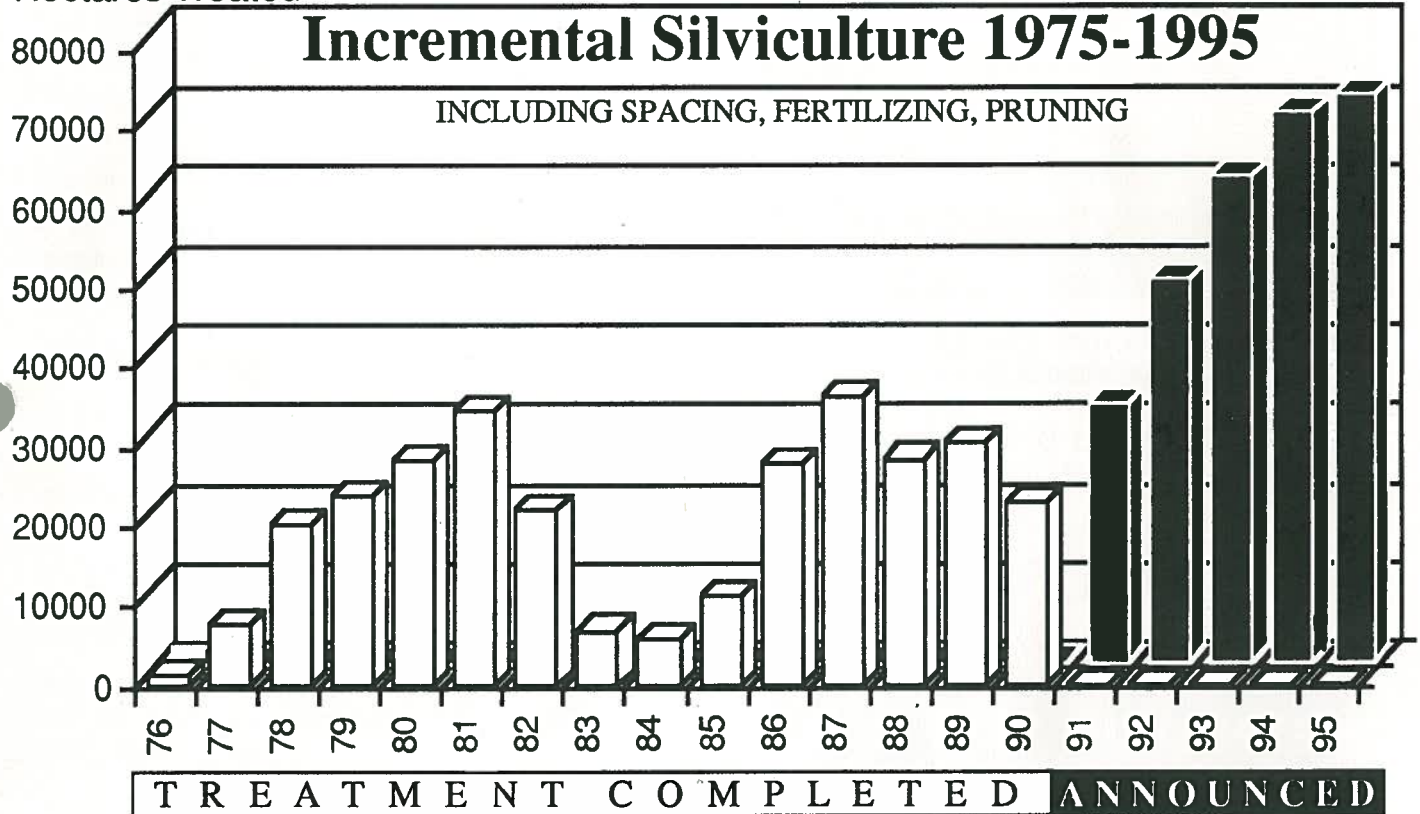


WSCA

Summer 1991

N E W S L E T T E R

Hectares Treated



**Roller Coaster of
Intensive Silviculture
Going Up Again!**

Western Silviculture Contractors Association

Newsletter SUMMER 1991

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The WSCA Newsletter is published by the Western Silviculture Contractors Association three times a year.

Opinions expressed by the authors do not necessarily represent the views of the WSCA.

This Newsletter was produced by Gordon Murray of *GraphiCoe*™

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News Briefs

\$1.4 Billion for Reforestation

Forests Minister has announce the details of the \$1.4 billion five year reforestation plan. He said the program includes \$500 in new money (including the \$100 million provincial contribution to FRDA). Richmond said the thrust of the plan is to "finish the big replanting job and re-focus our efforts onto managing the new forests to produce quality trees and a more diverse forest environment... the new emphasis on tending our growing forests is expected to generate, over the long term, an additional 3.6 million cubic metres of wood each year.

NDP says Reforestation Plan Shortchanges Forests

NDP forests critic Dan Miller says the Socred's announcement of \$1.4 billion represents a real increase in provincial funding of only \$50 million over five years—\$300 million less than they had promised to pump into provincial reforestation programs during last year's negotiations on FRDA II. He said once you subtract the current spending level and the federal contributions from the announced \$1.4 billion figure you are left with an increase of only 4% (\$10 million) per year. Miller claims the government is "short-changing our forests and the workers and communities that depend on the forest industry for their survival."

\$1,400,000,000	
- \$1,250,000,000	(\$250 million 90/91 budget multiplied by five years)
= \$100,000,000	(Federal FRDA II contribution)
= \$50,000,000	(\$10 million per year)

Employment Stability for Some

Changes to the contractor clause Regulation means that independent logging contractors will receive 50% of the work on forest licenses with an allowable cut over 70,000 cubic metres. Full contractors—those looking after a number of harvesting activities—will be contracted for five years, although the contract will be replaced every three years.

Native Forestry

The B.C. Forest Service will employ up to 200 native people by establishing 10 native fire-fighting crews. The native crews will carry out other reforestation field projects when they are not fighting fires. The Forest Service is also working with Indian bands on a program to employ 50 native people in forest district offices (so they can become acquainted with provincial forestry programs) and a joint task force to look into the opportunities for native people in the forest sector. The interim report of the Task Force on Native Forestry is now available from the Forest Service in Victoria.

The Perils of Planting

The *Vancouver Sun* published an article (July 29) by veteran treeplanter Zoe Lambert based on research she is doing for a book on the history of reforestation. In the article Lambert says there are two sides to the industry: "the good side... where experienced crews make consistent wages;" on the other side there is a "serious fringe of fly-by-night contractors flouting employment standards."

Lambert says these companies usually prey on inexperienced planters. When representatives of the Pacific Reforestation Workers Association approached a Prince George treeplanting company, the person describing himself as an experienced planter was told no positions were available, but those calling themselves inexperienced planters were encouraged and told hiring was in progress.

Lambert interviewed a planter who was charged \$740 in camp costs and earned about \$2 per hour for one month's work. She says this kind of experience is not uncommon among inexperienced planters recruited from universities, often in Ontario or Quebec. "Once here they have little choice but to accept poor wages and/or working conditions if they want to make enough money to get home."

MOF Action Plan for Key Issues

A number of initiatives have developed out of a two-day strategy meeting of senior Forest Service staff. The ministry will take aggressive steps to "address misinformation and allegations in European markets," ensuring economic stability in forestry communities, and "retaining our position internationally by working together to more efficient and effective forest stewardship."

MOF prepares Discussion Paper on Forest Practices Code

The Forest Resource Commission recommended that "a single, all-encompassing code of forest practices be established through the introduction of a Forest Practices Act." The Forest Service is now preparing a public discussion paper so the public can be involved in the process of creating a new forest practices code.

FRDA II Details Released

The \$200 million FRDA II agreement has been signed by the B.C. and the federal governments. The overall objective of the agreement is to work toward sustainable development of the forest resources of B.C..

FRDA II programs address specific areas of opportunity including:

- Improving the value, quality and health of young stands through stand tending (field work: \$133.5 million, research: \$20.5 million).
- Improving forest management on federal, provincial and private land (small scale forestry: \$20.5 million)
- Identification of new or value added products and markets, not yet discovered or whose potential has not been fully realized (\$3.5 million).
- Enhancement of integrated management of the full range of B.C. forest resources (public information and technology transfer: \$15 million).

Editorial

Full Ahead, Dead Slow

The Province commissioned the **Forest Resources Commission** to investigate forestry issues. This competent group recently released their first major report entitled: **The Future of our Forests**. A key recommendation was the establishment of a Ministry of Renewable Natural Resources and a Crown corporation Forestry Resources Corporation. These two entities would integrate the forest responsibilities of the 13 ministries currently involved in different aspects of our forest land and local community involvement. The FRC suggestion for cutting through the emerging disfunction of our balkanized forest management has set the stage for some radical change.

The FRC report has taken two years of public hearings, written submissions and research to complete. Forest Minister Claude Richmond, on releasing the report, said he was "eager to get on with the process" of dealing with its recommendations. His plan of action is to: "receive written comments... analyze these comments... meet with as many interested parties as possible... appoint a panel of experts to provide advice on the development of a discussion paper... the discussion paper, once developed, will be release for further public comment."

In other words: **full ahead dead slow**.

"Change", as Machiavelli dryly observed, "will be bitterly opposed by those who stand to lose by it and only lukewarmly supported by those who stand to gain."

Slow Down So I Can Get Off

Claude Richmond, certainly one of the most skilled recent helmsmen of the provincial log barge, recently announced that he won't seek re-election this fall. Claude Richmond's personal chemistry with his civil crew was has been excellent and he deserves credit for some deft navigation in troubled waters.

Enhanced Stewardship

The shift from a relatively single focus MOF to the more complex multiple vision of a MRNR parallels the public's shifting values in the forest. As the FRC noted in their report: "People now recognize a wide range of forestry values that have little to do with economics or material wealth." The commission proposed replacing the current atmosphere of conflict with an ethic of **enhanced stewardship** so that "the forests of B.C. will provide for the economic, environmental, social and spiritual well-being of all British Columbians through successive generations."

Dan Miller, NDP forestry critic and possibly our first Minister of Renewable Natural Resources, is a strong supporter of forest renewal. But it seems to be the NDP fortune to inherit the leadership when the problems are larger than their agenda.

An Unripe Plum from the Green Plan

In September we will see the Federal Government announce the forestry dimension of the Green Plan. We have been told in the past that the Green Plan was going to partially replace the Federal contribution to FRDA II with Trees Canada, a major reforestation initiative of 325 million seedlings.

Forestry Canada is presently working on the implementation of these reforestation efforts. My understanding is that the funding is scarce for Trees Canada. In addition, the program will probably

target other provinces where the need for reforestation is more severe (B.C. being a relative eco-topia because planting is now current with logging and the high priority NSR backlog is shrinking quickly).

Reforestation contractors and environmentalists in B.C. should put their hard hats on because any Green Plan plums dropping into our lap are indeed likely to be green—hard and sour tasting.

Intensive Silviculture Grows Again

Nowhere has the boom and bust cycle of fickle government funding been more evident than with intensive silviculture. Around 1980 intensive silviculture had a brief heyday on Vancouver Island due to federal job creation programs. Industry initiative was sapped and many career spacers were put out of work by programs such as NEED and EBAP.

One result of the higher contract margins created by these programs was a reduction in the number of spacing injuries coming into the Campbell River hospital. Spacing may be one of those industries where extremely low prices create a significant risk of injury.

The latest intensive initiative announced by Forests Minister Richmond may bring prices back to the point where we can grow a responsible and enduring industry with enhanced training and safety programs.

Forest Sector Strategy for Human Resources

Dirk Brinkman

The most effective human resource strategy for the forest sector is one that creates forestry jobs tomorrow with silviculture jobs today. We need to develop a silviculture strategy that responds to this economic imperative and incorporates the stewardship of public forests. To create an effective silviculture strategy we must ask four basic questions

What is the public vision of our forests?
We need to train our industry to respond to this vision.

What is the best strategy for realizing the public's vision?

We need to train the politicians to commit to the best strategy.

How far are we from achieving that strategy?

We need to train the scientists and technicians to measure and report on our progress.

How will we achieve that strategy?

We need to train our workers to effectively implement the strategy.

Public Vision

The public's vision of Canada's forests is emerging with vivid resolution. It began with the motherhood sentiment that characterized in the goals of early tree planting policy, well expressed by Lineus in the 18th century "If a tree dies; plant another." Today's mandate has evolved into the management of a diverse number of complex and changing ecosystems for all resource users. This public vision of the forest environment is emerging as powerful force in the information age.

Forest Sector Strategy

We, the foresters, administrators, contractors, forestry workers, and politicians—the stewards of Canada's forests, have a duty to provide the public with a practical strategy through which they can realize their vision.

National Silviculture Strategy

During federation, the provinces were made owners of the land and its natural resources. We as stewards, entrusted with the management of these resources have, to set strategic policies provincially.

A provincial silviculture strategy must be built upon a foundation of a sound **forest renewal** program which is then balanced by a **forest enhancement** program for established stands. One cannot be substituted for the other. The public vision still prioritizes reforestation over enhancing the existing forest.

Provincial Silviculture Strategy Template

Developing a consensus for set of national regeneration standards specific to each ecosystem is a natural task for the Department of Forestry. Currently each provincial standard is different and each cultural and technical regeneration system is unique. We need to compare provincial regeneration goals and performance. Some aspects that could be compared are: ecosystem fit; free-growing success; plantation performance; stocking targets; distribution; growth and yield; harvest versus regeneration area, volume, value, performance; how each program is delivered and who is responsible.

A state of the nation report on what is working and what has to be done in each province would lead to some healthy competition and peer pressure.

Growing a strategy: 1985 National Forest Congress

The last attempt at a national strategy began with the 1985 National Forest Congress. In weaving my voice into the tapestry of the last National Forest Sector Strategy, I was both impressed and distressed at the process of consensus making and compromise that characterizes Canadian democracy.

Four of my highest priority goals were reflected in the final strategy:

1. The level of silviculture must increase to be adequate for a sustainable supply of forest resources for all users.
2. Career opportunities in silviculture must be more year round, local and satisfying.
3. Job creation in silviculture must not displace the existing contracting industry.
4. An "end-results" free-growing perspective must shape future forest policy.

State of that Strategy

Most aspects of that 1985 strategy remain valid today. Today it is clear that at least two key elements are left out of the strategy— silviculture training and the safety of silviculture workers. today I would now add another goal:

5. On the job training for silviculture trainees must be supported with funding, available with nominal paper-work, to support.
6. Basic health and safety standards must be enforced through-out the silviculture industry through a national initiative.

In reformulating a strategy we need to look at the current status of our past strategy.

1. Level of Silviculture still Inadequate

Canada's principle capital, the forest land base, is not portable. It cannot be depleted without unacceptable environmental and economic consequences.

Provincial and federal forest policy remains inadequate to meet the public's demand for maintaining forest values, a legacy of forest management debt is being left to future generations.

Forest Inventory Renewal Emergency

In 1989, I put together a national campaign: Canada has a F.I.R.E.— a Forest Inventory Renewal Emergency. The strategy did not capture public attention because the public vision has lost the

focus on renewing the forest inventory in the larger picture of renewing the forest eco-system.

The fundamental principle for forest policy that all depleted forests must be renewed to an acceptable standard remains valid.

As part of F.I.R.E.! I said we need to:

- Regenerate all harvested areas
- Regenerate all fires
- Regenerate all withdrawals (with afforestation programs)

Regenerate All Harvested Areas

No forest renewal strategy is complete without a policy requiring regeneration of all areas harvested as a cost of harvest.

There must be a commitment not to leave a legacy of debt for future generations.

The least net cost per free-growing hectare is achieved by giving one private sector agency the "end-results" responsibility to regenerate the area. If this is the harvest company it also creates incentives for harvest options which favour effective regeneration.

By prioritizing accessible and economic sites, we can eliminate a significant percentage of the legacy of previous generations.

Regenerate All Fires

It is easy to assume that the 1980s would be bad for fires with six of the hottest years in the past one hundred. A recent Equinox article showed that the fire trend closely matches the change in concentration of CO₂ in the atmosphere. Which province will have the next conflagration is unpredictable—that there will be major fires in Canada in the nineties is certain. As a nation, we should share the responsibility and make regeneration of wildfire areas a national program wherever naturals will not come back.

Regenerate All Withdrawals

There are numerous permanent withdrawals from the forest landbase.

- Hydro pondage and powerline right-of-ways
- Highways
- Urban Sprawl
- Reclamation of Flume Kills/Tailings

These withdrawals can be compensated for when possible by reclaiming the actual area affected or otherwise through afforestation programs such as Urban Releaf.

Unproductive Agriculture Land throughout Canada represents a potential CO₂ sink for our man-made CO₂. By restocking this former land-base, we can sequester our CO₂ pollution.

Forest Enhancement

The volume, health and value of existing forest stands must be enhanced to ensure an economical wood supply for our forest industry through commercial spacing, partial commercial spacing, spacing, pruning, preferred species release, pest control, and fertilization.

Without an energetic enhancement program that will enable to set aside wilderness, buffers for waterways, ecosystem and old-growth reserves, we will deserve the appellation "Amazon North." We already risk international sanctions from the European Community and are currently experiencing an invasion of eco-activists.

We want eco-tourists who are here to enjoy the peaceful co-existence of the foremost wilderness preserves in the worlds with the foremost forest industry in the world. This requires the effective delivery of the most comprehensive and well targeted silviculture strategy that is made effective through effective training programs.

2. Silviculture employment still unstable

Then as now, Silviculture Workers have higher unemployment than Forest Workers (23.5% in 1985). Year round local employment for Silviculture Workers remains a key issue, as it has been since the major companies replaced forestry crews with contractors.

Over the past three years our company has built a vegetation management division, with fifty trained people and equipment. In 1989 there was no money for intensive silviculture and many of these people did not get much work.

The two cycles that the silviculture industry goes through are:

- the seasonal cycles,
- the cycles of government forestry budgets.

To deliver equitable employment to those who have dedicated their career to forest renewal and cost effective silviculture programs, we need reliable funding that we can plan around.

3. Job-Creation Programs

By 1985, in many parts of Canada, we witnessed job creation programs damage the reforestation sector of our industry— replacing career silviculture workers who were proud of their work, with job creation participants waiting out the recession. Although the current government appears to put little emphasis on job creation schemes, there remains a fear that our jobs will be replaced by make work projects.

We also need to examine the interdependency between silviculture workers and UIC. Without UIC, many of them would have to find other work and would not be available when the high-volume spring season begins. Also some people prefer not to work more than the number of weeks required to requalify for UIC. A clear policy is necessary to stabilize our work force and allow proper human resource planning.

4. End results Focus

1985 Green Ghetto

In 1985, reforestation funding came virtually 100% from federal and provincial Forest Health Care budgets. Reforestation programs had several problems: survival was low, surviving plantation performance was still poor in the context of new "free-growing" goals.

Today in British Columbia, we are quickly growing into an industry with a product that we are proud of— free growing ecologically suitable plantations are being delivered to the public as a part of the payment for the right to harvest. B.C. has started to get out of the syndrome of payment for effort. Contracts are increasingly defining the end-product goal as the service being delivered— increasingly becoming long term multi-activity contracts.

HUMAN RESOURCE STRATEGY cont...**Silviculture Must be Product Driven**

We know what the public wants, we know the strategy to deliver it, we can define what we want to see in our forests, we have the industry capable of delivering it, we simply need to add leadership and cooperation of the government.

At the last congress I pressed for "end-results" forest renewal, a strange notion to most participants—for an end to government subsidized reforestation.

Our industry also has to be prepared to go on to other things when its job is done.

B.C. new forest act and silviculture regulation is the strongest and most focused end-results/stewardship forest renewal policy in Canada.

5. Training Strategy

We are a very young industry. Everyone involved is a pioneer in the sense that much of what we do is new and experimental. It is an industry that deserves development and training assistance to meet the increasingly complex challenges of the nineties.

Silviculture Joint Adjustment Committee

In 1987 the SJAC committee met about twenty times and we worked our way through the human resource problems in our industry. This committee was the first time I encountered the jargon word "Human Resources". We faced the task of turning our 'fly by night' contracting industry from a 'cut and run' exploitation of human resources to one that nurtures them for sustainable development.

Components of a training strategy**Training Delivery**

Contractors have an obligation to train their silviculture workers both on the job and outside of the workplace.

There are two kinds of training—entry training for the green worker and upgrading or enhancement of the skills and knowledge of the experienced worker.

Selection

In the past the limited budget for training silviculture workers was allocated to programs whose graduates ended up with a job selling stereos while those of us who had committed our lives to doing the work had difficulty getting training assistance that would enhance our knowledge. (In the worst cases, forestry worker training schools had 95% of their graduates working in non-forestry occupations after one year.)

It is critical to deliver training only to those who will use it. The best pre-screening is the formidable physical difficulties of the work itself, making on the job training the most valuable.

In addition, keep the training for green workers to a minimum until the rain, heat, mosquitoes, black flies, no-see-ums, muskeg, gumbo and aching muscles eliminates those who are not going to use it.

On the Job Training

Information and training which has an immediate practical application is never lost. Book learning in academic environments often only demonstrates an ability to take exams and the material itself often forgotten. Most companies only train on the job—this is because field training modules which harness the imagination of working practitioners for achieving particular end-results goals results in the highest returns for training.

In-house Silviculture Training School

At Brinkman & Associates, we started our in-house Silviculture Training School in 1986. The focus was to develop our training program to train our trainers in the skills and technology of training green planters, or the even more difficult task of effectively training or retraining experienced people.

Standards

Industry standards are needed to facilitate funding without which agencies cannot confirm the professional level of on-the-job training.

Training Materials

Videos, films, books, manuals and pamphlets are the most useful for on the job training. Funding is necessary to produce these expensive materials.

Training Modules

A silviculture worker is required to become skilled at a number of different silviculture activities in order to develop into a year round silviculture worker. Each of these activities requires a separate set of knowledge and skills that require a separate training module best delivered just before the appropriate local season for that type of work.

Management Training

Only fools take on the increasingly perilous task of managing biological and weather dependant systems in this age of global warming with its climatic anomalies and unplanned side effects. Perhaps we need management training programs for contractors on topics such as risk management.

6. Occupational Health and Safety

Safety has recently emerged as a major issue in the silviculture industry. Eleven treeplanters (out of a workforce of 11,000) were killed last year. This is the result of a lack of enforcement of safety standards and proper safety training.

Currently there are no economic incentives to maintain human resource values—such as safe and healthy working conditions. Just as with forest resource values, effective legislation, regulation, and enforcement are necessary to enhance human resource values in the industry.

National leadership is required to create a level playing field of strongly enforced safety standards. Unless all contractors are required to supply healthy and safe work environments to an equal level, those who cut camp and safety costs will set the market price—in turn creating severe pressure on responsible contractors to cut such costs if they want to stay in business.

Positive steps have been taken by W.C.B. in B.C. and Alberta to bring in new safety standards for silviculture. It remains to be seen whether the are strongly enforced industry-wide.

A Global Strategy for Forest Renewal

One hundred years ago there were six billion hectares of forests. Today there is less than three billion hectares (at the same time world population has more than doubled), over 10% of this forest land is in Canada.

Afforestation and reforestation mega-projects world wide are imperative to reverse the climatic problems and soil/species degradation of the past one hundred years.

Global Forest Research Center

Canada should seize the initiative to establish a Global Forest Research Center to lead in research and education on Global Forest issues such as species diversity, soil preservation, climate/forest relationships, CO₂, and the identification, understanding, preservation, enhancement and restoration of ecosystems.

Restoration Ecology

In Canada we have a large number of diverse and unique eco-systems, often only a few miles apart. We are fast becoming leaders in Eco-system Renewal, the new art of silviculture foresters. "The restoration of Forests Differs in Time, Breadth, Height and Depth from the restoration of most other types of vegetation." Asby. Dept. of Botany. S.Illinois U.

We must invest in research and development of these and other forestry methods that will address the ecological challenges facing us in the coming century.

like a dog-gawned recycled hippie to you?"

Today, Jack's son is a good tree planter working in an industry that is proudly supplying the product demanded by the public— a free-growing plantation on every hectare logged.

Silviculture workers are supplying a professional service which requires increasing levels of skill, training and bush smarts. The success of our silviculture programs depend on attracting a highly motivated workforce. Such a workforce demands adequate training for year-round jobs at a safe and healthy worksite.

We must refine our National Forest Strategy to include such critical features as silviculture training and safety. Without a renewed commitment to a sustainable forest through silviculture, Canada's destiny is to lose our competitiveness and our quality of life, and to contribute irreversibly to the degradation of our planet.

The Next Generation

I Can Remember walking into my first Forest Congress on Labour Market Issues in Halifax in 1985 wearing my first suit & tie in fifteen years, to be greeted by Jack Munro's bellow, "Does that look

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Contractor-Forest Manager Relationships

by Ross Styles

Note: From a talk given at the SISCO conference May 2, 1991.

The relationships between silvicultural contractors and forest managers in government and industry have changed a lot lately. I believe future changes will be driven by two factors; economic forces and changing social values.

Dominating Factors—Five Trends

I do not have a crystal ball, but I think I see some trends that will influence forest managers in government and industry and, indirectly, the contractors who work for them. Some of these are established, others are just emerging. There are five that may dominate the next few years: financial constraint, biodiversity issues, land use issues, opposition to clear cutting, and community stability.

Financial Constraint

In 1987, the forest industry began bearing higher costs for wood supply. Stumpage fees rose dramatically and reforestation costs were handed over to industry. There is no indication there will be any lowering of cutting fees or relief from reforestation obligations. Because of these costs on one hand, and depressed markets on the other hand, financial constraint rules the day in the forest industry. In the near term, the pressure may be severe enough to put some companies into bankruptcy—and take some silvicultural contractors with them. There is no doubt that forest managers will be under pressure to cut and control the costs of silviculture treatments.

How might this change contractor relationships with industry? Certainly, contractors who can provide their clients cost-saving measures or a better job at little or no increased cost will have an edge. The pressure is on for jobs well-done and creative approaches that make our work more effective if not cheaper. Site-prep contractors may provide site specific mechanical treatment; for instance, one kind of treatment on the higher, drier ground, another on lower, wet areas. Also, benefits could result from site-prep contractors working more closely with planting contractors. Minor changes in the way they treat an area may make planting easier or cheaper. Or, by working with planting contractors, perhaps you can help planters learn to identify and use the most appropriate microsites.

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Biodiversity Issues

Wilderness areas and wildlife populations are diminishing. As they disappear those that remain are more valued. The defense mounted in the Pacific Northwest states for the spotted owl has reduced old growth timber supply there. Social views on what's of value in our forests are changing rapidly. Recently, this change was clearly illustrated for me when I heard an account of various ways to value an African lion: according to the report, the economic value of one lion shot for its pelt is \$1200, this would rise to \$5000 if shot by a trophy hunter, and \$500,000 through a 12 year lifetime as a tourist attraction. Public concern for preserving and maintaining forest biodiversity will add many new factors to the list of concerns within the jurisdiction forest managers. The needs to create wildlife forage and shelter, preserve and enhance animal species, and maintain

old-growth forest characteristics in managed forests are going to make the forest manager's job complex indeed.

Since assuming responsibility for reforesting the lands they cut, companies have shown a clear preference for developing long-term relationships with contractors they know and trust. This trend will intensify as treatment plans become more complex. Becoming familiar with the biodiversity concerns in a manager's operating area will be important in securing and maintaining long-term relationships. We can all expect to have a lot more to do with the Ministry of Environment in the future.

Land use issues

There are on-going issues regarding land use. Miners, hunters and fishermen, dirt bikers and trikers, hikers and overnights, trappers and cattlemen, skiers and skidoos—all want to be

able to do their thing in the woods. Their numbers will increase, their demands for access and facilities will continue.

This array of users reflects the many resources within our forests. Increasingly, forest managers will need to consult with user groups and agencies that have interests in their cutting areas and manage for several values other than wood supply. No doubt they will discover that their work can be easier when they work with contractors who understand those other users and their values, well enough to appreciate the complexity of treatment plans. Contractors will do well to become knowledgeable about other user groups and their values, to participate in—and even facilitate—this consultative process.

Opposition To Clear-cutting

Opponents to clear-cutting are being heard more frequently. Perhaps the

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CONTRACTORS & MANAGERS cont...

greatest challenge may be arising in Europe. The possibility exists that opposition in Europe to clear-cutting in Canadian forests will attract a level of attention comparable to the attention given here in B.C. to clear-cutting the Amazon forest. This could seriously threaten the market for Canadian softwood and pulp in Europe. If clear-cutting is silviculturally sound and not threatening to the environment (and I believe it is), then we need to join together to find the message and voice to quiet the opposition.

Jobs And Community Stability

The last trend is a growing public demand for more local control in forest management. This will likely manifest itself in a number of ways, but the immediate concern is for jobs and community stability. This was illustrated by a item on BCTV's newscast about 3 week ago. The stability of Clearwater has been

threatened by recent mill closures and job losses. One reason given for the closure of a mill was inadequate timber supply. The broadcast showed a number of angry residents protesting the sale of logs to buyers outside of their area.

They want the local forest resource to support local people. This issue is confined to logging and milling at present, but as silvicultural work becomes recognized as an established component of the forest industry, similar demands will be made of silvicultural pursuits. Prudent forest managers will begin to respond beforehand.

Conclusion

I think several factors will combine to compel contractors to define limited working areas. The needs of forest managers for on-going, working relationships, increasing demands that forest resources serve local communities and provide work for local people, and the need for fairly intimate knowledge of one's operating area will make it in-

creasingly difficult for contractors to continue past nomadic practices of working all over the province.

While it is possible that some large, growth-oriented contractors will seek to become "full-service" contractors, I think the scales will tip in favour of specialized service firms. Managers will want to call upon those contractors who can provide the best of the services their working plans call for, the nursery with a reputation for producing the best of the stock type he wants to use, the site prep contractor with the best operators on the types of equipment he wants to employ, and so on! Defining a market niche may be the buzz words of the next few years.

The increasing complexity of the work, particularly as we add significantly increased incremental silvicultural activity to basic silviculture, will make it more difficult for contractors to work with transient crews. Training and retaining workers will become much more important, and in all probability, fundamental to their success.

Consider the Competition Covered

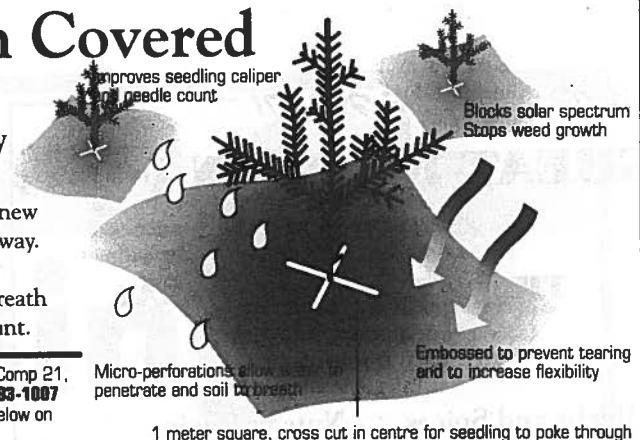
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Auditor Generals Report

Note: *In 1990 the Auditor General performed three value-for-money audits in the Ministry of Forests. The AG examined how the ministry monitors forest companies to ensure they meet their obligations when they build roads, harvest timber and reforest areas they harvest. This following presents selections from the AG report on reforestation monitoring. Next issue we will present selections from the Forest Resource Commission Report.*

Background

The activities of forest companies can expose the forest to a number of risks. The ministry sets conditions for road building, harvesting and silviculture to minimize the risks. Silviculture, if poorly done, can significantly delay the renewal of the forest, and result in licensees wasting large expenditures.

During the year ended March 31, 1990, the ministry collected \$651 million for forest companies and spent \$538 million on its programs.

In 1987, changes were made to the Forest Act to make major licensees responsible for basic silviculture. As a result of these changes, the ministry switched for its traditional role of monitoring specific activities to that of auditing a licensee's overall compliance with its obligations.

In the early 1980s, the ministry had a staff of approximately 5,00. During that period of government restraint, staffing was reduced to 3,700. Current staffing level is further reduced to 3,200. Much of work previously performed by ministry staff is now performed by private sector companies on contract.

Monitoring of Silviculture Activities

We concluded overall that the ministry's monitoring practices do not give adequate assurance that licensees are meeting their reforestation responsibilities. The policies and procedures regarding frequency of field visits and follow-up of problems are not based on an appropriate evaluation of the potential losses should licensees not comply with ministry expectations.

A major licensee's responsibility for reforestation of a specific site to the free growing stage may extend over a period of 10 years or more. During that time, prompt intervention is needed to re-

solve any problems that may arise before they lead to higher rehabilitation costs or decreased productivity for the forest resource. Effective monitoring is therefore essential if the ministry wants to ensure that appropriate reforestation activities are carried out.

Because monitoring objectives have not been articulated clearly, field staff are uncertain about whether the purpose of the auditing is to determine if the licensee has complied with the prescribed silviculture treatments, or if the crop is likely to reach free growing status.

Minimum auditing targets are based to a large extent on estimates of the number of audits that available staff resources are able to conduct. Given the size and value of the province's forest base, and the long-term perspective needed to ensure its effective reforestation, we believe the ministry should have a more rigorous approach for establishing its audit coverage.

Inconsistent consideration is given to weighting selection for higher risk species or ecosystems, where problems are more likely to be found.

Monitoring procedures do not specify what constitutes a significant deficiency in licensee performance, requiring follow-up action.

Enforcement

We found that the ministry often did not take follow-up action when prescribed treatments were not adhered to. When alternative treatments were deemed likely to result in free-growing seedlings, the treatments were approved. If deemed unlikely and a judgement about the inappropriateness of a particular treatment could be made with little doubt, ministry staff usually require the licensee to take corrective action. In cases, however, where judgement is

uncertain, some ministry staff have been deferring corrective action until failure to achieve free-growing status can be determined with greater certainty. This could mean waiting several years before taking corrective action.

If staff choose to defer difficult decisions for 10 or more years before making a final decision as to whether free-growing status can be obtained, there is a danger that timber production could suffer. If many of a company's areas fail to reach free-growing status, rehabilitation costs could be so high that the licensee would not be able to pay for them. In certain cases, it may not be possible to rehabilitate the cutblocks in question. Some areas may be behind schedule or have fewer trees than required by ministry standards. Corrective treatments and double billing at this time would not likely make up for lost volume.

Field staff require guidance for the actions they should take if the likelihood of reaching free growing status within a specified time cannot be precisely determined.

To improve the effectiveness of its monitoring and to help maintain credibility with industry and the public, we think the ministry should set up a system that would allow it to follow up audit findings quickly and effectively.

Public Information

The ministry provides relatively detailed information on the provinces overall silviculture program in its annual report. However, further detail is needed to make the reporting more meaningful.

The ministry provides a table in its annual report that lists licensees audited in each region and the number of hectares examined and the number deemed likely to reach free-growing status. We think the ministry should include the total number of hectares being reforested by the licensee and thus subject to audit. In addition there may be benefits to showing the stages of silviculture that have been reached for areas audited.

We also think that the report should clearly state what the ministry is trying to achieve, in terms of its objective and performance targets for monitoring.

WSCA AGM/Convention Report

This year's Convention had many strong presentations and interesting exchanges. Unfortunately, we cannot print all of them in this Newsletter, but have included a selection. The WSCA will publish a combined record of the 1990 & 1991 conventions this fall.

Enhancing Forest Resources

by Claude Richmond, B.C. Minister of Forests

First I will give you a little background in the current state of the softwood lumber industry. It does not look very rosy in the industry, the market is very tough. We did some number crunching on today's prices, as compared to '82, when the bottom dropped out of the market. If you converted into today's dollars, the market is worse today than it was in 1982. So that gives you an indication of what the industry is going through. There are many factors contributing to that: the US housing market is way down, the Canadian dollar is too high, interest rates are too high, and all this is impacting on the B.C. forest industry.

As tough as the market is, of greater concern to the industry is the long term outlook for forestry. It's a cyclical industry and they're used to downturn, they come out of them. Unfortunately, there are some casualties, but generally we come out a wiser and stronger industry. But some of long term concerns are of greater importance to many people in the industry, and I don't have time to go into all the detail tonight. But the program that I'm going to announce to you deals with one aspect of the long term future of the forest industry.

The theme of your conference is Enhancing the Forest Values, which I applaud. This afternoon I announced to the media the details of our program for enhancing B.C.'s forest resources. This new program is the biggest challenge and the greatest opportunity ever in the province's history for silviculture contractors. I would like to congratulate the MOF staff for all the work they have done on it since last February.

We had originally planned on a lot more Federal money for this program. We realized in about November that while our program was ready to go, we

weren't going to get what we wanted out of FIRDA II. We had tried for ten months to lever a few more dollars out of the Feds but we realized that \$100 million was all we were going to get.

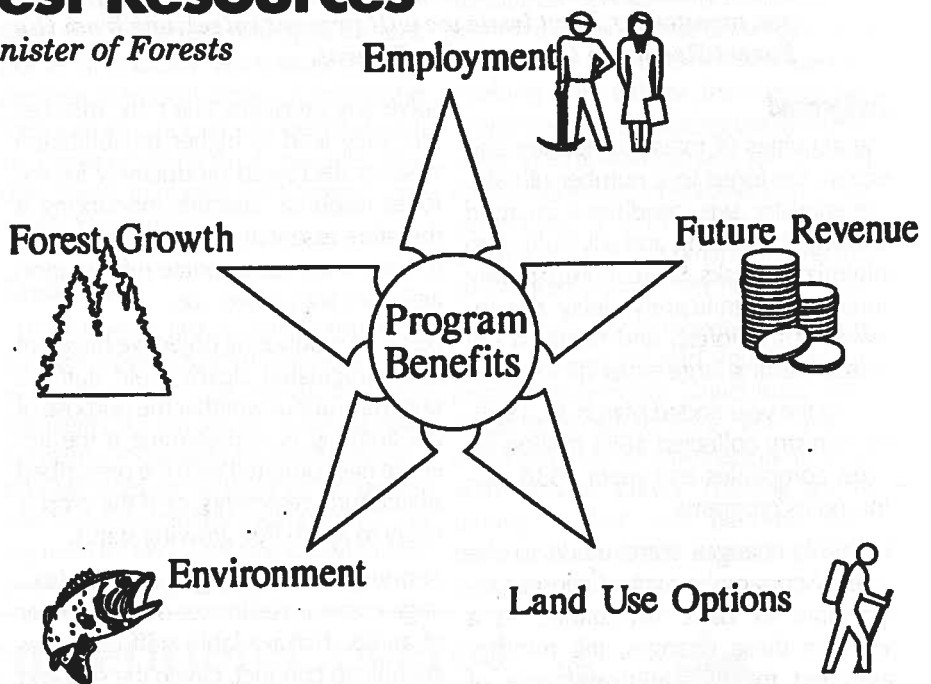
So we had to go back and take a look at our numbers and I had to do a selling job in Cabinet to put in a lot more Provincial money. Thankfully, it all worked out, and this program is the one that we worked hard to come up with. I have said all along that, even without the money we wanted in FIRDA II, our commitment to the forests and people of British Columbia would still be there. I think that this program bears that out.

First of all, the forest renewal program. \$1.4 billion will be put into the program over five years, or more than \$768,000 a day. It adds \$500 billion in new money, including \$100 million allocated by the Province to the new FIRDA agreement, but not the Federal side, as new money. The program is part of the 12 point taxpayer protection plan announced by Premier Vander Zalm last

week. We believe that it ushers in a new era in forest management. It will finish replanting the backlog by the year 2000. It will refocus efforts on tending new, young, forests, improve tree growth and value, and develop more diverse second-growth forest environment.

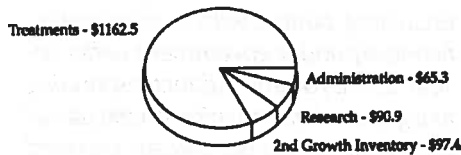
Sweden is often held up to us as a model of forest management. We will use many of the same forestry techniques, but will apply them in a manner unique to British Columbia. We will blend high production techniques with other resource values to produce a mosaic of forest benefits. The switch in emphasis to incremental silviculture will pay off in jobs. 64,500 person-years over the five years. Most of these jobs will be in forest dependent areas where the industry is experiencing lay-offs, especially in the interior and the north where we have a lot of one-industry towns. They've had closures and many, many lay-offs, and it will support economic and social stability for these communities.

Here's how the program works.



1991/92 - 1995/96

Expenditures (\$ Millions)



Total \$1.4 billion over 5 years

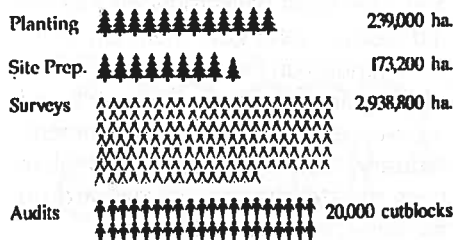
1. Program Spending Breakdown

Over the next five years, we will prudently invest \$1.4 billion: \$1.16 billion in forest treatments, \$97.4 million in second growth inventory, \$90.9 million in silviculture research, \$65.3 million in administration and support services.

2. Resource Enhancement

For 1992 to 1996, we set some ambitious but attainable goals for enhancing existing plantations. Brushing: 358,000 hectares. Spacing: 260,000 hectares. Fertilizing: 47,800. Pruning: 25,000 hectares.

1991/92 - 1995/96
Silviculture Goals

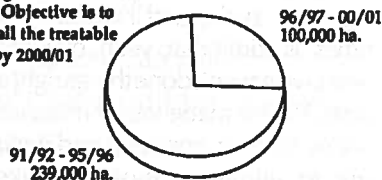


3. Basic silviculture

Basic silviculture will remain high. Planting: 239,000 hectares. Site preparation: 173,200, Surveying: 2.9 million hectares. We will be auditing 20,000 cut blocks.

Planting NSR

Includes 1982-87 NSR and pre 82 good & medium site NSR. Objective is to plant all the treatable NSR by 2000/01

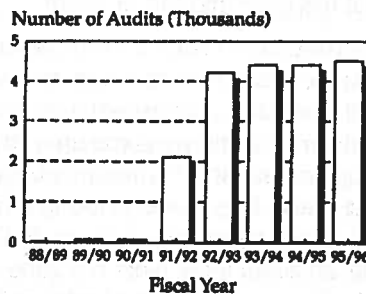


4. Eliminating the Backlog

The program's prime component, is to ensure reforestation of remaining hectares of forest lands which were not satisfactorily restocked in the past.

Nearly two-thirds of the NSR lands, 240,000 hectares, will be planted over the next five years. The remaining 100,000 hectares in the following five year period. We have set a goal of eliminating all the backlog by the end of the decade.

Silviculture Audits



■ Accomplished
□ Projected

5. Audits

Big and mid-sized forest companies are responsible for replanting areas that they harvest. The difference now is the forest service will invest far more money and effort, making sure the job is done right.

We'll increase the silviculture audits to 4,000 harvest areas a year from the current level of about 100. This means that fifty percent of the areas harvested by companies will be audited for compliance with the law. We'll invest four million dollars a year to monitor and audit licensees' work in the forest. This is another major new initiative.

6. Small Business Forest Enterprise Program

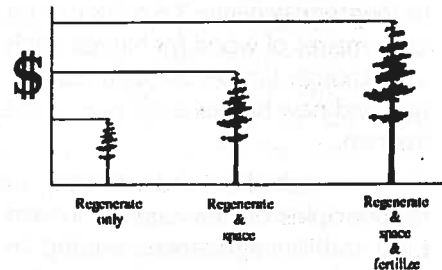
The Provincial government will continue to reforest areas harvested by small operators under the Small Business Forest Enterprise Program, \$145 million over five years, from the Small Business Forest Enterprise account not included in the \$1.4 billion package. And we will also continue to replant areas damaged by fire and pest outbreaks.

7. Incremental silviculture

Under the program's third component, we'll increase incremental silviculture funding by 1000%. We'll quadruple spacing activities. We'll triple fertiliz-

ing, and we'll take a significant step in pruning which was negligible in the past. Highlight of the program, is that we'll invest a total of 1.16 billion in basic silviculture and incremental silviculture treatments.

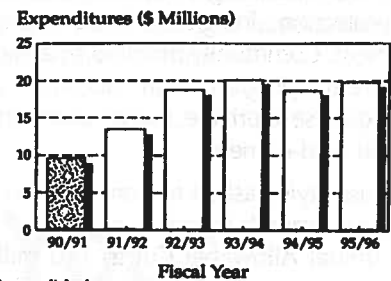
Final Crop Value



8. Second growth inventory.

Under the program's fourth component, we'll invest \$97.4 million in developing complete inventory of second-growth forest resources.

Silviculture Research



■ Accomplished
□ Projected

9. Silviculture research

Under the programs' fifth component, we'll invest \$90.9 million over five years in extensive silviculture research and silviculture practices, forest growth, genetic improvement of the trees, and ensure second-growth forest retains significant biological diversity.

10. Jobs

As I said before, the direct effect of this program will be 64,500 person-years over the five years, or 2.5 million person-days annually.

Future revenues to the government, therefore to the people of British Columbia, additional harvestable forest will earn over a rotation of 100 hundred years, \$4.3 billion in Provincial revenues, \$16 billion in gross domestic

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S**RICHMOND AGM Presentation cont...**

product. More land use options for parks or other reserves if the extra wood is not harvested. Environment improvement, enhancement of other resources such as wildlife, aesthetics, recreation, biological diversity. Forest growth: new emphasis on tending the forest will, over the long term generate 3.6 million more cubic metres of wood for harvest each year. Enough lumber to build seventy thousand new homes each year of the program.

FIRDA II reached the understanding on the principles of new equally funded \$200 million agreement ending in 1995. It focuses on a new forestry partnership initiatives. Major thrust there is sustainable forest development programs, maintaining a full range of forest resources, timber wildlife range, water, recreation, improved growth and value of second-growth forest. As well as research and sustainable development, forest renewal, growth and yield, forest protection, integrated forest management. Community oriented small-scale forestry program with incentives and expertise to private, native, and municipal land-owners.

Ross Styles asked to comment on the government's intention to increase the Annual Allowable Cut to 110 million cubic metres by the year 2020. First of all, let me say that I think it's entirely possible— if this program is continued by future governments—that we can, in not too many years, increase the Annual Allowable Cut (AAC). They've done it in other countries. But I should add that the Chief Forester, not the Minister of Forests, sets the annual allowable cut, and it's not determined in isolation. There are many factors that go in to deciding it. But I think as does Mr. Cuthbert and others, that if we pursue this commitment to the forests, that there need not be any reduction in the annual allowable cut. We can compensate for the fall-down. Maybe not immediately, but over the next twenty or thirty years.

Today's announcement of the forest renewal program is in direction of the

government's intent to increase the annual allowable cut, but more than that, to show our commitment to the forests, to the future generations of British Columbians. So in conclusion, our \$1.4 billion program enhancing our forests is one that we've very proud of, and I'm proud of the staff for the amount of work that has gone into this program.

We have a thick book with the numbers and the locations and where this work will take place. I was asked today by one of the media, did we come up with this program since the Premier announced it last week. They never cease to amaze me. That's television of course. Believe me, an awful lot of work has gone into this. The only thing we've had to review, as I said since November, is where the dollars were coming from, because we had expected and tried arm twisting, and negotiating in every way possible to get more Federal money into the program, but we were unsuccessful. But it is our commitment to ensure that trees we grow will be in great supply and high quality. Our success will contribute to the Province's prosperity for generations to come. The program also equates to permanent jobs in the forest industry, maintaining our forest as a number one generator of wealth and the economic stability in British Columbia.

Of course, this is just the first phase and it must be carried on at the end of this five years. We must have that long term commitment to the forest industry, and I think that we have shown that by the thought that has gone into this program to manage the forests for all the values in the forests, not just timber, but bearing in mind that the forest industry in one form or another generates nearly half of the wealth of the Province of British Columbia. So I don't think that we can ever forget that, and I know that you won't let us do that, if we or future governments tend to neglect our commitment to the forest. We have every intention of keeping it right where it is, and improving it as years go by. And with help from people like yourselves, we'll be able to do that.

Questions

Dirk Brinkman: I'd like to toast Claude Richmond for having created an escalating budget with a recessionary economy and a government under restraint. Are you and Cabinet responding to a greater determination on the part of the public to see our forests managed well? There seems to be a good understanding among foresters in our industry to actualize it somehow. And there's a job to be done in the ground level about what are the benefits, what can we do, how does that improve a stand, and so on. There's a lot of training, education, understanding, to be worked with.

C.R. That's right. And there's a tremendous job to be done with the public. The public doesn't understand forestry the way they should. It starts with the media. Maybe we haven't done a good enough job telling the media what we're all about, and I mean that sincerely. The media tends to react sometimes to outrageous statements from fringe elements. I think we need to take more time and gave them backgrounders like we did today— John gave them ten or fifteen minutes on the reason for this type of program. But then it doesn't end there— everyone from government, industry, and the people who plant trees, must tell the story of what we do in the forest, why we're doing it.

Get into schools and universities, Rotary and other clubs that you belong to. We collectively have not done a good job over the years, informing people what we do in the forest industry. And that has to change. You can see it is changing rapidly. The industry's getting into it. Ray Smith is now a TV star. Who would have ever thought it? You're seeing more and more people talking about what we do in the forests. The first thing we have to do, and I've said it many times, is admit that, yeah, over the past years we haven't done things right all the time. We've made lots of mistakes. But we've learned from that and we're trying to eliminate those mistakes as quickly as we can.

Dirk Brinkman: I'd hoped WCB would be the logical regulation through which to enforce health and safety, but suddenly we find we're caught in a bureaucratic backwater ten years old, possibly going on another five or ten before there is any action. And we obviously need action sooner. So I think we're back to the drawing board with the Ministry of Forests enforcing some of the basic safety and transportation standards. Until we have a new WCB regulation. I'd like to ask on behalf of the members that this be attended to very quickly, because our season starts in a week or two.

C.R. After much discussion at the Cabinet committee level, we determined that the way to deal with safety was through the WCB, that it didn't really fall under our mandate. So, with all the best intentions, and I can assure you that we are as concerned with safety as you are, we decided to leave it up to the WCB. And you tell me now it's going to be another long period of time before anything happens. Let me take another look at it. I can't promise you that we'll introduce legislation this spring, but I'll take it back as a top priority. Because it's a very serious concern to us. There were a couple of serious accidents last year, one in Alberta, one here, and there are numerous bear incidents, food incidents, so I think very strongly that we've got to ensure that the people out there working in these camps at least have basic hygienic needs met and basic safety.

Bernie Strut, Cardinal Reforestation: I'm personally sceptical because, as we were told today, 14 long term projects for the

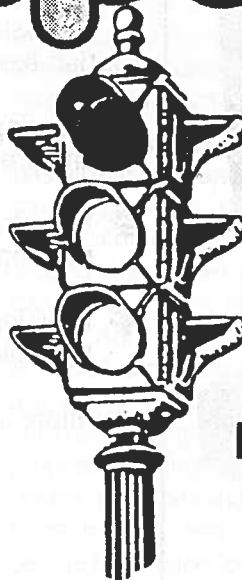
silviculture industry have lasted an average of eighteen months. I'm curious of how much of this impressive \$1.4 billion has the Premier transferred into the administrative fund at this time, and how much will that of the \$1.4 billion will have to raised during this recessionary program we're in.

C.R. Well, I guess the easiest way to answer that is that this is a firm commitment from the government, and I have the numbers that will be spent each year. It's spelled out and it's a firm commitment. So the money will be there. Exactly where we get it from I can't tell you at the moment. All I can tell you is that when I personally make a commitment for this many dollars, and the Premier does, the money will be there. The only caveat on that is I can't vouch for successive governments. The commitment may not be there if this government is not there. I can't bind some other government. So it's another good reason to vote Social Credit in the next election. In fact, it's 1.4 billion reasons to vote, but it's a firm commitment from us. It's not a promise, it goes far beyond that. It is now etched in stone, as it were, and made public, and this is our plan. And it isn't something that was pulled out of the air some kind of an election promise. I don't want to leave that impression. This is something that's been worked on for a long period of time by the professionals in the Ministry, and they're telling us this is what's needed, so we said, if that is what's needed, then that's what we're going to do. Because we have to make that kind of commitment to the forests of British Columbia if we're going to have a forest industry ten, fifteen, twenty years from now.

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Adding Value to Our Heritage with Silviculture

TFL #35 - An Enhancement Model

by Steve Tolnai, Weyerhaeuser

As an introduction, I will say a few words about my own and Weyerhaeuser Canada's past involvement in silviculture and intensive forest management. What I'm going to tell you is based on our own experience, not theory. It is being done, rather than something was are just talking about.

Let me tell you first why I am committed to improving the level of silviculture and forest management in B.C.. I grew up in a country where the forested land is only 16.3% of the land base. These forests supply only about 50% of the solid wood and fibre needs of this particular country. Of necessity, the small forest land base has been intensively farmed for centuries. No one questions the importance of the forest resource, or the need for maintaining maximum productivity levels. There's a long established and strong forestry ethic present. I am talking about Hungary, but it could be any European country.

In Hungary, all resource values found in the forest, including fibre, aesthetics, recreation, water, soil, wildlife, domestic forage, historical sites, tourism, etc. are managed and hence, and allocated by one agency of the government, and by the same, and it's managed by the same professionals. The forest land is managed for multiple purposes and very intensively. Everybody compares to Sweden, so I decided to use Hungary.

Let me give you some idea about the intensity of forest management in Hungary. My calculation based on value indicate that in Hungary, there's a professional forest engineer, or forester, employed for every five hundred hectare of forest land, and there is one technician, or certified forestry worker, with formal training, for every two hundred and five hectares. Over and above this, it is estimated that for every one hundred hectare, another non-certified casual forestry worker is employed.

In contrast, it is estimated that in Kamloops forest region, every six thousand, seven hundred hectare of forest land is supported by only one profes-

sional forester and/or forest technician. By a back of the envelope calculation, this indicates that the forests of Hungary are managed and worked with forty-five times as much professional or technical manpower per unit of forest land, as that applies to the Kamloops forest region. And I would guess that it's probably not different for any part of B.C., or for Canada, for that matter.

You might ask: why this long dissertation of how many people are dedicated to the management of our forests. The answer is simple. The scope of intensity of any activity is determined to a large extent by the amount people, time, and dollars dedicated to it. This is most definitely true in forestry and silviculture activities. Therein lies a long standing dilemma.

In Canada, there's a lack of social and economic pressure to increase forest productivity, which is in part a legacy of many years of plentiful supply. This history of plenty has done nothing to foster the development of forestry ethics. Improving forest productivity to better management, clearly requires more investment. In the absence of need (shortage) and without other corresponding ethics/public attitude, funds dedicated to forestry by the governments who manage the public land have always fallen short.

In these circumstances, it isn't too surprising that there are few well educated trained people to do the job that lies ahead. I'm not saying that the ones around aren't well trained and educated. But there's just not enough of them. And we all know that without qualified and dedicated people, who are provided with all necessary resources, budgets, things will not progress. Adding value to the forest means the combination of investing more money, and committing more people to genuine forest work.

This raises another related issue: investment security. Both distant and current history suggests that the land owner, the people of British Columbia, do not dedicate sufficient funds for something that they do not see the need for or know the

value of. The urban dwelling majority are quite happy to live with the hinterland. They may occasionally seek cover with green vegetation. Whether it will ever be commercial forest carries little weight in their daily lives.

The only people who are truly interested in sustaining and enhancing the productivity of our forests, are the people who directly gain their livelihood from that resource, and the people who have direct interest to investment in facilities which manufacture timber into forest products. Some of these people and some of these companies, would be prepared to spend money towards enhancement of the forest resource, provided it would enhance their security of access of harvesting rights, or to their security of employment. Unfortunately, this is not happening in B.C. You might ask why not. Because there are far too many road blocks confronting everybody who wants to enhance the productivity of public forest land, as a means to enhance the security of their jobs or cutting rights.

These obstacles take many shapes and forms, but fall into one of the following broad categories: technical, professional, structural, jurisdictional, administrative, financial, and political. Let me briefly highlight each one of these.

Technical

- Inadequate timber, soil and other resource inventory data.
- Inadequate or non-existent or very conservatively, for conservative productivity data and information.
- Lack of species performance data and some major biological/ecological hang-ups.
- Lack of an appropriate forest growth and yield simulation model incorporating financial cost benefit data.

Professional Obstacles

- Lack of understanding in the area of financial, biological interactions.
- Lack of understanding of the role and benefit of mature timber inventory.

TOLNAI AGM Presentation cont...

- Lack of understanding or definition of quality work in silviculture. Evaluation of species performance by current users and perceived values.
- Lack of research information and lack of willingness to take some risks in light of these deficiencies.
- Complacency to do things as they always have been done.

Structural Obstacles

- Ownership issues. Lack of security for any long term silvicultural investment, basically.
- Undefined managerial stewardship responsibilities.
- Little receptiveness to new ideas, especially those originating outside of the perceived managerial responsibilities.

Jurisdictional Obstacles

- Government land owner retains rights to final decision, yet expects someone else to pay for it.
- Multiple use complications, many diverse use overlapping jurisdictions for different resources, is quite a common thing.

Administrative Obstacles

- Common standards and regulatory processes, determined by land owner to fit lowest common denominator.
- Difficult to get exemptions for exceptional activities.
- Outdated public policies, such as the non-declining or even flow harvest management approach.

Financial Obstacles

- Increased level of forest management equals added expenditure.
- Budgeting and policy making to achieve a minimum standard will achieve just that.
- B.C. has not accepted the principle that benefits from expenditures, above minimum required expenditures, should become the property of the inventory.
- Financing has to be uninterrupted and cover all necessary activities, in a timely fashion.
- Everyone wants better forestry, but no one wants to pay for it without

instant and tangible benefits.

- Some companies still believe that government should pay for all levels of forest management while they receive all the benefits.
- Some companies believe that silvicultural expenditures above minimum are a waste of money.

Political Obstacles

- Belief that good forestry can be legislated.
- Elected representatives more interested in doling out benefits than investing/creating new resources. Perceived public apathy about increased forest productivity.
- Absence of an immediate economic and/or political pay back for money spent in forestry.
- Many other more pressing priorities which pay greater dividends measured in votes right away.
- Belief that forestry is a sunset industry.

In the shadow of these road blocks, it is not surprising that forestry practices in B.C. are and always have been at levels determined and imposed on industry and on the forest service by government of the day. Little attention has been paid to professional advice based on biological capabilities, and supported by sound financial decisions. It was said many times that the greatest incentives are related to self-interest (some people call it greed): money, improved profits, better jobs; and the quest for greater security: better tenure arrangements, long term supply guarantees, secure jobs, and bright future.

How do we overcome the shortcomings of the past? How do we get the industry, and those depending on it for their livelihood on a more solid footing? We must change this scenario. Government and industry must do things differently. It can be done only by enhancing the value of our forests, by increasing the productivity of the land base that will be left for us to operate, and by making maximum use of the wood that is out there, rather than leaving it decay, or to insects to consume it.

Silviculture, the forming of the forest, is the vehicle to achieve this secure future for all of us. Terms like "basic" and "intensive" silviculture, and "intensive

forestry", have outlived their usefulness. Instead, we should be talking about **good forestry** and **good silviculture**, based on sound biological climate, social and economic considerations. We can make it happen, it must happen, and eventually it will happen. If you do not believe in this vision for tomorrow's forest, then we had better start taking courses in how to become tourist guides.

Now let me tell you about one of Weyerhaeuser Canada's initiatives, aimed at changing entrenched mind sets and administrative rules. So that good silviculture and good forestry can be practiced in B.C. I will start with the punchline: On August 30th, 1990 the Chief Forester of British Columbia approved a 50.2% harvest increase on TFL 35 commencing in 1992.

In this approval letter, Mr. Cuthbert stated "the AAC increase proposed for 1992 is based on the assumption that the level of forest management which you propose in this plan will continue into the long term." This is the first time to our knowledge that in B.C., a harvest increase was approved on a defined area base, for reasons of increased level of silviculture and forest management activities, and of course, corresponding expenditures.

How did this happen? It's a long story—the beginning goes back sixteen years. It was started with a simple conviction shared by Weyerhaeuser Canada and a few people in the Ministry of Forests resulting from an extensive field trip to TFL 35 many years ago. After this field trip, the Chief Forester of B.C. and Weyerhaeuser of Canada concluded together—surely we can manage and utilize better than the standard and practices of the day.

We began with wild enthusiasm. Little did we know that it would take another sixteen years worth of determined effort, along with about \$1 million of expenditure, before some tangible results were in front of us.

I am not going to give you a blow by blow recount of events, reasons, and happenings that contributed to the duration of this process. Let me just tell you that it was not because we did not know what to do and how to do it. The fact that

we wanted to do something different than the norm had a lot to do with the marathon negotiation process. I will describe to you briefly some of the issues we had to deal with, and how they resolved these issues.

The Objective

First, we developed an objective statement that we had to sell to the Ministry of Forests. This objective was **"to capture the productivity opportunities translated into harvest increase on TFL 35 to optimum economically realistic and supportable level."** At this time the average productivity level of TFL 35 was 2.38 cubic metres per hectare per year. We did not set out to plant more trees. Or to practice better forestry. Nor even to harvest more wood. We knew from the onset that if we achieved the stated objective, those developments will be automatically the results.

We established targets then by site classes, using lodgepole pine as the desirable species. The targets then were quantified by desired diameter, height, and stem number at harvest. Things were easy to this point. The next task was to figure out how to bring about these target stands in the shortest time. It became a major undertaking. Although we had the right tool at our disposal to do this task, we discovered that in B.C., at least in those days, there wasn't even the most elementary type of information data available to do the necessary calculations.

The tool we had and were eventually able to use, is the High Yield Forest computer simulation model, HYF in short, developed in 1966 and successfully used for many years by Weyerhaeuser Company. Our parent company agreed to modify their software, so that B.C. information and data could be accommodated.

The problem was that we had very little data available. We had to re-inventory the whole TFL, with emphasis on data gathering on young, immature stands, soil capability, and regeneration performance. We had to establish what could be grown, using different species of tree, and their mixes. By different stocking densities, silviculture activities, regeneration methods, etc. We had to search

for and calibrate yield statistics from both natural and plantation forest. To do this, we had to find natural stands that developed by accident, more or less on the same part, as planted and managed stands.

Pulling all this together took about two years. Then we spent the next five years convincing the outside world that indeed we were dealing with technically sound and valid data. The problem was not that the experts and specialists disagreed with specific data, or how simulation and calculations were done. The problem was, that the output was very different from everything they had ever seen before.

Our simulation runs, which are basically prediction for a sustainable harvest at different forest management intensities and levels, gave us a very bright picture of the future that was contrary, and still is, to common belief. Furthermore, it was shown that the intensified management will result in much higher harvest right away, and in the future. And it can be accomplished with very favourable economic parameters.

Key Findings

What are the key findings?

- Under prevailing conditions, on most sites, lodgepole pine outperforms other suitable species.
- Natural regeneration is too costly, both in time and rehabilitation costs, and very unpredictable.
- Insufficient and erratic spacing which is characteristic of natural regeneration, has a very high price, in form of reduced productivity.
- Prompt planting eliminates the bulk of undesired competition related problems.
- Excellent site preparation is necessary for good plantation survival.
- You need vigorous, healthy, and sturdy seedlings to get good survival and immediate performance.
- Good seedlings, good site preparation, and good planting, equals good long term seedling performance.
- In order to be able to project future performance, you must know

what the starting point is.

- We need good growth and yield data.
- The historic 88,000 cubic metre harvest was more or less realistic sustainable under historic financially constrained non-management approach.
- We have an overabundance of overmature mature volume on the area, and it has to be depleted much faster than the 88,000 cubic metre cut, unless the objective is to harvest decayed wood forever.
- There are many structural administrative road blocks in front of any new approach, even if it offers a win-win situation for everyone concerned.
- To groan and moan about our problems and do nothing about them, is still the easiest thing to do.
- There is very little understanding in professional, technical, and political circles about the relationship, which is really options, between standing mature inventory, forest management standards, level of investment in silviculture, and harvest scheduling.
- The perception in B.C. is that we are overcutting, and it is not easily changed, no matter what the specific data and information shows.
- Most believe that intensive incremental forestry is simply fertilizing, pruning and commercial thinning.
- There is little understanding and appreciation that intensive forestry is the execution of pre-determined and necessary activities to achieve a target productivity.
- The target productivity could be anything we desire to achieve and are prepared to pay for.

In a nutshell, we learned a whole lot. By mid-1984 we had inventory, yield, cost and other related data. We understood the biological and technical issues involved with the tree species we deal with and the cost of available silvicultural options. Our U.S. based technical expert converted the high yield forest model to accept B.C. data and the Forest Service was eventually satisfied that all data and program use was valid. We

TOLNAI AGM Presentation cont...

Table 1 Stand establishment and product value estimate			
Management regime: Plantation, Site class: Good, Species: PI			
Rotation length: 80 years, Initial stocking: 1240 ha., M.A.I.: 7.5 m ³ /ha			
1. Stand establishment & management		2. Logging cost	
Cost/ha.	Years from logging	Final harvest	\$11.85/ m ³
Site preparation	\$180 2	Admin, O&M, Superv	\$2.04/m ³
Planting	\$280 3	Transportation	\$8.47/ m ³
Seedlings	\$225 3	Other charges	\$2.11/m ³
Other (Fill-in, Survey)	\$100 6		
Weeding	\$37 6	3. Product values	
Spacing	\$62 8	Sawlog at mill	\$37.00/m ³
Admin/Overhead	\$4/yr 1-18	Fibre logs	N/A
Protection	\$0.20/yr 1-60	Other products	N/A
Mgmt/Supervision	\$0.80/yr 1-60	Total Value	\$37.00 at 80 years
Office/Overhead	\$0.50 1-60		
Other	N/A		

Selected Cost/Benefit analysis input—output data

Site condition & method	Rotation year	MAI m ³ /ha.	Present log value \$/m ³	Harvest cost \$/m ³	Benefit cost ratio	ROI %
Good • Plantat'n • Natural • Passive	60	7.50	37.08	24.29	2.92	6.01
	80	5.25	35.31	24.78	2.04	5.46
	100	1.75	31.78	25.70	4.25	5.70
Medium • Plantat'n • Natural • Passive	60	4.70	35.31	24.86	1.83	4.78
	70	3.00	33.54	25.77	1.03	4.05
	120	1.20	30.01	26.83	1.85	4.60
Poor • Plantat'n • Natural • Passive	85	2.90	30.01	27.54	.58	3.25
	85	1.45	28.25	28.42	.39	2.60
	130	0.85	26.48	29.00	.62	3.58

had a good handle on cost and productivity levels of different silvicultural regimes, related to all feasible species and conditions. We also determined the value of the product log.

Figure 1 illustrates this for the pine. A very detailed cost analysis was done for every species, for every site. As you know, this is good site class species PI. and annual increment happens to be 7.5 cubic metre per hectare for this, and if you would add these numbers up, it would amount to something like \$1050 per hectare, silviculture expenditure, to the end of the rotation. The total value, and this happens to be fifty year rotation, is \$37 per cubic metre. I'm using this just illustration so you see what kind of things has to be done, in order that one really understand what the heck is going on.

On this particular example, if you would project that to fifty years, that per year cost is about \$1050 per hectare. We had a good handle on cost and productivity levels of different silviculture regimes related to all feasible species and conditions. We also determined the value of the product log. From this information, we carried out a cost benefit analysis, again by species, related to plantation, natural regeneration, and passive regeneration management. Passive, you just don't do anything. In B.C. we all know that you leave an area alone eventually it will be covered by trees. The question is, what kind of trees and how long is it going to take?

The cost of benefit ratio is important if you are dealing with limited amount of funds. You're looking for where you spend little money and get lot of return.

On that basis, on poor sites for example, you would opt for passive management. You don't do anything, you don't

spend any money. So whatever you get is almost free. IF the return on investment in silvicultural investments is 5-6%, industry are quite happy with it. So in this particular case, we could meet that most definitely good and medium sites, again in poor sites, you are looking at something else.

We designed several management regimes and different intensity of harvest schedule. To list a few:

- **Traditional Even Flow.** It replicated the standards and cost of forest management of early 1980s, and this was the activities, in those days, if you recall, were very much constrained by funding.
- **High Yield Forest/Current Management** model was the silvicultural standard of the day, but there was no restriction on funding.
- **Even Flow/Practical Management** scenario, and this was strictly biologically driven, using management and silviculture techniques, giving the best cost benefit ratio. Harvest scheduling is constrained by BC even flow forest policy. Mixed species management applied.
- **UnEven Flow/Practical Management**, same as the option before, biologically driven. However, all aspects including harvest, are scheduled in a way that it gives you the best return.
- **Maximum Yield** scenario where we chose the species and management techniques that provide maximum yield. Biologically driven regime also.

Figure #3 illustrates some of the outcome of these different regimes. If you want to minimize the cost of course you don't do anything. If you want more wood at an acceptable cost., I would pick the Uneven Flow Practical Management. Because it gives me 56,600 cubic metre additional harvest (on a hundred year average) at a \$6.18 incremental cost. It costs a little more than the current management, but the current management doesn't give you that much. If I am really keen on getting the maximum incremental without worrying about the cost, then the 63,900 incremental volume is the highest, costing \$7.82. Interestingly, the even flow practical management is the most expensive.

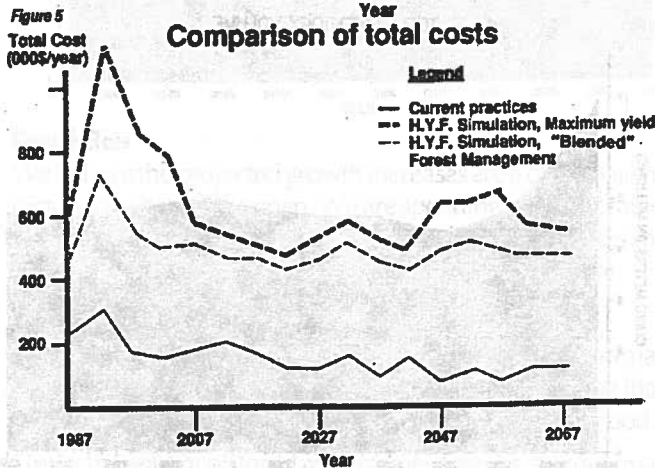
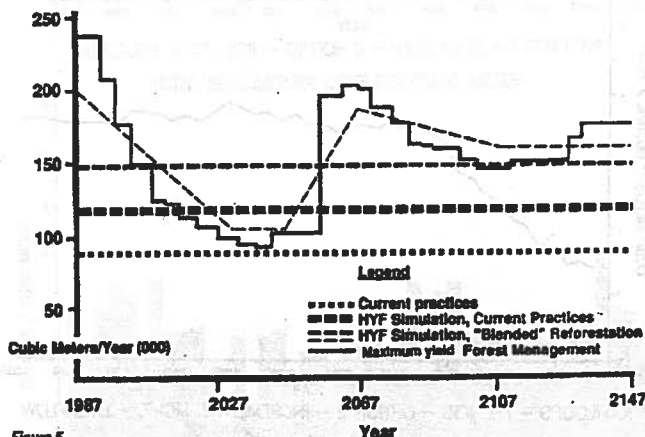
Figure #4 shows there are many harvest scheduling options. They depend on a number of things, standing inventory, the management level, the intensity of the management, and administrative constraints. The lower end is roughly 88,000 cubic metres, and that's a historical traditional harvest on that particular piece of land. If you introduce a higher level of management then of course you come up with a higher level of harvest.

Following this analysis and projection, there were many presentations and proposals made to the Forest Service regarding our intent to implement an intensive forest management program on TFL #35. Our preferred option was higher forestry, uneven flow, branded management regime. We wanted to utilize the economic benefits in that particular land base's ability. This regime gave us the best economic financial economic resort, providing us a substantial immediate harvest increase.

Figure 3
Selected harvest and cost data related to some feasible management regimes

Management Regime	Harvest (000) m ³	Average of 100 years' values			
		Silviculture (000) \$	Cost \$/m ³	Harvest (000) m ³	Cost \$/m ³
Traditional Evenflow	91.1	130.0	1.42	—	—
H.Y.F. Current Management	117.3	280.0	2.38	24.2	5.72
H.Y.F. Evenflow Practical Management	136.0	480.0	3.53	43.9	7.97
H.Y.F. Unevenflow Practical Management	147.7	480.0	3.25	66.6	6.19
H.Y.F. Maximum Yield	165.0	630.3	4.07	63.9	7.82

Figure 4
Harvest Schedule Options



Six years of negotiations could not break the log jam on two key issues, basically, who gets the benefit & who pays for it.

1. The Forest Service's insistence on not deviating from the provincial even flow harvest policy, which seemed etched in stone.
2. The distribution of benefits from company investment in intensified management.

Finally, in mid-1990, Weyerhaeuser agreed to the conditions set by the province. The Ministry accepted our proposal. The key points were:

1. Even flow scheduling of a branded practical incremental forest management regime.

2. All costs associated with the undertaking being borne by Weyerhaeuser without any recognition for this cost, in appraisal or any other payment arrangements.
3. Full stumpage to be paid on the entire volume of wood harvested.
4. Increasing harvest commencing after performance to agreed silviculture management standards, has been demonstrated to be in place.
5. company commitment to develop a long term fish and wildlife management plan for the area.
6. Company effort to build public understanding about the enhanced management program, and the justification for AAC increase.

As stated earlier, approval of the Working Plan #7, containing all proposals was received in August 30, 1990.

Allow me to take a few minutes to tell you about some of the specifics on TFL #35 that allow us to increase the harvest now, and maintain it indefinitely at a fifty point two percent higher rate than in the past. We are managing to meet the objective we defined. All silvicultural harvest and planning activities support and fulfill these objectives. This approach forces us to strive for excellence in every detail of our forest management activities.

84% of the harvest originates from small clear cut blocks (average size 35 hectares). That will be promptly site prepared to an appropriate standard and planted mainly with lodgepole pine. The density is 1600 stems per hectare with a minimum acceptable established stocking density of 1280 stems per hectare.

Eight percent of the harvest originates from small clear cut blocks that will be generated and managed through natural regeneration methods. Full stocking will be achieved within six years, if needed by filling, planting or replanting. The other eight percent of the harvest originates from the areas selectively harvested and managed accordingly. Seedlings using the reforestation and produced at our own seedling nursery near Vernon. Besides lodgepole pine, we grow and plant fir, spruce, yellow pine, and larch.

We are planning to brush, weed, and thin 66% of all planted areas and 90% of natural regenerated areas. We are looking after the area as if it were our own private land. Our improved enhanced silviculture activities will increase the Long Run Sustained Yield from the historical 81,000 cubic metre per year to 130,000 cubic metre per year. The mean annual increment will increase from the historic 2.4 cubic metres per hectare to 3.1 cubic metre per hectare per year. The cost of this undertaking, during the initial twenty year period, will be an additional \$1.65 per cubic metre of harvest over and above the acceptable minimal standard.

The added logging, reforestation and other management activities create approximately 51 direct, full time jobs. Again, over and above what the minimum standard would maintain. The province receives an additional \$400,000 in stumpage revenue.

TOLNAI AGM Presentation cont...

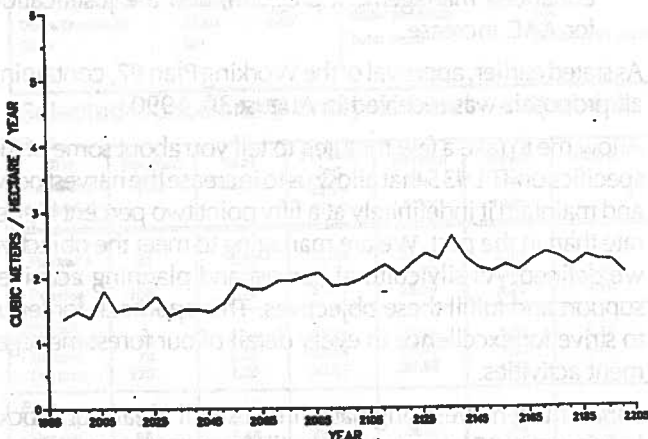
All this is happening while the area retains its very unique multiple use characteristics. It supports approximately 11,400 user days annually of recreational activities such as fishing, picnicking, hunting, snowmobiling, cross-country skiing, firewood cutting, and vehicle touring. There are two permanent camp sites and picnic sites maintained on the area. The entire tree farm is under a grazing permit supporting 3,400 animals months grazing use. The area's important

wildlife and fisheries habitat. It is also an important watershed, the City of Kamloops being the water license holder. Our goals is to maintain the quality and quantity of water in that drainage area.

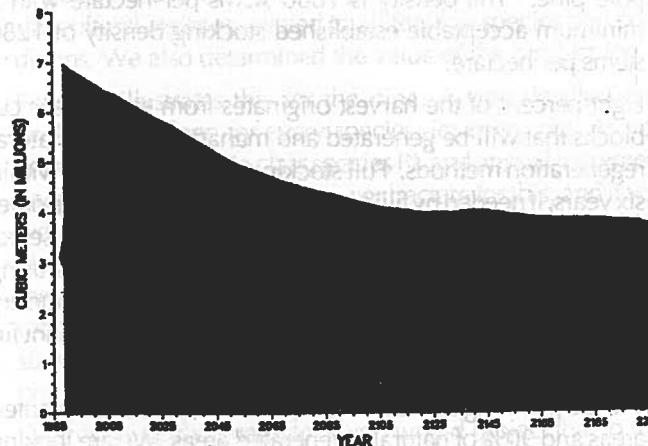
Comparing Basic and Enhanced Programs

The parallel slides compare the so-called basic forestry standards or base line (labeled option 5) and the Weyerhaeuser enhanced forest management regime (option 6).

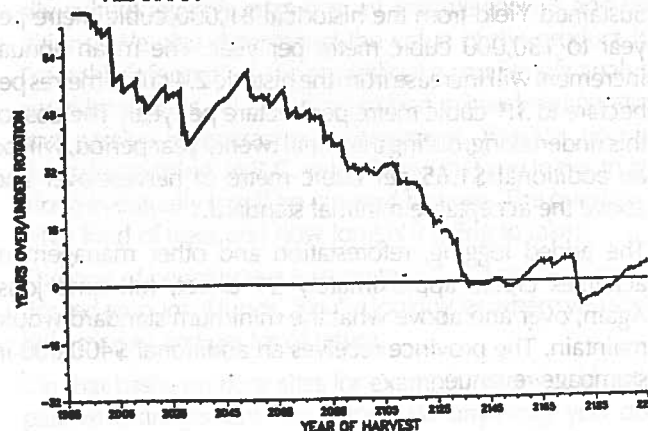
1989 WEYERHAEUSER CANADA HYF SIMULATION
KAMLOOPS - TFL #35 - OPTION 5 - BASE CASE - EVENFLOW
GROWTH RATE



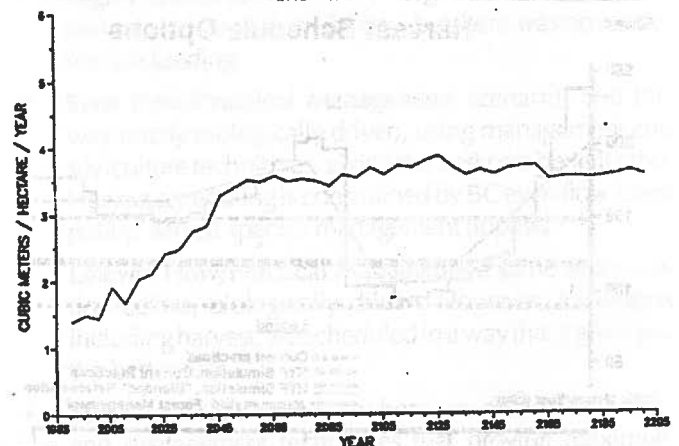
KAMLOOPS - TFL #35 - OPTION 5 - BASE CASE - EVENFLOW
TOTAL INVENTORY VOLUME



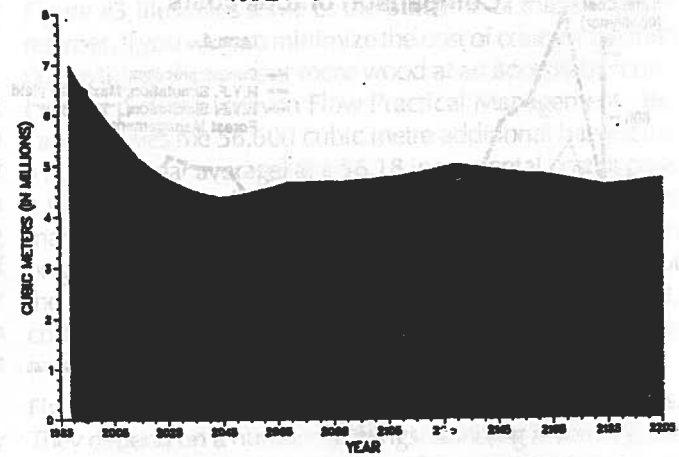
KAMLOOPS - TFL #35 - OPTION 5 - BASE CASE - EVENFLOW
ALL STANDS - HARVEST AGE RELATED TO ROTATION AGE



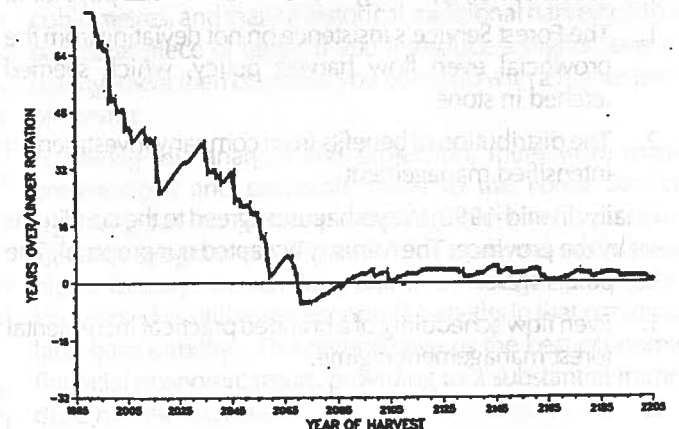
1989 WEYERHAEUSER CANADA HYF SIMULATION
KAMLOOPS - TFL #35 - OPTION 6 - INCREMENTAL MGMT. - EVENFLOW
GROWTH RATE

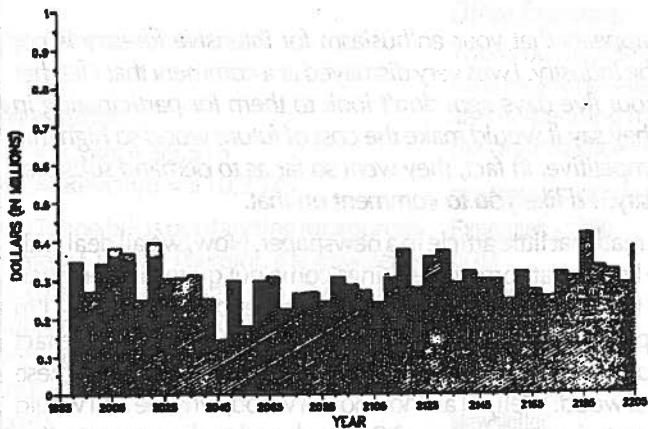
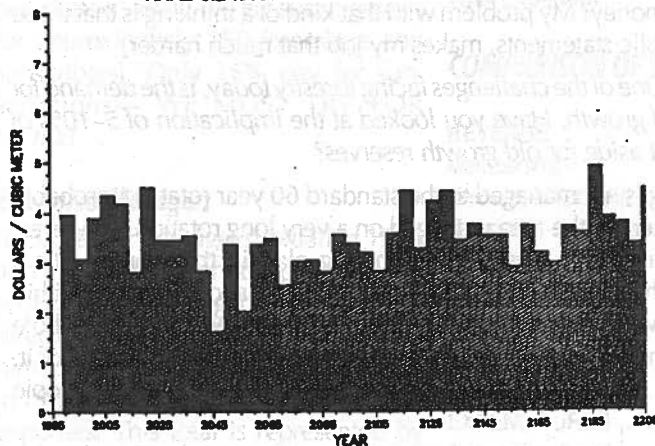
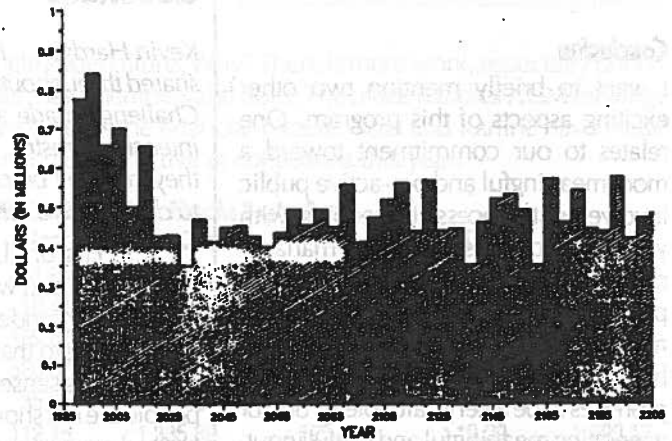
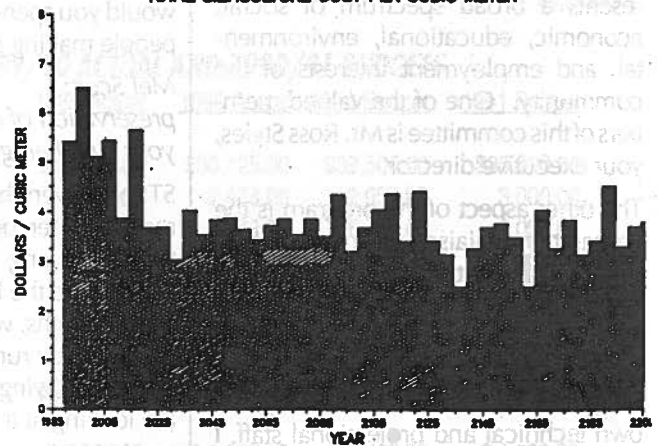


KAMLOOPS - TFL #35 - OPTION 6 - INCREMENTAL MGMT. - EVENFLOW
TOTAL INVENTORY VOLUME



KAMLOOPS - TFL #35 - OPTION 6 - INCREMENTAL MGMT. - EVENFLOW
ALL STANDS - HARVEST AGE RELATED TO ROTATION AGE



KAMLOOPS - TFL #35 - OPTION 5 - BASE CASE - EVENFLOW
TOTAL SILVICULTURE COST

KAMLOOPS - TFL #35 - OPTION 5 - BASE CASE - EVENFLOW
TOTAL SILVICULTURE COST PER CUBIC METER

KAMLOOPS - TFL #35 - OPTION 6 - INCREMENTAL MGMT. - EVENFLOW
TOTAL SILVICULTURE COST

KAMLOOPS - TFL #35 - OPTION 6 - INCREMENTAL MGMT. - EVENFLOW
TOTAL SILVICULTURE COST PER CUBIC METER


Growth Rate

We believe the projected growth increases are a conservative picture of what will happen. We are spending a considerable amount of time and money to better define growth rates for TFL #35. Nevertheless it is an impressive improvement

Total inventory volume

With the very conservative management regime, the overmature volume would be depleted very gradually, assuring that we almost always would be harvesting over the hill wood.

Under the enhanced forest management regime, the overmature volume is depleted much faster. In about 60 years, the inventory volume will stabilize at a higher level.

Harvest level

Under the base line scenario, all harvest activities take place during the next 90 years will be on overmature areas. What we are planting from now, we wouldn't be harvesting until 2130 even though it will be mature in 60 years.

Under the enhanced program the harvest of the managed stands will commence in 55 years, and prime wood will be harvested from there on.

Harvest Age

We all know the stands should be harvested at or near rotation age, in order to capture best quality and economic benefits.

Under the base line scenario, it would be 2130 before we would be harvesting stands at their prime. The issue of harvesting over the hill wood raises under the first scenario, can be clearly seen. During the initial 60 years harvesting would be on stands that are an average of 55 years beyond their optimum age.

In contrast, following the enhanced scenario it will take about 60 years (2050) to reach a state where all stands are harvested at their proper rotation age.

Total Silviculture Cost

What is the cost of all this? Everybody's interested in that.

The base line scenario average cost is approximately \$300,000/year over 200 years.

The cost of the enhanced program is \$475,000 per year over the same period. (Note the higher costs in the first 20 years.)

Silviculture Cost per Cubic Metre

The base line cost averages approximately \$3.25/hectare over 200 years.

The cost of the enhanced program is approximately \$3.75/hectare over the same period. However, once again, the cost of the initial twenty years is substantially higher.

TOLNAI AGM Presentation cont...**Conclusion**

I want to briefly mention two other exciting aspects of this program. One relates to our commitment toward a more meaningful and pro-active public involvement process. In keeping with you intent to adjust our forest management activities based on a reasonable public input, we have established a ten man advisory committee. This group has already met twice formally, and it promises to be a very valuable forum for generating meaningful and useful input. The membership on this committee represents a broad spectrum of social, economic, educational, environmental, and employment interests of the community. One of the valued members of this committee is Mr. Ross Styles, your executive director.

The other aspect of the program is the preparation of liaison with the Ministry of Environment, Fish and Wildlife Branch, long term fish and wildlife management plan. This work is well underway, headed by Fish and Wildlife biologist and specialist, assisted by our own technical and professional staff. I believe this is another first in British Columbia.

In closing, I wish to thank your organization for inviting me to share my views and experiences with you. I am an optimist. I always was and always will be. I am confident that all pieces of the silvicultural puzzle will fall in place. You'll see the day when good silviculture will be practised in B.C. on a larger scale. And not because of its value to the society and to the industry, and not because someone will find a way to legislate it.

Good silviculture means excellence in planning and in execution. Excellence prevails only when people see the benefit and value of it. Excellence cannot be legislated any more than honesty or happiness.

So let's bring about the necessary changes in mind set, in appreciation and understanding that will result in excellence in forest management.

Questions

Kevin Hardy: *It appears that your enthusiasm for intensive forestry is not shared throughout the industry. I was very dismayed at a comment that Fletcher Challenge made about five days ago: don't look to them for participating in intensive forestry. They say it would make the cost of future wood so high that they couldn't be competitive. In fact, they went so far as to demand subsidies to do intensive forestry. I'd like you to comment on that.*

ST: First of all, I read that little article in a newspaper. Now, we all deal with newspapers and we know that sometimes things come out quite different than the person intended to. However, I am aware of a number of companies—I'm not referring to that particular article—that cannot come to terms with the fact that it makes sense to spend more money on silviculture. And I know that these people are not short of wood. Well, if I am not short of wood, why the hell would I spend any money on to increase volume? Remember, the cheapest wood to use is that you don't spend any money on. If you have enough of that, then why would you spend money? My problem with that kind of a thinking is that those people making public statements, makes my job that much harder.

Mel Scott: *One of the challenges facing forestry today, is the demand for preservation of old growth. Have you looked at the implication of 5-10% of your land being set aside for old growth reserves?*

ST: Everything is not managed to the standard 60 year rotation, probably more than ten percent of the area managed on a very long rotation. However, there is a long term Fish Management working plan in the works—it's a response to the Fish and Wildlife people's concern about old growth. Within a few months, we will have that initial plan in our hand. And then the whole thing will be run through the model again. And see what will come out of it. What I'm saying is, it has been considered, but not in a formal way that people are looking at it now.

Doug Hern: *Are you going to be establishing through this working plan, growth and yield tables for managed stands over time*

ST: A very important part of the program is to constantly verify that the assumptions made, all the statistics developed, are indeed correct. So there is an ongoing program of verification, and we are developing some tables now that are very fine, to begin on an ongoing basis. What we have to do, and this is an interesting thing again, different than anybody else to my knowledge, that we actually knock down a hell of a pile of trees. Okay. The ones that developed on more or less on a managed basis happened to be as many trees on that particular patch as we would like to manage, okay. So they were growing the same way, more or less, as under managed conditions. We knock down these trees, and they are sectioned in every foot, and you are literally rebuilding those stands, as they grew. And we think it's a very important thing, because that's the only measurement that we have now, since we don't have managed stand history. So what we will have to do, we know where they are, where they are sixty, seventy years old, okay? So we are going to track all our, by site classes, by species, all the performance of our management regime against those.

Doug Hern: *One of the assumptions in bringing down the average age for harvesting, is that the tree size required for the future is going to be minimal.*

ST: We have sawmills now that they would be very happy if they wouldn't have anything else but twelve inch trees going through. So our target stands were developed based on our perception of what kind of trees can we afford to grow for sixty years, and what kind of facilities or uses there will be there sixty years from now.

1991 WSCA Treasurer's Report

by Chris Akehurst

Newsletter:

1990 Costs = \$9,515

1990 Revenue = \$10,352

BUT, one bill is outstanding for approximately \$1,200. Therefore, the newsletter is close to breaking even. With more subscriptions and increased advertising we should at least break even next year (not counting the secretarial services cost).

We circulate approximately 1,000 newsletters. BUT, we get subscriptions for approximately 150 (members and subscribers). Only 15% pay for subscriptions— WE MUST TRY FOR MORE!

Executive Manager:

Because of the budget shortfall in 1989 and 1990 we could not afford to pay for an Executive Manager. Therefore, the directors negotiated with Ross to pay him for only four pay periods each year in 1989 and 1990, plus office and travel expenses. This total is represented by adding together the 1989 and 1990 Executive Management Services figures for a total of \$10,602. We still owe Ross Styles approximately \$8,000 of this. It appears that with our current membership level, we cannot afford an Executive Manager in 1991.

Accounting:

We have previously had an audit done every year, but I feel this is not necessary now that Karlina is updated on Bedford and can provide up-to-date monthly statements. Therefore, I proposed the following Resolution:

That the Association waive the necessity to have an audit every year, and instead get an Accountant's report that is not a full audit.

This would cost approximately \$300 instead of \$1,200. Under the Societies Act and the WSCA Constitution (Part II - Section 58), we are not required to have an auditor.

Office Expenses:

This is our largest single expenditure. Why? There is more work, especially phone calls for the newsletter, new members and dues. The office handles AGM mailings and is spending more time on the financial picture. Ross and Karlina have made the organization much more effective at collections this year.

EXAMPLE OF OFFICE BREAKDOWN (Four Months Sept.-Dec.):

Expenses - 1990	Sept.	Oct.	Nov.	Dec.	Total
AGM	\$41.25	\$56.77	\$27.50	\$1,807.74	\$1,933.26
Employment	10.41	43.42	5.00	—	58.83
Finance	199.61	69.55	57.04	63.24	389.44
General	520.67	467.63	490.20	356.17	1,834.67
Membership	35.61	11.25	15.41	—	62.27
Newsletter	112.15	1,335.89	125.84	19.29	1,593.17
Ethics	7.36	—	—	—	7.36
Total Expenses					\$5,879.00

COMPARISON OF 1989/90 ACTUAL AND 1990/91 BUDGETS

	1989 Actual	1990 Actual	1990 Budget	1991 Budget
REVENUE				
Membership	\$19,550.00	\$30,125.00	\$39,500.00	\$30,000.00
Newsletter-Subscriptions	1,450.00	2,474.00	2,000.00	3,000.00
Newsletter-Advertisements	5,841.00	7,878.00	6,752.00	8,000.00
AGM Fees	3,970.00	6,555.00	6,337.00	8,000.00
AGM Trade Booths	3,105.00	3,364.00	4,260.00	4,400.00
Miscellaneous	1,807.00	1,768.00	1,500.00	1,500.00
Govt. Canada Grant	—	7,200.00	7,200.00	4,500.00
Total Revenue	\$35,723.00	\$59,364.00	\$67,549.00	\$59,400.00
EXPENDITURES				
Accounting, Legal	\$2,621.00	\$1,285.00	\$2,400.00	\$1,200.00
Advertising	497.00	—	500.00	—
Bad Debt Expense	2,700.00	750.00	—	—
Bank Charges	128.00	144.00	200.00	150.00
Executive Mgmt. Services	926.00	11,720.00	9,676.00	—
Insurance	300.00	773.00	350.00	300.00
Meetings, AGM	6,663.00	14,270.00	12,267.00	19,500.00
Member Services	—	575.00	—	500.00
Newsletter	8,032.00	9,515.00	10,352.00	11,000.00
Office	18,495.00	25,575.00	22,400.00	25,000.00
Research	5,995.00	2,695.00	—	—
Telephone	1,730.00	1,458.00	2,400.00	1,600.00
Total Expenditures	\$56,837.00	\$57,966.00	\$62,589.00	\$59,250.00
SURPLUS/(DEFICIT)	(\$21,114.00)	\$1,398.00	\$4,960.00	\$150.00

Notes on 1990 Membership Dues

	1990 Actual	1990 Budget
Memberships:		
Active Members	49 @ \$500 = \$24,500	60 @ \$500 = \$30,000
Associate Members	8 @ \$200 = \$1,600	10 @ \$200 = \$2,000
	1 @ \$150 = \$150	
New Active Member	5 @ \$250 = \$1,250	15 @ \$250 = \$3,750
	1 @ \$125 = \$125	
Supplier Members	8 @ \$250 = \$2,000	15 @ \$250 = \$3,750
	4 @ \$125 = \$500	
Total	\$30,125	\$39,500

I have budgeted the 1991 memberships at the same rates and with the same number of members as the actual 1990 figures. I think this is realistic.

WCB Notification Tango

WSCA Seeks Notification

Dirk Brinkman

Note: From letter to Al Riegert April 19

At the WSCA directors meeting, March 22, it was resolved that, to ensure that regulations are uniformly enforced, WCB must be notified by both the contractor and contractee (the party letting the Silviculture Contract: MOF, Licensees, and TFL holders etc.)

1. **The silviculture contractor is responsible (under threat of \$250 penalty) to notify WCB of project schedule, location, before commencing.**
2. **In turn, the contractee is required to receive confirmation of notification to WCB before permitting the contractor to proceed.**
3. **If the contractor proceeds without notice to WCB, and his operation is in violation of the the act, and the contractee failed to confirm WCB notification, the contractee may be held liable for the non-compliance and also suffer penalties.**

Unless all contractors are supplying the services to the same standards, those who cut corners will set the market price and force responsible suppliers to compromise safety and health. Without firm enforcement, solutions to supplying services that meet the standards will not emerge since the incentive to creatively solve the problem disappears.

Both the operating costs of the responsible contractors and the silviculture costs of the responsible contractee will be unfairly higher unless the notification mechanism uniformly exposes all contractors equally to inspection at the convenience of WCB inspectors.

If the contractee looks the other way while the contractor they retained flagrantly violates the regulation in order to keep their costs low, the contractee is also considered responsible.

Enforcing any regulation in our industry is uniquely difficult, due to the nomadic nature of the work, the isolation of camp locations, the poor road conditions and short period of time (average 15 days) silviculture camps are in one location.

WSCA Requests Cooperation

Dirk Brinkman

Note: From letter to Al Riegert May 16

I discussed this matter with Dave Harrison, representative for Council Of Forest Industries and Dave Lahane, representative for Northern Interior Lumber Manufacturers. Tony Harrison talked with the representative for International Lumber Manufacturers Association.

WSCA Directors are concerned that voluntary notification of W.C.B. will only be complied with by responsible contractors. In other words, by not notifying W.C.B. a substandard contractor avoids the risk of W.C.B. inspection.

The WSCA's directors unanimously agree that the proposed safety regulation will be unenforceable if the requirement to comply with the W.C.B. Silviculture Standard is ineffective. This is an essential key to the regulation.

Our first recommendation was to have M.O.F., the Forest Industry or B.C. Hydro etc., be required to notify the W.C.B. of any silviculture contract, contractor, project dates, number of workers and location, etc.

ILMA and COFI both suggested that the contractor should be required to receipt the company with W.C.B. confirmation. The requirement would parallel the requirement to confirm insurance coverage, fire equipment, work permits and any other comparable prerequisite to commencing work.

The NILS position is that the industry does not want either a policing role nor any other responsibility. They felt that if the Silviculture Standard is not enforceable by W.C.B. it was improperly designed and even receipted confirmation involves too much of an industry role.

NILS suggested that since notice is so important, failure to notify W.C.B. could result in an automatic \$5,000 fine.

Whatever the best resolution, the WSCA Directors feel that a poor notification mechanism is akin to encouraging the slippery and haywire operations.

NILS Rejoinder

Joan Thomas, NILS Forester

Note: From letter to Al Riegert May 31

At the joint meeting on silviculture camp standards in Vancouver on March 21, 1991 it was agreed that notification of silviculture projects to the WCB would be the responsibility of the contractor.

Dirk Brinkman's letter of May 16 on notification of silviculture projects to the W.C.B. paints an overly negative picture of the Northern Interior Lumber Sector's (NILS) position.

The NILS is committed to camp standards and the safety of all workers, but we believe the responsibility to notify the WCB is the contractors, not the licensee's.

Firstly, we favour the contractor complying with this requirement as we strongly feel it is most logical for the contractor to provide a comprehensive list of their planned activities for the season. If there is a fear that some operators will not notify WCB, it is between WSCA and WCB to establish an audit procedure. Secondly, the issue of receipted confirmation of WCB notification was not discussed between Dave Lahane and Mr. Brinkman. However, we believe this would be a positive step to help streamline the process.

Further, the suggestion of an automatic \$5,000.00 fine is not a NILS position. This was not discussed in terms of a dollar amount, merely that a monetary fine might provide an incentive to contractors to comply with WCB notification.

Our position is simply that responsibility for notification to the WCB lies with the contractor.

WSCA Accepts Contractor Responsibility

Dirk Brinkman

Note: From letter to Al Riegert June 7

The WSCA accepts that the responsibility for notification should rest with the contractor.

On behalf of Dave Lahane and NILS, I do not feel that Dave's criticism of the proposed solution of receipting was either

irresponsible or negative, I am sorry if my letter implied that.

In my discussions with NILS, they have consistently demonstrated a determination that contractors operate safely and in silviculture workers' best interest.

Dave's casual suggestion, a threat of a \$5,000 fine for inducing contractor notification, may well be a suitable stimulus for contractor compliance. I will support this option. Which solution is optimum to enforce compliance, I leave to WCB deliberation and decision.

Ensuring an adequate incentive for uniform compliance by all contractors is a critical area, as was evidenced by the Alberta and B.C. vehicle accidents in 1991.

The WCSA simply wishes to ensure that what we set up here works and is in the best interest of us all.

W.C.B. Has No Solution

A. Riegert, Occupational Safety & Health, WCB

Note: From letter to Dirk Brinkman on 30 May 1991

Thank you for your letter in which you summarize the viewpoints of the various associations regarding the process of notifying the Board as to where silviculture camps will be established.

At present we have in place two formal notification programs: construction projects and removal of friable materials containing asbestos. I have no statistics but compliance seems to be quite good but I would not say that it is 100%. I have no feeling as to what it would be with tree planting contractors. Lack of notification would, of course, make inspections of silviculture camps quite different.

I have no recommended solution at this time. Board staff will have to discuss this more extensively in preparation for further meetings to develop regulations.

Immediate Action Required

Dirk Brinkman

Note: From a letter to Dr. Bill Whitehead, VP Occupational Health & Safety

Al Riegert has retired so I am forwarding this issue to you for your attention.

I am pleased to hear that the Ministry of Forests has agreed to sent notification of the start date and location to the W.C.B. for all MOF administered contracts.

Currently, over 60% of silviculture contracts are let by private industry as part of their legislated silviculture responsibilities. There is currently no mechanism in place to ensure that the W.C.B. is notified about industry contracts.

In his letter of May 30, Mr. Riegert stated that notification compliance has been very good in the construction industry. However, the contracting conditions in construction industry are very different than in our industry.

Construction crews are usually working for several weeks or months at a location with an identifiable address that is much more visible and accessible to W.C.B. (and other) inspectors. It would be much harder for them to escape detection.

Silviculture contracting, however, is by nature a nomadic wilderness activity. Silviculture camps are usually isolated and remote from government offices and often are moved to different location every 15 days on average. The camps can be difficult to get to even if you know exactly where they are, never mind if you have not been notified of their location.

WCSA takes the position that voluntary notification by silviculture contractors is unacceptable for several reasons:

- Silviculture contractors who are knowingly in violation of W.C.B. safety rules will intentionally fail to notify the W.C.B. in order to escape detection.
- Because of the temporary and remote nature of these camps (as outlined above) it would be relatively easy for unscrupulous contractors to avoid inspections.

- Significant advance notice of a camp establishment is necessary or the camp will likely have moved before a W.C.B. officer can schedule an inspection.
- The extremely competitive low-bid nature of the industry means that market prices can be set by contractors who cut costs by ignoring safety standards and evading detection (and thereby endangering their workers). Responsible contractors who comply with safety standards will lose contracts and be faced with either bankruptcy or cutting corners on safety.

Through discussion with several industry associations affected (COFI, ILMA, NILS) the WCSA has identified two acceptable mechanisms.

1. Before commencing a silviculture contract, the silviculture contractor is required to provide the licensee a receipt showing confirmation from the W.C.B. that the W.C.B. has been notified of the project commencement (including location, crew size, start-up dates and duration).
2. Failure by the silviculture contractor to notify the W.C.B. of project commencement would result in fine large enough to create a deterrent (greater than \$1000).

The WCSA believes it is vital such a procedure be implemented as soon as possible. The fastest solution would be a notification agreement between the W.C.B. and the industry associations involved. If the W.C.B. feels that it is not within its mandate to enter into such an agreement, we request that formal regulations requiring notification of silviculture contracts be prepared for the next legislative session.

Please notify me as soon as you have identified the W.C.B.'s course of action.

Safety Reports

Alberta Forestry Accidents

Ian Hooper

This is the first edition of the Summary of Reported Forest Accidents— a summary of all accident reports submitted by industry employers to the Workers' Compensation Board of Alberta.

The summary is intended to increase accident awareness and reduce injuries by providing information to workers and employers regarding accidents.

For each month, the Forest Industry Unit of the W.C.B. will produce two summaries based on the activity of the employer. The first summary includes: reforestation, brushcutting and tree falling. The second summary includes: sawmills and planing mills, plywood mills, chipboard mills, and peeling and pointing of logs.

We ask that you post the report in a prominent place at your worksite. Please take the time to review and discuss these accidents with your workers. Injury reduction begins with you!

If you have any questions or comments regarding the Summary of Reported Forestry Accidents, or require additional copies, please contact the Forest Industry Unit at 498-7520.

August 1990 Accident Summary

Creeks Hill, 47 km west of Whitecourt.

The deceased and their fellow workers were being dispatched to a work site in Mackenzie, British Columbia where they were contracted for tree planting operations.

The vehicle crested Two Creeks Hill and entered the soft shoulder north of the highway and was unable to return to the asphalt surface. The vehicle struck a sign post five metres into the ditch which immediately fractured the graphite driveshaft behind the driveshaft guard bracket. The vehicle then continued for 60 metres within the ditchline in an attempt to exit the ditchline until it was flipped into the air by its right wheels. The vehicle continued to flip down the length of the ditchline in a westerly direction for approximately 90 metres.

Five of the deceased were thrown from the moving vehicle and two sustained fatal injuries within the vehicle. Four of the passengers were wearing seat belts, two of which survived the accident.

It was determined during the course of the investigation that the vehicle was in acceptable mechanical condition. - Further, the highway was in good condition, the weather was excellent and the wind was probably not a factor. The investigation established that the driver had limited experience and knowledge with respect to the operation of the van. That is, no previous experience or specific training related to van operation or transportation of passengers.

Alberta Occupational Health and Safety ordered the company not to transport workers by 12 or 15 passenger vans until Alberta Occupational Health and Safety was supplied with safe transporting procedures and policies.

Alberta Occupational Health and Safety initiated a joint government and industry task force to develop policies and procedures regarding the transportation of workers. These procedures will include the requirement for all passengers to be belted up while the vehicle is in motion and that the driver make daily vehicle inspections. Alberta Occupational Health and Safety is recommending that all operators of passenger vans in this industry be designated drivers, have an Alberta Class 4 or equivalent licence and have completed relevant Driver Training.

Alberta Safety Standards

Dirk Brinkman

Note: From April 29 letter to John MacPherson, AOH&S

Thank you for assembling such an effective collection of safety regulations for treeplanting in Alberta. Notwithstanding the tragedy that was the stimulus for these regulations, the industry appreciates having its health and safety obligations clarified. It is also significant that the contract officer will be enforcing the standards, ensuring uniform compliance. A reduction in the number of injuries will be the inevitable result.

The regulations both cover the hazards well and focus on outcome, rather than method, allowing for innovative individual solutions. This permits the industry some time to adapt to the regulations and gives Alberta Occupational Health and Safety an opportunity to examine alternate solutions.

In the course of enforcing the regulations, there will emerge a need to define minimum standards of acceptable compliance. This can best be done during the season.

These regulations provide a firm foundation on which to build a safer and more enjoyable workplace. Thank you, on behalf of all WSCA members.

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Pesticide Roundup

Pesticide Action?!

by Dirk Brinkman

Note: From an April 18 letter to Dave Mercier, Minister of the Environment

At our February conference, Cliff Serwa, then Minister of the Environment, agreed to address two long outstanding issues for the silviculture industry. Now comes the time to look at the WSCA's specific concerns and proposals.

Notice of Pesticides on the Seedlings

We ask the new Minister to ensure that a notice is placed on the seedling shipping container whenever pesticides have been used on the seedlings within three months before shipping or boxing for cold storage.

This is being done by the Ministry of Forest nurseries, and some private nurseries, but not by all private nurseries.

Herbicide Applications

We ask the new Minister to ensure that:

Durable notices (that remain legible for at least one year) are placed around all pesticide field applications every 100 meters at highly visible points, so that anyone entering the site from any direction can determine the date and strength of the application and is able to avoid the area.

Herbicide application information is included in each private and government contract document that may require a silviculture camp in a drainage which has had a pesticide application within the past year.

Re-entry times are developed for each herbicide that defines when it is safe for workers to enter an area after a herbicide application.

Pesticide Surprises

by Jorn Rash, President of Mu Services

Note: From letter sent to Gwen Shrimpton on Feb. 12, 1991. See the Winter 91 newsletter for Jorn Rash's first salvo.

I would like to expand on my concerns relating to the exposure of treeplanters to certain chemicals.

First, to clarify a point in my Jan. 6 letter to Glyn Fox—I stated that I believed absorption rates were higher than dermal exposure levels. What I intended to say was that dermal exposure had little relation to actual body burden.

In my criticism of K. Alleyene's study, I found it less than scientific to throw out the highest concentration level. It has been my experience to open boxes of trees that glisten with an oily substance and be able to feel and see (when standing back) the fumes rising from the box. There was no indication on the box of a recent chemical treatment.

Further to this, I will quote from a letter from Dirk Brinkman, WSCA President: *"My main critique of Alleyene's study is that it was only looking at averages and not extremes. It is the inevitable extreme that poses an unacceptable hazard. When a seedlot risks being wiped out by botrytis, nursery managers often blitz it with heavy doses of captan/benelate, etc.—sometimes just before shipping. Residue on these trees may be dozens of times higher than the average. Such last minute emergency treatments often fail to get on the pesticide history notice."*

"In my experience, the phenomenon of crew vomiting, headaches, nausea, etc. has several times been traced to these surprise treatments."

The following points may be unscientific but they have come to my attention over five years of field observations:

1. Within 24 to 48 hours of commencing a planting contract, I noticed a marked change in the planters abil-

ity to understand and carry out the most basic instructions. I relate this to one of the breakdown elements of captan and benomyl—nitrus oxide (Symptoms of acute toxicity: mental confusion or euphoria).

2. Within 10–14 days of commencing a planting contract, up to 50% of the crew exhibited symptoms of "treeplanters' cold." Again I relate this to acute toxicity of captan/benomyl or breakdown elements of same—toxic fumes of chlorine, sulphur oxides and phosgene (Relatively acute reaction: irritation to the upper respiratory tract).
3. I have concerns regarding the combination of insect repellents and pesticides. The insect repellents (DET compounds) may represent a health risk by themselves because of heavy use during the planting season. The combination of DET and toxic chemicals on the trees represents an added danger.
4. The consumption of alcohol during periods of high exposure to tree chemicals pose another health risk due to the potential reaction of these substances in the body.
5. No studies I am aware of address the long term health risk or carcinogenicity of these compounds. Such a study seems in order.

I make no pretense to understand all the scientific aspects of these concerns, but it has not taken a lot of research to find significant health hazards faced by tree planters that have not been addressed by any branch of government.

I recommend the immediate adoption of the following recommendations:

1. Establish a minimum standard of days elapsed between application of chemicals to trees and their handling by treeplanters.
2. Ban immediately the burning of boxes from seedlings treated with chemicals within the previous year.

I hope this will help you address the concerns about pesticides shared within the silviculture community.

Ministry Replies

Note: Reply sent to *Jorn Rash* on Jan. 22, 1991

re: Possible hazard to treeplanters exposed to pesticide treated seedlings and/or contact with or disposal of seedling transportation boxes.

I have contacted John Henigman in regard to the above issues. He has extensive experience in the matters and has agreed to respond directly to your concerns. Consequently he will be contacting you in the near future. I trust this situation is satisfactory.

Glyn Fox, Head of Toxicology, MOE

Note: Reply sent to *Jorn Rash* on Jan. 29, 1991

Your letter of Jan. 6/91 has been passed on to me for a reply. I am the Nursery Pest Management Officer with the Extension Services section of the Silviculture Branch. You have raised several concerns which we would be happy to address. I will be preparing a detailed summary for you, which should be ready by the end of February.

Gwen Shrimpton

WSCA Role

by Jorn Rash

Note: From letter sent to *D. Brinkman* on Feb. 12, 1991

Thank you for your letter of support concerning treeplanter exposure to pesticides. When trying to bring about change in some of these areas relating to pollution and high finance one certainly soon gets the impression of being some kind of radical shit-disturber. Your letter makes me feel more like a regular member of the society.

As you can see in my letter to Ms. Shrimpton, I have made two recommendations for immediate action and while I don't feel these ideas are earth shaking in their ramification I do expect some opposition from within the forest industry.

After a discussion with Dr. Bannister of SFU I have another concept that may bring more attention to the surprise application of chemicals which you referred to in your letter. Dr. Bannister told me that he could be willing to take samples of any trees that were apparently treated outside of understood industry parameters and forward them to a research person to determine the level of contamination. For this to be effective as many contractors as possible would have to make their field staff aware of this opportunity so that a sample of suspect trees could be sent to Dr. Bannister as soon as possible. We would have to outline the proper procedure for packing such trees and would need the cooperation of the logging company or Ministry office involved.

As usual, the funding for such a project would be a problem

but I believe that it would be advisable for contractors to lay the ground work for such a testing program. The WSCA would be the most appropriate group to organize such an undertaking.

There are numerous concerns within the silviculture community that should be addressed through government. It seems important to identify specific areas of concern, design the necessary changes in law or policy and prepare to lobby the new government for these changes. The odds of an NDP government winning makes it more likely that meaningful changes could be affected in the laws governing silviculture.

I am prepared to work in any capacity that would bring about these changes. This year finds me in an unanticipated state of temporary retirement beyond my control. In some ways this is a blessing because I have been able to pursue other concerns, but this does not provide my ongoing need for a cash flow. Since I am not aware of the WSCA's present financial position, I propose working for the Association in this capacity.

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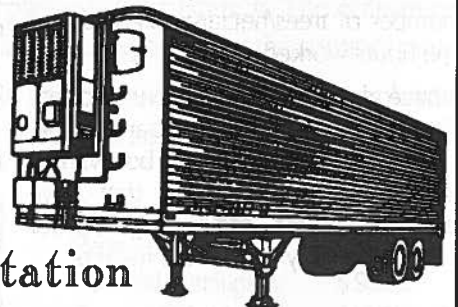
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Employment Standards for Silviculture

by Al Strachan, Industrial Relations Officer

This information is a means of identifying what your obligations and rights are under the Employment Standards Act. In this way we hope to assist you in preventing wage complaints from arising. However, if they should arise, there would at least be a clear mechanism in place for conducting audits which would involve a minimum amount of your time, and would give clear and unambiguous results.

Most disputes in the industry involve disagreements between employers and employees as to the number of trees planted on a specific plot, and the rate per tree or hectare. Thus our Branch will require, as specified in Sections 10 and 11 of the Act, that a daily record be kept by the employer of the number of trees planted by each employee, the unit price per tree or hectare, and the total hours worked each day by each employee. Also, each employee must be shown a copy of this daily record, and to ensure that the employer and employee agree with these daily totals, the employee and employer's representative must verify these figures by their signature.

I have included a typical payment claim form that would be acceptable to our Branch. You may choose to use another format, but you must have a daily record that both you and the employee have verified, as a true reflection of the number of trees/hectares planted and the hours worked.

I have also included for your information our Employment Standards Bulletin, but I would ask that you be aware of particular problem areas that have arisen in the past, and exactly what our Branch's policy is on these matters.

Tree Planters are not sub-contractors

Tree planters are considered by our Branch to be employees and are thus eligible to receive at least the minimum benefits as outlined in the Employment Standards Act.

Tree Planters receive Vacation Pay

Vacation pay cannot be included as part of the unit price per tree or hectare. Vacation pay should be paid once the employee terminates; however, our Branch will allow that vacation pay be paid on every pay cheque, as long as the amount of vacation pay is clearly identified on the pay stub and separated from normal wages. Vacation pay is based on at least 4% of the total wages earned;

Therefore, the pay stub must show the total wages earned and how that figure was arrived at. For example:

250 trees @ \$0.17/tree	=	\$42.50
100 trees @ \$0.18/tree	=	\$18.00
400 trees @ \$0.19/tree	=	\$76.00
Total wages earned		\$136.50
Vacation pay @ 4%		\$5.46
Gross wages earned		\$141.96

Hours of Work and Overtime:

Because most tree planters are paid on a piecework basis, i.e., by the claimed. However, paid overtime rates tree, overtime is often not an employee is entitled to be if applicable, under the Employment Standards Act. See Bulletin No. 3. Overtime rates are to be paid as follows:

Daily

- 1 1/2 X regular rate after 8 hours
- 2 X regular rate after 11 hours.

Weekly (excluding what has already been required- for daily overtime)

- 1 1/2 X regular rate after 40 hours
- 2 X regular rate after 48 hours

Fines & Replants

If a plot does not pass inspection of at least 85% then the contractor usually will not be paid for that plot. The result is that often employees have to go back and replant the plot to bring it up to acceptable Standards. The onus is on the employer to ensure that all planters are aware that this is a condition of employment.

The employee must Provide Verifica-

tion of any fines levied by Ministry of Forests or the Primary Contractor to affected employees.

If an employee refuses to or cannot bring a plant to an acceptable level whereby the employer and thus the employee will be paid for that plot, then the employer must pay to the employee at least the equivalent of minimum wage plus overtime for all hours worked on that particular plant.

Termination

On termination of employment, all wages and vacation pay must be paid immediately where the employee is fired or laid off or within 6 calendar days where the employee quits.

Full pay at least semi-monthly

While employed, employees must be paid at least semi-monthly and payment must include all wages earned in the previous pay Period (maximum of 16 days in a Pay Period).

Deductions

Any deductions from an employees pay cheque without their approval will not be accepted by our Branch. Deductions for stashing of trees, plot failure without Ministry of Forests verification, or damage to equipment, will not be considered to be acceptable deductions.

Employers may wish to Pursue such matters through the civil courts.

Camp Set-up

Employees must be paid for work spent in camp setup, dismantling and obtaining supplies.

I have also enclosed a handout that you must give to each employee. This will ensure that both your company and the employee start each contract with a solid understanding of how wages are to be earned and paid.

I would ask that you examine the Employment Standards Bulletin. Also, employee handout and the please post several of the Employee handouts and Bulletins, so that they will be accessible to your employees.

I hope you will view this as relations with your employees, a means of assisting you in your and thus as a mechanism for fostering a healthy and positive work environment.

I expect to make a few spot visits this spring and summer, however, if I miss your crew and you have some questions, please feel free to contact me at my office.

Good luck with your plants in 1991, and have a successful year.

Calculations of Vacation Pay & Bonus per Tree

Potential Earnings which include vacation pay and bonus.

\$0.20/tree X 1,000 trees = \$200.00

Calculation of wages earned.

\$0.1672/tree X 1,000 trees = \$167.20

Bonus @ 15% (\$167.20 X .15) = \$25.08

Total wages earned = \$192.28

vacation pay = \$7.69

Gross wages earned = \$199.97

The pay stub must show the wage calculation as broken down in this manner. Vacation pay must be paid on a production bonus. If you do not pay the bonus the vacation pay would be payable only on earnings.

- Calculating rate/tree without including vacation pay but including bonus:
\$.20/tree divided by 1.04 = \$.1923/tree
- Calculating rate/tree without including vacation pay or bonus:
\$.1923 divided by 1.15 = \$.1672/tree

It is imperative that the pay stub outline the payments as noted above.

TREEPLANTERS INFORMATION BULLETIN

This Bulletin has been compiled so that treeplanters will have a solid understanding of their rights and obligations under the British Columbia Employment standards Act.

1. Your employer should make accessible to you copies of the Employment Standards Bulletin, with inserts.
2. Our Branch considers you to be an employee not a subcontractor.
3. As an employee, you are entitled to Vacation Pay. Vacation Pay should not be included as part of the price paid per tree or hectare, but should be paid when you terminate your employment, or identified clearly and separately from regular wages if paid on every pay cheque.
4. If you are in a camp setting, reasonable camp costs may be charged and deducted from your pay cheque, providing that your employer has clearly informed you about these costs and specified the daily rate prior to your starting work.
5. If your employer has a commissary or provides you with tools, clothing or other materials at your request, your signature, indicating receipt of these articles, will be taken by our Branch as your authorization for these costs to be deducted from your pay cheque.
6. You and your employer must agree on the number of trees planted and the price per tree or hectare for each plot planted. Our Branch requires your employer to keep these records. You and an employer's representative must verify totals every day, with a signature.
7. In order for your employer to be paid by the Ministry of Forests or the major contractor, the plot must pass an inspection. The plot will be graded to a certain percentage. Usually any grade below 85% is unacceptable, and the contractor will be ordered to improve the quality level or not be paid.

Any percentage fines passed on to your employer will normally reduce the percentage payment which you as a planter receive. (See examples.) This is viewed as acceptable by our Branch. The employer will be required to show the actual percentage paid on the contract plot.

If you refuse to bring your plot to an acceptable level, your employer can pay you minimum wage for hours worked on the plot in question.

EXAMPLES:

Trees Planted	450	Hectares Planted	0.52
Price Per Tree	\$0.21	Price Per Hectare	\$180.00
Potential Earnings	\$94.50	Potential Earnings	\$93.00
Contract Payout	96%	contract Payout	97%
Wages Earned	\$90.75	Wages Earned	\$90.79
4% Vacation Pay	\$3.62	4% Vacation Pay	\$3.62
GROSS EARNINGS	\$94.34	GROSS EARNINGS	\$94.42

8. Stashing, burying, hiding or destroying trees is an offence that may give an employer just cause for immediate dismissal.

Please contact the nearest ESB office if you have any questions.

Training Reports

IWA Training Proposal

Clay Perry, IWA Canada

Note: From a letter to Dirk Brinkman, June 6/91

We have had a meeting with Art Shortreid of FRDA, who outlined what his Committee in expecting in the way of proposals for silvicultural training.

I know that this is a busy time for you, but we would greatly like to get your advice, and, we hope, approval in principle for this application.

Silviculture Training Proposal - Phase I

The product of Phase I would encompass an assessment of current silviculture training programmes, current and future needs assessment, and a curriculum, delivery mechanism and budget to deliver a pilot programme.

The product would include programmes with both operational silviculture work and quality control

mechanisms, focusing on clients displaced by advancing technology and requiring re-training.

Phase I to be summarized by 2 reports:

1. Background and Needs assessment
 - inventory (of existing programs)
 - needs assessment
 - client survey (people available for training)
2. Design of pilot project
 - curriculum
 - delivery mechanism
 - schedule
 - materials
 - budget

Phase I Project Budget

TIME:	161 days @ \$300	\$48,000
TRAVEL:		\$11,000
OFFICE	Rent & Utility	\$10,000
	Materials	\$2,500
	Clerical	\$4,000
	REPORT PRINTING	\$4,000
	RESEARCH	\$4,800
	TOTAL BUDGET	\$84,300

Only On-the-Job Training

by Dirk Brinkman

Note: From a letter to Clay Perry, June 9/91

On the Job Training

Despite my sympathy for displaced workers, I am only supportive of on the job training or during the job training modules.

This is because too much training focuses on categories of people without consideration for whether they really are committed to the work, consequently the training funds are wasted, evaporating the funds available for enhancing the skills of those who are committed to the work.

Selection Through Work

Therefore selection before training must be a process whereby the trainee is first of all working and can commit to further training and then the program convenes.



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The background and needs assessment must be done, but will probably be pre-empted to Forestry Canada's Labour Market Survey sector; Lorenzo Hugo, who has just completed an outstanding report on Newfoundland and Labrador, and previous to that, a report on South Eastern Canada. A parallel survey would serve this need.

Curriculum

Curriculum were developed by Ministry of Forests March of 1991 and still need some review.

Delivery and Pilot Project

Now we get into the vital entrails of this project. Let us plan this with care. Delivery on the job; focus on isolated high-unemployment forest communities; trainers selected from the work force; and funding arrangements designed to enhance community and private program commitments.

Forestry Continuing Education

by Dean Clark Binkley, UBC

The Faculty of Forestry at the University of British Columbia is interested in helping to coordinate a program for forestry continuing education in the province. The structure of this program would involve delivery of activities through regional delivery centres, as recommended by regional forestry education advisory committees. A forestry education council would be formed to review regional and provincial program activities and direction of the program. UBC's involvement would include facilitation of communication between regional delivery centres. A diagram of the proposed structure is below.

We held a planning a workshop in March, 1991, which sought to identify the characteristics of a successful forestry continuing education program and critique the proposed structure.

Proposal for a Continuing Forestry Education Program for B.C.

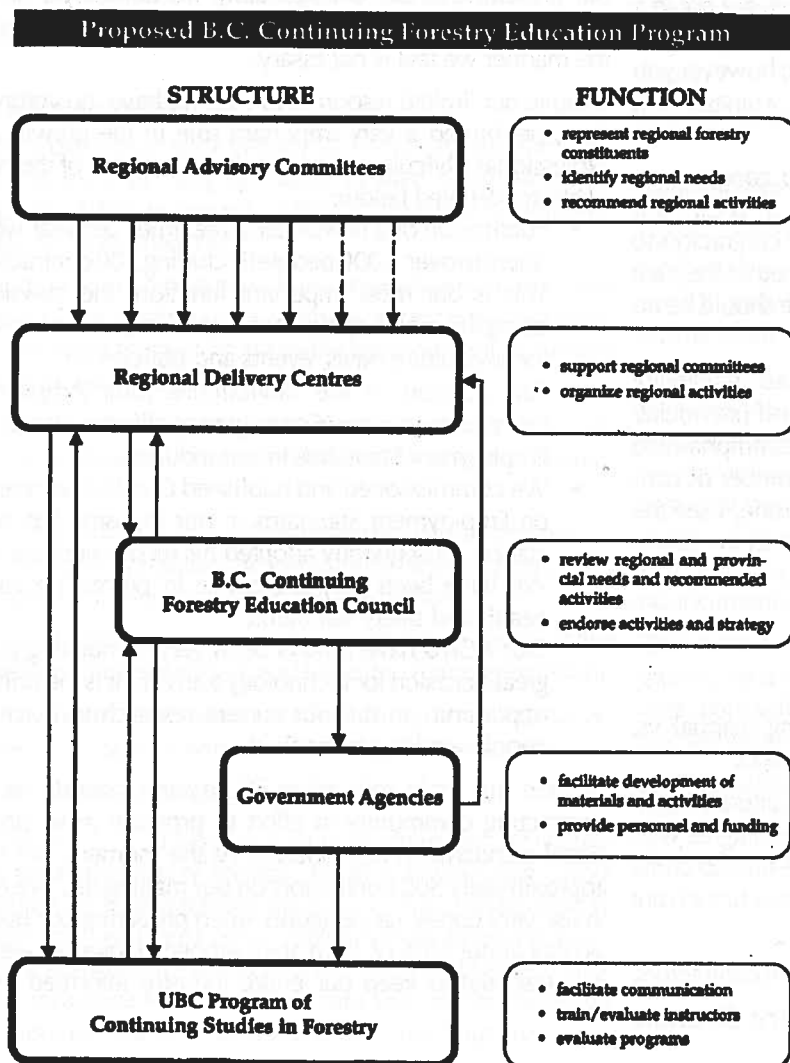
The scientific and technical knowledge which provides the basis for forest management is constantly changing. Continuing education programs can provide managers, professionals, technicians and forest workers with the benefit of the most recent research and best available technology.

Furthermore, the general public, as owners of the largest share of the forest resources the province, needs to be better informed in order to participate effectively in decision making processes and in order to judge conflicting media information.

Although some programs are being developed to fill these needs, no institution has a mandate to coordinate the multitude of would-be players and consumers. Many activities are offered on an hoc basis, often resulting in duplication of effort and highly variable program quality.

The goal of the proposed British Columbia Forestry Education Program is to rectify these defects and establish, within three years, an effective program based on six principles:

1. **Cooperation** among the many participants in the process
2. **Coordination** to reduce overlap, fragmentation and duplication; to ensure high quality, appropriate activities presented by the best available personnel; and to make the best use of existing expertise and initiatives
3. **Responsiveness** to clients and emerging technologies
4. **Public Credibility** by providing continuing studies through an independent, broadly based, and neutral organisational entity
5. **Dispersed Delivery** through the network of regional colleges to locate the educational activities conveniently close to the recipients
6. **Commitment** to the development of a lasting, long-term mechanism to handle the need for continuing studies in forestry in b>c.



Mail In

Reinstatement After Stashing

Note: Letter to the WSCA Ethics Committee.

In response to your letter of January 14, 1989, regarding the termination of my company's membership in the Association, I hereby apply for Associate Membership status in the WSCA. I have enclosed the Silviculture Branch Contractor Performance Report outlining the work completed by my company in 1989.

In regards to the 1988 stashing incident, I have made numerous changes to my company, both in policy and personnel in an attempt to eliminate any further incidents. As stashing is a universal problem for all contractors, any suggestions, techniques, or literature would be greatly appreciated.

Mario Russo, President Russo Reforestation

No Fed Bucks Passed

Thank you for your letter of Feb 19 (see letter facing-Ed.), in which you identified a need for financial support which would enable you to provide a service to the silvicultural contractors of B.C. We have reviewed your request for funds to carry out this service. Due to the fact that all of our dollars in this fiscal year have already been committed, are not in a position to consider your request. There may, however, be an opportunity through FRDA II when it is signed; however you will have to make presentation to the new Management Committee when this body is duly formed.

From revenue perspective, you may want to consider enlisting more of the 500 contractors working in B.C.. As it stands now, there seems to be no incentive for contractors to belong to the as they get the same service whether they are members or not. If the service is of value, there should be no problem in getting members.

In closing, it is quite apparent that the increased availability of funds for silvicultural work, both federal and provincial/industrial programs over the last few years, has emphasized a need to address and assist the increased number of contractors working in B.C. Based on this fact alone, I see the WSCA playing an important role and function in forestry in B.C., and in this regard you have our support.

John Drew, Forestry Canada

Manual Brushing: The Study

r.e.: your letter of Feb. 11, 1991 concerning manual vs. herbicide brush control (see letter last issue-Ed.).

We would like to inform you again that Silviculture Branch is still working on the issues you raised. You will agree with us that the issues are complex and would take time to come up with a solution. The issue involves not only our branch but dealings with other branches and agencies.

We want a solution which is fair to all Silviculture contractors.

P.W. Ackhurst, Director Silviculture Branch

Mail Out

Russo Reply

You may re-apply for an associate membership, and we are prepared to consider the application. Our members are very sensitive to the stashing event and its effect on our industry.

It is critical for us to know exactly what changes have been made within your organization. Are the people directly responsible for the stashing still in your employ? What has been done to ensure there is no repeat of this event? We are looking for more evidence of change in your operations.

These matters and others remain a concern and we request that you meet with Ross Styles, our Executive Director, and Bob McAtamney, your Regional Coordinator, to discuss this. We will proceed based on their recommendations.

Dirk Brinkman

WSCA has Important Role to Play

Note: Letter to John Drew, Pacific Region Director, Forestry Canada

The WSCA is finding it increasingly hard to maintain our office and perform our informational role in the industry with our present revenue. Unfortunately we do not yet have a broad enough membership base to carry on our operations in the manner we feel is necessary.

Despite our limited resources to date we have, on volunteer time, performed a very important role in the growth of a professional silvicultural industry in B.C. Some of the highlights are detailed below:

- Publication of a newsletter three times per year which is sent to over 1,000 people (including 500 contractors). This is our most important function, the newsletter being the most important source of information in B.C. for silviculture news, events and policies.
- Participation in the Silviculture Joint Adjustment Committee report which helped qualify the Health and Employment Standards in our industry.
- We commissioned and published Dan Lousier's report on Employment Standards in our industry. The Association subsequently adopted his recommendations.
- We have been very pro-active in promoting camp, health and safety standards.
- Our AGMs have always been very stimulating and a great occasion for technology transfer. It is the primary opportunity in B.C. for current research to reach the people working in the field.

We see our main role as an information conduit for the contracting community in effort to promote more professional standards in our industry. At the moment, we have approximately 500 contractors on our mailing list. We need to use very conservative figures when preparing our budget as only about 10% of them are members. However we feel it is essential to keep our entire industry informed about

MAIL IN continued...**Manual Brushing: Keep 'em stumped**

r.e.: your letter dated Mar. 29, 1990, referring to the method of stumpage appraisal where manual brushing is used.

Stumpage appraisals are done in advance of harvesting on each cutting permit. The licensee submits to the Forest District a map showing the ecological classifications on the area to be harvested. The silviculture treatment regimes are then assigned based on the ecological classification.

The increased silviculture cost estimate for manual treatments will apply to areas for which the Ministry of Environment will not issue a pesticide permit. This situation may apply in watersheds. This increased estimate is not a default mechanism—it only applies to areas where the government has decided that use of herbicides is not an option.

The silviculture cost estimate which is applied to an area where herbicides can be used is based on an average cost of manual and chemical treatments. This reflects the probability of pesticide free zones within each area where manual brushing will be used.

The regimes which allow the increased silviculture cost estimate can only apply when manual brushing techniques are the sole option for brushing on 100% of the area.

P.W. Ackhurst, Director Silviculture Branch

Not Over-committed

I note a blemish in your Winter '91, WSCA Newsletter. This involves the reprinting of a table headed "Comparison of 1985 and 1990 Approved OVER-COMMITMENT with the Long-Run Sustained Yield".

The implication that current harvest levels are too high and should be reduced to some estimate of long run sustainable yield in order to meet "sustainable development" criteria is wrong on two counts:

1. Long run sustainable yield is an unknowable number, depending as it does on future levels of forest management.
2. Today's rate of harvest has no impact on the long run cut available, provided no permanent deterioration of soil productivity is caused by today's harvest.

Reducing cut today would deprive this generation of the benefits of harvest without any benefit to future generations.

I find most of your newsletter interesting and informative. Please don't spoil it with sensationalist "factoids".

A.N. Brett-Davies, R.P.F.

Ed Note: *Thank you for your comments, this table was presented out of context. While it is true that LRSY depends on management practices. This comparison to LRSY with current forest management practices indicates a need to improve average forest growth (MAI) with more intensive forest management in order to maintain (or increase) the level of harvest over the long run.*

MAIL OUT continued...

changes that affect all of us. Herein lies our dilemma—do we continue to disseminate information to those who are not members and hope to entice broader participation, or do we forget about all non-members? We believe that we must continue our role as an Information conduit, but to do that we need some financial assistance.

On behalf of the WSCA, I would like to ask if you would consider providing us with some financing over a three year period so that we could continue with and improve on our services to the industry. I have included with this letter our 1990 financial statement and 1991 budget to show you the true state of our finances. Also included is a short synopsis of the role the WSCA has played in the growth of the silviculture Industry.

We are looking for \$20,000 a year over a three year period to help us hire a permanent staff member who could oversee the day to day running of the Association. During the three year period of the financing we would hope to be able to broaden participation in our Association sufficiently to carry these expenses on our own. This is impossible now since all the officers are volunteers who have their own businesses to operate.

We are hoping you will give favourable consideration to this request and look forward to hearing from you in the near future.

Chris Akehurst, WSCA Treasurer

Reforestation Mega-project

Note: *Letter to Claude Richmond, Minister of Forests*

On behalf of all of us who authentically seek to supply the services to the forests that are demanded by the public, thank you for putting in place the "Enhancing Our Forest Resource" program.

With this we commence B.C.'s mega-project of the century. The value generated by this program will dwarf the value of the Columbia River Treaty, the Bennett Dam and the North East Coal Project. Because the benefits are diffused throughout the web of forests around us and across the province, few will recognise the magnitude of the program that this announcement begins.

This bold step you have taken begins the long awaited journey to a major intensive forestry program for the Province, built solidly on a foundation of eliminating the backlog and reforesting current cut blocks.

We unqualifiedly support this initiative and are available to facilitate its implementation.

Dirk Brinkman

MAIL IN continued...

Cool to the Idea

Thank you for your letter of February 1, 1991 expressing concern about our preparedness for future climatic conditions (see *letter facing- Ed.*).

It is important to note that, at present there is no evidence to connect extreme weather events that lead to flooding last November with any long-term climatic trends or with global warming. The very high rainfall accompanied by snow melt that resulted in the extensive flooding in November 1990 could not have been predicted. Because of the large amount of water moving through coastal watersheds during such storms, forest cover is unlikely to make much contribution towards reducing flooding.

The Ministry of Forests is working to improve road building, road maintenance, and harvesting practices in order to minimize flooding and erosion problems in the future. We have undertaken much research, and have developed protocols and guidelines for operating in order to minimize adverse impacts. We are also committed to eliminating all backlog "non-satisfactorily restocked" areas by the end of this decade.

The Ministry of Forests recognizes the importance of British Columbia's forests to the global carbon budget. Ministry staff are working with Forestry Canada and other agencies in analyzing the impacts of the forestry sector on greenhouse gas emissions and in developing strategies for reducing these emissions.

Ministry research staff are examining the effects of environmental factors on our forests. This research will contribute substantially to our ability to respond to future climatic conditions.

Thank you again for taking the time to write to me about your concerns. If you have further questions I will be pleased to hear from you.

Claude Richmond, Minister of Forests

MAIL OUT continued...

Forestry Finger in the Dyke

Note: *Letter to Claude Richmond, Minister of Forests*

In the aftermath of the Lower Mainland flooding last Fall, an investigation into the influence of logging on this flooding was initiated.

The report stated that logging was not a factor in the flooding.

An investigation into the failure, in the past, to reforest the areas logged would recognize that the run-off would have been mitigated by healthy established forests occupying the 3,500,000 hectares of NSR and NCB.

The issue here is the broader one of the causes of climatic anomalies and the forests effect on the climate, not the smaller effects of a few cut blocks here and there.

One hundred years ago, there were six billion hectares of forestland world wide. Today there are three billion hectares. The other three billion hectares of forest land has been burned up and has added to the CO₂ in the atmosphere, contributing to global warming. One of the first effects of global warming in the northern hemisphere is an increased incidence of climatic anomalies. Today's record breaking weather extremes have to be viewed in this global context. Provincial forest renewal policy has a critical role to play in absorbing CO₂.

The land form, surface stability, and vegetation cover of this province is not adapted to withstand the deluge of rainfall from these kinds of climatic anomalies. Current road building and harvesting practices are not adjusting to climatic conditions which make these extremes inevitable.

Canada is committed to reverse global warming and B.C. will also be expected to play a part in this national strategy.

Reports that fail to address such obvious issues do not suggest that we are prepared for the climatic anomalies of this decade, nor that we are taking responsibility for a global warming strategy.

Dirk Brinkman

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MAIL OUT continued...**Lavender Kudos**

Note: Letter to Dr. Strangway, President UBC

At the Annual General Meeting of the Western Silvicultural Contractors' Association, it was unanimously voted that the WSCA send a letter of appreciation for Dennis Lavender to the President of the University of British Columbia.

Our members, our planters, silviculture foresters, the forest industry, the Ministry of Forests and the public of British Columbia all owe Dennis an enduring debt of gratitude. Dennis's work has had a national impact and the benefits of his work will accrue to many generations of Canadians.

Western Silvicultural Contractors' Association learned with regret of the retirement of Dr. Dennis Lavender. The body of knowledge embodied in this astutely self-disciplined scientist is the leading edge in forest seedling nursery culture and is currently of the utmost importance to our industry meeting the demands of the public in our forests.

In any way you can retain the services of Dr. Lavender who, at the age of 65, has the energy of a high-ball tree planter, the enthusiasm of a rookie planter, and the value of an old growth forest, we would be very grateful.

Dirk Brinkman

Owls Make a Marketing Mess

Note: letter to IFA Nurseries in Washington State

What effect have you projected on the seedling market in the Pacific North West due to the Spotted Owl reduced logging effect?

How much and why has the market declined in the past?

Members of our association wonder what our future will look like with environmental withdrawals being discussed here.

Dirk Brinkman

Canadian Silviculture Conference

Note: Letter to P. Ackhurst, Director Silviculture Branch

We have been approached by Claude Boisvert of *Silviculture Magazine* to co-host the inaugural Canadian Silvicultural Conference in Vancouver (Nov.18-20, 1991).

This 1991 Conference will provide a great opportunity to raise the profile of the silviculture industry in this province. In light of the recent provincial commitment to spend \$1.4 billion on silviculture in the next five years, such a conference will provide a great boost to the government's program, especially with its emphasis on intensive silviculture.

By co-hosting the National Silvicultural Conference, we will also raise the profile of our Association and be able to attract more silvicultural contractors to it. We have 500 contractors on our mailing list, most of whom are not members, but we feel that it is more important to keep them informed (i.e. by sending newsletters to them) and hope to entice their participation as members.

The WSCA is keen to undertake this task, but our budget does not allow for this. Claude has indicated to us that we will not be getting any percentage of the conference fees, so we are left in a bit of a jam.

Therefore, I have been instructed to approach the MOF to help cover the costs that will be involved in the WSCA co-hosting the 1991 National Silvicultural Conference. Our cost estimate for co-hosting the conference is \$15,000. This is comprised of a part-time wage to the coordinator plus office expenses, travel expenses, postage, phone calls, etc. The person we would like to act as coordinator is Carl Loland (our Past President).

I have included with this letter a copy of our 1990 financial statement and our 1991 budget to show the nature of our finances. We believe our co-hosting the conference will further advance the silvicultural cause in B.C.. We are hoping that you will give favourable consideration to this request and look forward to hearing from you in the near future.

Chris Akehurst, WSCA Treasurer

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- Brinkman & Assoc. Reforestation Ltd.
- Cascade Resources Ltd.
- * Coast Range Contracting Ltd.
- * Green Mountain Services Ltd.
- * Hill Side Building Group Inc. (A)
- Intertribal Forestry Assoc. of B.C. (A)
- Island Green Forestry Services Ltd.
- Loki Reforestation Ltd.
- Mountain Reforestation Ltd.
- * New Forest West (A)
- Oliver & Giltrap Reforestation Ltd.
- Outland Reforestation Inc.
- TIBE Enterprises Inc.
- Whiskeyjack Reforestation Ltd.
- * Woodward Reforestation Ltd.
- Zanzibar Holdings

Nelson/Kootenay Region

- Callburn Forestry Ltd.
- * Cutler Contracting
- Dark Star Forestry Ltd.
- * Evergreen Tree Planting Co-op
- Greenpeaks Holdings Ltd.
- Jansma Reforestation Ltd.
- Mart Resources
- MU Services Ltd.
- * R.J. Agricultural Contractors Ltd. (A)

Cariboo Region

- * Blue Collar Silviculture Ltd.
- * Lid's Reforestation Ltd.
- * Loxton Treeplanting Co. Ltd.

Kamloops Region

- Appletree Industries
- Arland Reforestation Services Ltd.
- * Crow Point Enterprises Ltd.
- Forsite Consultants Ltd.
- Golden Raven Cooperative
- Grandy Reforestation Service
- * Nu Growth Industries Ltd.
- Rainbow Resources Ltd.
- RS Lott Contracting
- Sanders & Co. Contracting Ltd.
- South Okanagan Silviculture

Prince George Region

- Apex Reforestation
- * Celtic Reforestation
- * D. Fraser Reforestation Ltd.
- * Folklore/Hawk Forest Enterprises
- I & I Construction Ltd.
- Integrated Silviculture Services Ltd.
- Kuwani Consulting Ltd.
- Lloyd Reforestation Ltd.
- MacLennan Contracting Ltd.
- * Mountain Top Reforestation
- Mudslide Contracting Ltd.
- * Pacific Regeneration Technology Inc.
- Roots Reforestation Ltd.
- SBS Forestry Inc.
- Seneca Enterprises Ltd.
- * Serac Reforestation Ltd. (A)
- Shannon Silviculture
- Silvaram Holdings Ltd.
- * Spraywell Ltd.
- Tawa Reforestation Enterprises
- Triple Eight Enterprises Ltd.
- * Twig Contracting Ltd.
- * Vin Law Resources Ltd.

Prince Rupert Region

- * Avison Management Services Ltd.
- Backwoods Silviculture Ltd. (A)
- * GTG Contracting Ltd.
- Mountain View Silviculture Ltd. (A)
- Singletree Ventures Ltd.
- Summit Reforestation Ltd.
- Waterside Ventures Ltd.

Alberta Region

- National Silviculture Inc.
- Next Generation Reforestation Ltd.
- * Tsuga Forestry Contractors Ltd.
- * Weldwood of Canada Ltd. (A)

Ontario Region

- * Plenty Canada

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