo	13 - in 3 TSA's	2 - (from Quesnel TSA) Weldwood of Canada Ltd. Slocan Forest Products Ltd.
2. Kamloops	11 - in 4 TSA's	1 - (from Kamloops TSA) Weyerhaeuser Canada Ltd
3. Nelson	11	1 - Westar Timber Ltd.
4. Prince George	11 - from 5 of 6 TSA's	0
5. Prince Rupert	5	3 - Pacific Inland Resources Babine Forest Products Northwood Pulp and Timber Ltd.
Total	51	7

4.0 Discussion

a. Questionnaire-

What were the results of this survey? The accompanying tables show the replies to the questionnaire by the 7 responding companies.

Our first finding is that there is currently very little fisheries inventory information collected by forest companies in the interior of B.C. Certainly, the collection of this data is far less than in coastal areas.

Two of the respondents had TFL's, where the legal obligations for having more resource data collected to assist planning are greater than for Forest Licences. Two of the companies were collecting site specific information, such as fish sampling at major stream crossings to determine fish distribution, with extensive reliance on existing inventory information from the agencies. Others were filling in gaps in existing inventory by spot sampling. One response dealt solely with a recce of physical habitat of a stream that was used as part of a LRUP report.

Most of the information was collected at a 1:10,000 or 1:50,000, with very little data collected at a scale of 1:5,000. This latter scale is usually required when surveying logging openings on the coast due to the frequency of small, unmapped fish streams. These conditions may not be as prevalent in the interior and a scale of 1:10,000 may be adequate for detailed planning. The scale of 1:50,000 is adequate for large areas, but relatively useless for detailed planning- One of the reasons for its use by companies is that existing (agency) inventory data is often on NTS maps of this scale.

Two of the companies will store the data on their in-house GIS system, while the remainder will keep maps or reports on file with the Cutting Permit, passing the information on to the agencies in the referral process.

b. Informal discussions by telephone-

There are a number of reasons why fisheries information has not been collected by forest companies to a greater degree than our survey found. It is probably even more illuminating to examine these reasons when the actual number of companies gathering data are so few. The following discussion reports points of view (which are often conflicting), from various operators and ministry personnel, in response to the general question "why is fisheries information not being collected?"

Perhaps the biggest single factor why more forest companies have not collected fisheries information is because of the type of forest tenure prevalent in the interior. The majority of companies operate on Forest Licences, under which the cut for a company may be moved around within the TSA by the MoF, usually to deal with issues such as rate of cut, salvage etc. The companies generally have fewer obligations than in a TFL, which

Areas of tenure where fisheries information was collected	Type of Resource Data	Level of Inventory	Scale	Collected by:	Where the data is stored
MOF REGION - CARIBOO -Weldwood of Canada					
TFL 5 - about 20 watersheds adjacent the Fraser R. ~ 34,000 ha	Currently being completed, including: -Watershed boundaries -soil/slope hazard rating -stream profiles -species and habitat - for stream classification	Company GIS data to begin with. Complete detailed inventories on all major drainages will be done. - some electroshocking for fish distribution	1:10,000 base, with 1:10,000 Color air photos, into 1:50,000 composite	Consultants, with local information from company	-GIS in-house - provided to MoE, and DFO when completed
- Slocan Forest Products					
8 Cutting Permits on Forest License A20011	Use a Stream Management Plan - includes harvest plan around creek, and description of banks (shorelines), vegetation, soil types, gradient and flow	Air photo, spot sampling for fish presence, recce of creek	1:10,000	Field staff and forest technician	Cutting permit file, copies to DFO, MOE and MOF
MOF REGION - KAMLOOPS - Weyerhaeuser Canada					
Forest License A18694 Finn Ck. drainage	physical habitat	recce	N/A	Company biologists	In a report which will become part of a LRUP

Areas of tenure where fisheries information was collected	Type of Resource Data	Level of Inventory	Scale	Collected by:	Where the data is stored
MOF REGION- NELSON - Westar Timber Ltd.					
TFL # 55-watersheds - Downie Ck. - Goldstream Ck. - Bigmouth Ck.	- Physical habitat - Water Quality - Watershed classification	- Air photo - Spot sampling - 1:50,000 maps from MOE - stream classification	1: 20,000 1: 50,000	Company employees, Consultants, Assistance from MOE	GIS, Inventory reports, on maps, at local MOE offices
MOF REGION- PRINCE RUPERT Babine Forest Products					
CP 162, all major road crossings examined for fish use to assess bridge or culvert. 5-year plan overview. New blocks reviewed for fish sensitive creeks identified by DFO habitat inventory	- Fish trapping (species) - sediment transfer and hazard rating	-Local knowledge - recce overview , highlighting of creeks in sensitive areas	1:10,000 - 1: 50,000	Company layout tech. DFO information from habitat inventory	CP application - Fish sampling at road crossings used in referral letters for approvals - DFO habitat inventory on maps in company office.

Areas of tenure where fisheries informations was collected	Type of Resource Data	Level of inventory	Scale	Collected by:	Where the data is stored
MOF REGION - PRINCE RUPERT cont'd - Pacific Inland Resources - Forest license A16830					
Telkwa chart	Data mainly from MOE/DFO	- Local knowledge - existing reports - spot sampling (some) - agency field review	1:50,000 ,some 1:5,000	- Company foresters - Consultants	1:50,000 is on 5 year plan overlays 1:5,000 on PHSP
Kitseguicia R., Blunt Ck., Babine Lake	Limited information available (Fish Habitat Inventory and Information Program and Stream Summary Catalogue)	Local knowledge and some spot sampling	1:5,000 1:50,000	- Company foresters - Consultants	same as above
Nitkitkwa and Babine Rivers	Water sampling program - joint effort with PIR/MOF/REPAP	same as above	same as above	same as above	same as above
- Northwood Pulp and Timber					
Forest License	- Fish - Habitat - water quality	- local knowledge - air photo - spot sampling - reoce - detailed	1:10,000 (color photos) 1: 15,000 (B/W photos)	- Company foresters/engineers - Company biologists - Consultants	- files - cutting permits - 5-year plan - inventory reports - maps - local MoE office

has a detailed Management and Working Plan. However, the downside is that these companies do not have a guaranteed cut in a specific area. Thus there is no incentive to these companies to gather non-timber resource information for areas they may not be allowed to harvest. Secondly, an adjustment to stumpage may be awarded by MoF to a company to cover the cost of specific items that are above and beyond the usual operating costs. However, the MoF has not been doing this for non-timber resource inventories.

Many forest companies replied in the telephone interview that the collection of fisheries information had never been requested by MoE, nor has it been a formal requirement. This was acknowledged by a number of MoE personnel, with a few people intimating that this situation may be changing. In this light, it was also pointed out that oil companies operating in the north-east of the province are required to gather extensive resource data while forest companies are not required to collect anything. A few cooperative projects between MoE and the forest companies were mentioned; most appeared to concern wildlife, with only a few fisheries or water quality projects. Also, a number of forest companies in some districts felt that their attempts to collaborate with MoE in the collection of data or habitat management had met with a less than enthusiastic response. Relationships between MoE and forest companies appears to vary greatly, being very good in some regions, but poor in others.

Areas where fisheries resource information has been collected are generally within regions where salmon occur, such as in the Prince Rupert Forest Region. A number of the district offices in this region were included in the sample for the 1992 coastal survey, with the areas generally east of Smithers included in this survey. The Coastal Fisheries Forestry Guidelines are often mentioned by companies in this area, and Stream Classification is not as foreign as in other areas of the interior.

Similarly, the companies within the Cariboo Region that are collecting fisheries data are operating within the Quesnel TSA (Timber Supply Area), in watersheds adjacent to the Fraser River. For much of this region, management emphasis is more often on wildlife, aesthetics and dealing with problems such as windthrow.

The Prince George Region, in addition to being huge, has much of its waters within the Arctic drainage, and therefore not used by salmon. Only a small portion of this region has been covered by aquatic inventories. The establishment of a model forest (Northwood Pulp and Timber) will result in extensive inventory work in the future, which hopefully include the fish resource. Many correspondents did not identify the significance of the fisheries resource unless salmon were present; or significant trout or Dolly Varden fishing opportunities occurred.

Kamloops Region is interesting in that the main focus in fisheries work has been on lakes, many of which have been inventoried, with relatively few streams being recreationally fished. Streams with important salmon runs have generally been covered by Department of Fisheries and Oceans, while important steelhead rivers such as the Deadman and the Nicola have received a lot of work from MoE. In addition planning

guidelines have been developed within the region (Okanagan Guidelines for example) that include habitat protection prescriptions such as 20 m machine buffers along lake shores. There is a suggestion that the guidelines tend to treat all streams the same as there is no stream classification system. It has also been suggested that water management for domestic and irrigation use were a main management concern as was rate-of-cut, and that resident fish management and protection was a secondary outcome from dealing with these issues.

The Nelson Region has some major management concerns such as the rainbow trout of the Lardeau/Kootenay Lake, but in general many respondents felt that resident fish protection occurred as a natural outcome of addressing rate of harvest, and water management concerns. The Mica Dam Compensation Program will provide the opportunity and the funding for a lot of inventory work in the Revelstoke area.

During discussion with both companies and agencies, several other issues may have an influence on the collection of fisheries information. One is a belief that the collection of non-timber resource information is the mandate of the resource agencies, not the responsibility of the companies. Some companies staff have suggested that if there was an allowance on the stumpage, they would be more willing to gather the data. On the other hand, a number of foresters and engineers expressed interest at being more pro-active in gathering resource information, and felt the need for more integrated resource management. The cost of gathering the data may be a significant issue, but many companies feel that it is just one more addition to a long (and growing) list of work that is expected to be done as part of the development process, without adjustment to stumpage.

One of the problems that appears to occur in most areas is that the MoE is under budgeted, and understaffed, which often resulted in backlogs of openings to be field checked (with the possibility that areas that should have been looked at, being missed), and delays in the referral process. This is unfortunate as utilization of MoE inventory information, and reliance on agency field trips to examine cutblocks are probably the most common processes used by companies in dealing with the fisheries resource while developing harvesting plans.

However, at least two MoE offices, Smithers and Williams Lake, have currently given up reviewing 5-year plans. Some companies have indicated that the information may still be sent to those offices, but that the MoF is expected to continue making decisions regarding harvesting approvals, irregardless of MoE's position. There is some concern as to whether the fish resource will be short-changed by this approach, and no clear idea as to what will replace the referral process. In other districts, companies have stated that the MoE staff have good local knowledge and show up for field trips, but don't appear to have good inventory information. On the other hand, DFO field staff do not appear to be as constrained, with companies generally commenting favorably on their cooperation and level of inventory information.

In summary, it appears that there are a variety of reasons why fisheries information has not been collected in the interior by forest companies, many of which are institutional.

c. How will the proposed Interior Guidelines be received?

This topic goes somewhat beyond the scope of this survey. However, a number of points could be made from our findings, regarding the proposed Interior Fisheries Forestry Guidelines.

First, some form of training would definitely benefit forest companies in the implementation of the guidelines. Unlike the coastal forest companies where there has been a history of fisheries-forestry concerns, it appears there is little familiarity or experience within the interior companies offish habitat protection or offish species identification other than by agency on-site inspections or broad, generalized guidelines. If stream classification is to be the basis of application of the guidelines, as in the coastal guidelines, and this information is to be prepared by company staff, then companies will need assistance in identifying and classifying the three stream classes.

Secondly, because of the general lack of involvement by companies in gathering fisheries data, some resistance may be found regarding the "added" cost of stream classification. It will be viewed as a non-recoverable cost to harvest planning, rather than as a development cost that can be covered by an adjustment in stumpage. This could be a source of resistance to "buying in" to the program.

Because stream classification will be a relatively new concept, it will be important to include some form of standardized data recording to ensure that the information is meaningful and reliable.

APPENDIX 1. Sample Questionnaire

Peter Bruce
R.R.#3 Tieau Rd.
LADYSMITH, B. C.
VOR 2EO

TEL/FAX: 722-3705

Here is the questionnaire I discussed with you. The objective is to consolidate the substantial volume of fisheries resource information that has been collected by the forest industry over the years.

This information will augment that gathered by other groups, which will be collated by the Fisheries Inventory Task Force of the provincial Resources Inventory Committee.

The results will identify vital information needs concerning renewable resource management. I thank you for your participation.

The attached sheet is designed to take as little of your time as possible and yet give a basic outline of the information your company has. Please fill out the form and return it by FAX as soon as possible.

Thank you.

Peter Bruce

An explanation of each column follows; select the appropriate comment or add your own if needed.

A. AREA - Name of tenure(s) - TFL, TL, TSA, etc., and major watersheds if applicable.

B. TYPE OF RESOURCE DATA - 1) Biological - fish, aquatic plants, etc.
2) Physical Habitat - streams, lakes, marine foreshores
3) Water Quality
4) Resource Use - Angler Days, catch level

C. LEVEL OF INVENTORY

1) Local knowledge
2) Air photo only
3) Spot sampling for fish presence for fish/forestry guidelines
4) Recce overview of drainage with spot sampling of fish and habitat
5) Detailed- extensive sampling of fish and habitat within drainage

D. SCALE AT WHICH DATA WAS PRESENTED - 1:50,000, etc.

E. COLLECTED BY: 1) Company foresters/engineer/technicians
2) Company biologists
3) Consultants

F. WHERE IS THE INFORMATION STORED

1) in files
2) stream CARDS
3) cutting permits
4) 5 year plans
5) G.I.S.
6) Inventory Reports
7) on maps
8) local MOE offices
9) Other_____

Company: _____

Contact Person: _____

FOREST INDUSTRY FISHERIES INVENTORY STATUS

A Areas of Tenure for Which Fisheries Information has been Collected	B Type of Resource Data	C Level of Inventory	D Scale	E Collected By	F Where is the data stored?

APPENDIX 2 List of Interior companies sampled.

List of Interior Forest Companies sampled to describe the types of fisheries information collected in the forest industry

1. MOF REGION- CARIBOO (13 Companies interviewed)

Williams Lake TSA-

West Fraser Mills Ltd.
Weldwood of Canada
Jacobsen Brothers
Lignum Ltd.
Carrier Lumber Ltd.

Quesnel TSA-

West Fraser Mills Ltd.
Tolko Industries Ltd.
Slocan Forest Products Ltd.
Canfor Ltd.

100 mile House TSA-

Ainsworth Lumber Co. Ltd.
Weldwood of Canada
Slocan Forest Products Ltd.
Lignum Ltd

2. MOF REGION - KAMLOOPS (12 Companies interviewed)

Kamloops TSA

Tolko Industries Ltd.
Slocan Forest Products Co. Ltd.
Ainsworth Lumber Co. Ltd.
Gilbert Smith Forest Products Ltd.
Weyerhaeuser Canada Ltd.

Okanagan TSA

Riverside Forest Products Ltd.
Weyerhaeuser Canada Ltd.
Federated Co-op Ltd.

Lilloet TSA

J.S.Jones Ltd.
Ainsworth Lumber Co. Ltd.

Merritt TSA

Tolko.Industries Ltd.
Weyerhaeuser Canada Ltd

3. MOF REGION - NELSON (10 Companies interviewed)

Atco Lumber Ltd.
Bell Pole Co. Ltd.
Crestbrook Forest Industries Ltd.
Downie Street Sawmills Ltd.
Evans Forest Products Ltd.

Slocan Forest Products Ltd.
Pope and Talbot Ltd.
Riverside Forest Products Ltd.
Meadow Creek Cedar Ltd.
Westar Timber Ltd.

4. MOF REGION - PRINCE GEORGE (11 Companies interviewed)

Dawson Creek TSA

Canadian Forest Products Ltd.
West Fraser Mills Ltd
Louisiana Pacific Canada Ltd.

Mackenzie TSA

Fletcher Challenge Canada Ltd.
Finlay Forest Industries Ltd.

Fort Nelson TSA

Takama Forest Products Ltd

Fort St. John TSA

Canadian Forest Products Ltd.

Prince George TSA

Canadian Forest Products Ltd.
Carrier Lumber Ltd.
Dunkley Lumber Ltd.
Northwood Pulp and Timber Ltd

Robson Valley TSA

(Did not Sample)

5. MOF REGION - PRINCE RUPERT (5 Companies sampled)

Babine Forest Products Ltd.
Northwood Pulp and Timber Ltd.
Pacific Inland Resources Ltd.
Decker Lake Forest Products Ltd.
Houston Forest Products Ltd.