PROVINCE OF BRITISH COLUMBIA

Department of Lands, Forests, and Water Resources

HON. R. A. WILLIAMS,
Minister

J. S. STOKES,
Deputy Minister of Forests

REPORT OF THE
Forest Service

Year Ended December 31 1974

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in right of the Province of British Columbia.
1975

Victoria, B.C., March 1975

The Honourable Walter S. Owen, Q.C., LL.D.,
Lieutenant-Governor of British Columbia.

May it Please Your Honour:

Herewith I respectfully submit the Annual Report of the Forest Service of the Department of Lands, Forests, and Water Resources for 1974.

R.A. WILLIAMS
Minister of Lands, Forests, and Water Resources

The Honourable R. A. Williams,
Minister of Lands, Forests, and Water Resources,
Victoria, B.C.

Sir: This is the Annual Report of the Forest Service for 1974.

J. S. STOKES
Deputy Minister of Forests

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PERSONNEL DIRECTORY 1974

(As of December 31st)

VICTORIA HEADQUARTERS

J.S. Stokes ..... Deputy Minister of Forests
W.E.L. Young ..... Chief Forester
W.G. Hughes ..... Assistant Chief Forester (Operations)
W. Young ..... Assistant Chief Forester (Resource Management)
P.J.J. Hemphill ..... Director of Services
J.A.K. Reid ..... Staff Consultant

Staff Division Heads

R.W. Long ..... Departmental Comptroller

Resource Management Division Heads

R.W. Robbins ..... Forester i/c Timber Division
J.B. Bruce ..... Forester i/c Inventory Division
W.C. Pendray ..... Director, Range Division

Services Branch Division Heads

W.C. Phillips ..... Forester i/c Protection Division
C.J. Highsted ..... Forester i/c Forest Service Training School
L.W. Lehrle ..... Forester i/c Engineering Division
A.M. Brand ..... Personnel Officer

Operations Branch Division Heads

E. Knight ..... Forester i/c Reforestation Division
G.C. Warrack ..... Forester i/c Research Division
E.H. Lyons ..... Forester i/c Information Division

FOREST DISTRICTS

Vancouver Forest District

H.M. Pogue ..... District Forester
J.C. Payne ..... Assistant District Forester

Forest Rangers

W.G. Howard (Cultus Lake); G.D. Bertram (Hope); J.R. Schmidt (Harrison Lake); J.N. Nelson (Mission); M.H. Mudge (Port Moody); M.N. Neighbor (Squamish); R.S. Wilson (Sechelt); K.A. Northrup (Pender Harbour); S.B. Hollinshead (Powell River); V.J. Doerksen (Lund); T. Brooks (Campbell River North); W.G. Archer (Sayward); B.D. Horning (Port McNeill North); R.A. Campbell (Port McNeill); G.F. Hawkey (Port Hardy); D.E. DeHart (Campbell River); A.J. Teindl (Port Alberni); F. Vicen(Tofino); N.P. Gilgan (Pemberton) B.L. Custance (Gold River); M.W. Antonelli (Langford); H. Norbirg (Parksville); S.J. Sykes (Duncan); R.W. Thomas (Cowichan Lake)

Prince George Forest District

M.G. Isenor ..... District Forester
D.H. Owen ..... Assistant District Forester

Forest Rangers

G.W. Graham (McBride); W.E. Hall (Valemount); M.A. McRae (Prince George E.); G.E. Meents (Prince George N.); L.G. Espenant (Fort St. James); H.V. Hopkins (Dawson Creek); J.L. Younghusband (Aleza Lake); K. Arnett (Vanderhoof); S. Anderson (Fort St. John); P.F. Griffiths (Fort Fraser); Vacant (Summit Lake); H.L. Miskovich (Fort Nelson); G.E. Magee (Prince George W.); M. Wilkinson (Hixon); L. McQueen (Chetwynd); C. Nelson (Mackenzie)

Nelson Forest District

J.R. Johnston ..... District Forester
J.A.D. McDonald ..... Assistant District Forester

Forest Rangers

G.M. Cartwright (Invermere); J.L. Humphrey (Fernie); Vacant (Golden); J.B. Gierl (Cranbrook E.) Vacant (Creston); H. Thompson (Kaslo); A.C. Joyce (Lardeau); R.E. Robinson (Nelson); C.C. Jupp (New Denver); J.H. Raven (Nakusp); H.R. Wood (Castlegar); P.F. Russell (Grand Forks); W.R. Anderson (Kettle Valley); H.D. Hamilton (Canal Flat); W.G. Benwell (Mica Creek); H. Osborne (Fauquier); Vacant (Elko); Vacant (Cranbrook W.); J.A. Hogan (Beaverdell); C.N. Bellmond (Salmo); G.L. Benwell (Revelstoke)

Cariboo Forest District

E.W. Robinson ..... District Forester
A.B. Robinson ..... Assistant District Forester

Forest Rangers

J.H. Little (Quesnel); Vacant (Clinton); E.A. Bouchard (Williams Lake); C. Rohn (Quesnel); F.W. Hendy (Tatla Lake); J.F. Lynn (Horsefly); R.W. Donnelly (100 Mile House); P.O. Holitzki (Likely); F.A. Folliet (Riske Creek); R.J. Reeves (Alexis Creek)

Kamloops Forest District

A.H. Dixon ..... District Forester
C.A. MacPherson ..... Assistant District Forester

Forest Rangers

D.J. Wittner (Lumby); M.E. Monteith (Birch Island); O.D. Parsey (Barrier); J.P. Weinard (Kamloops); V.D. Craig (Chase); W.O. Pistak (Salmon Arm); G.R. Webster (Sicamous); G. Stefanac (Lillooet); A.G. Cameron (Vernon); R.W. McDaniel (Penticton); G.F.M. Baker (Princeton); F. Pearce (Kelowna); J.O. Noble (Ashcroft); R.K.M. Berard (Merritt); V.H. Barge (Blue River); J. Wanderer (Enderby)

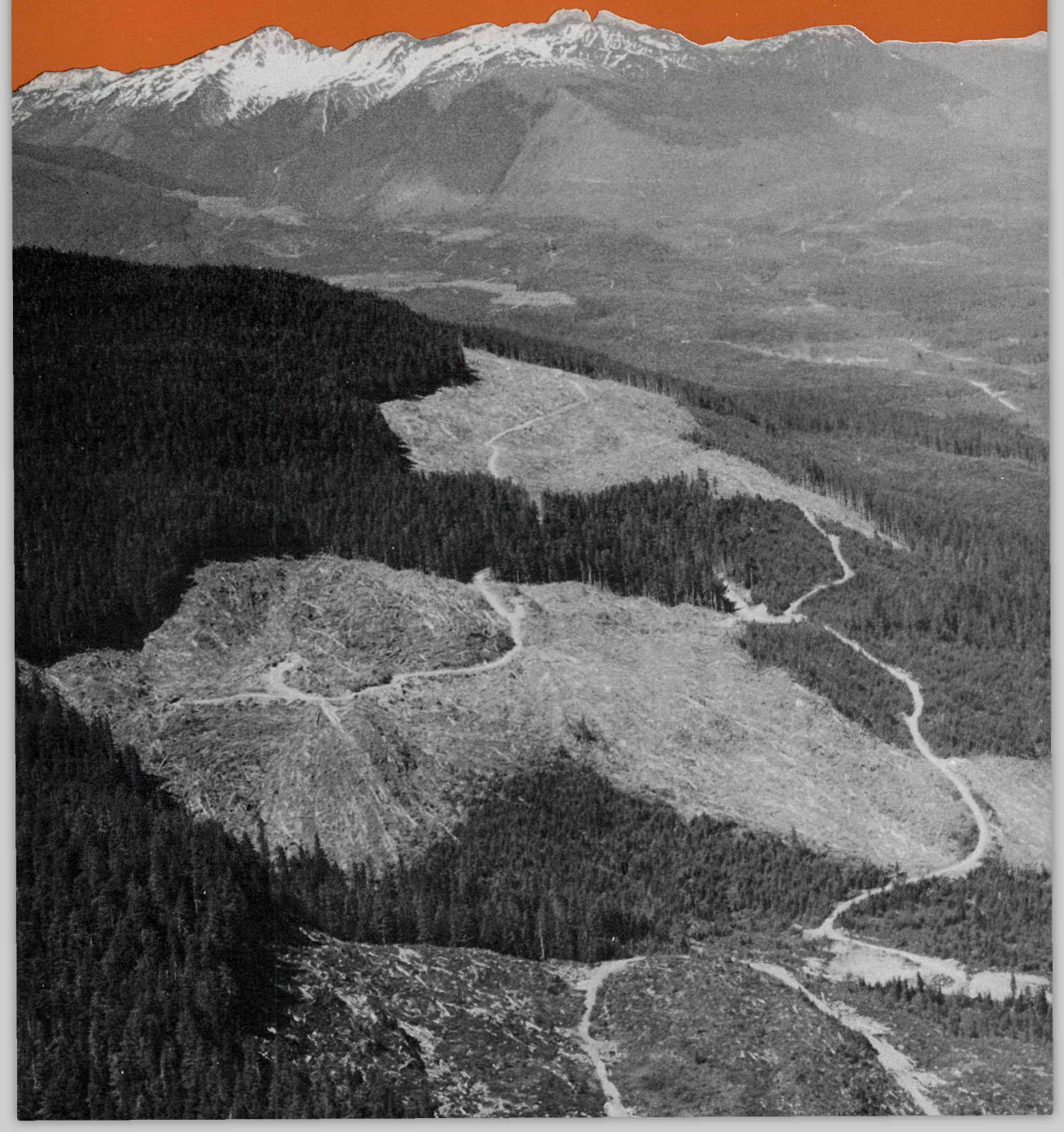
Prince Rupert Forest District

W.G. Bishop ..... District Forester
R.G. Gill ..... Assistant District Forester

Forest Rangers

V.H. Hernandez (Queen Charlotte City); H.W. Quast (Terrace); W.O. Neros (Kitwanga); F.L. Roe (Hazelton); A.R. Pement (Smithers); D.J. Neal (Houston); W.G. Waldron (Burns Lake); S.E. Hansen (Bella Coola); W.H. Jones (Southbank); J.P. Dunlop (Lower Post); I. Brown (Kitimat); R.N. Keep (Stewart); W.O. Johnston (Prince Rupert)

Chief Forester's Report



Revenue to the province from its forest resource dropped substantially during 1974 in marked contrast to the previous record-breaking year.

The figures tell the story: Revenue collections were $197,200,142 — a decrease of 19.5 percent over the previous calendar year. Timber sale stumpage, which comprised 92 percent of the total, contributed $181,605, 129 — a decrease of 21.3 percent over 1973.

The revenue drop was due to various factors, the most damaging being a world-wide slump in the lumber market. Reflective of the situation was the severe decline in home-building throughout North America. And 1974 also saw a significant drop in plywood sales — down about 30 percent from the previous year.

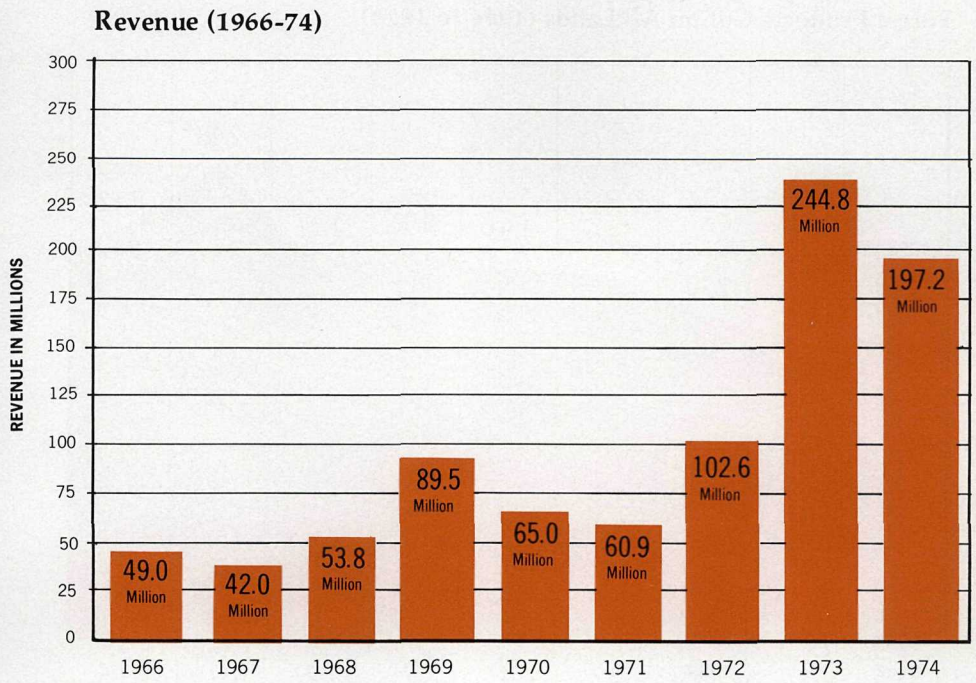
On the other side of the ledger, pulp and paper production, demand and sales reached new peaks — but by the end of the year they too were starting to level off and even decline.

There is another strong factor which undoubtedly is going to have marked effects on provincial revenue derived from the forest resource. Even if the general lumber market improves, that will be offset by higher administration costs, and higher costs related to protecting the environment.

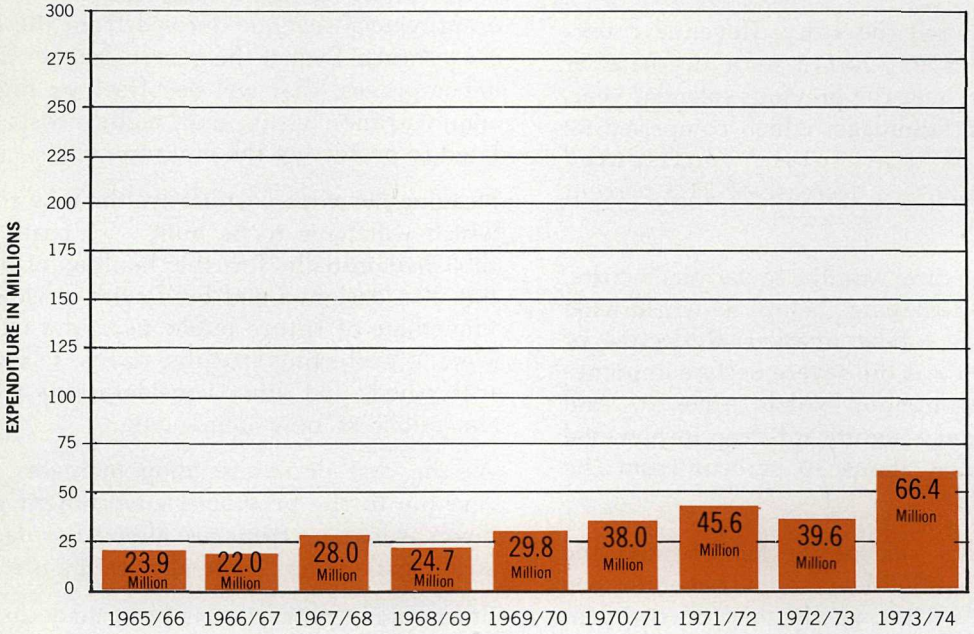
Heading the extra-cost list are the new roads which will have to be built . . . roads established initially for the hauling of logs, but also designed and built with a view to immediate or future public use. And with a view to protecting streams, rivers, fisheries, watersheds and other considerations which the public is now demanding.

As the cost of roadbuilding increases, the revenue to the provincial government goes down as logging firms are allowed to deduct such costs from stumpage payments.

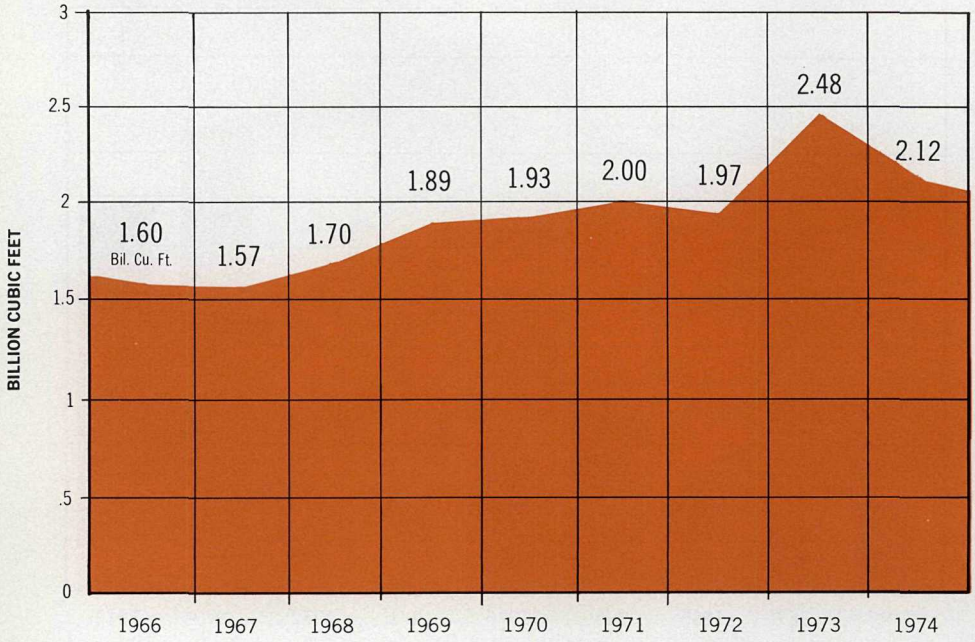
Encouraging progress has been made in our



Expenditures (1965/1974)



Forest Products Cut on All Lands (1966 to 1974)



forest resource productivity studies. This has involved establishment of numerous plots and detailed measurements from which we will obtain valuable data on potential yields from managed timber stands in the future.

Related to this aspect of our planning for the future, is the relatively new CARP system (computer assisted resource planning) which will play a dominant role in the future administration of our timber resource. The system is quite complex and involves data banks and computer analysis. It will enable the resource manager to actually simulate long-term results of various alternative management policies or techniques. The first region to come under the CARP management system will be the 600,000 acre Westlake Public Sustained Yield Unit in the Prince George Forest District. Studies there commenced two years ago.

It was a significant year for planning and establishment of facilities in the forest recreation program. There are now 787 forest recreation sites established throughout the province, an increase of 181 over 1973. An additional 175 sites will be established in 1975.

It has been conservatively estimated that some 672,000 people used the recreation sites during the year — well above the 153,000 recorded two years earlier when the program got under full swing.

The special Task Force on Crown Timber Disposal completed and released two detailed reports during the year. They were entitled "Crown Changes for Early Timber Rights" (royalties and other levies for harvesting rights on timber leases, licences and berths in British Columbia); and "Timber Appraisal" (policies and procedures for evaluating Crown timber in British Columbia). Copies of these reports are available from the Information Division of the Forest Service in Victoria.

By year's end a third report, dealing with forest tenures, was nearing completion.

There were 2,558 forest fires throughout the province during the year — covering more than 53,650 acres and causing forest cover losses of $1.86 million. The Forest Service cost of fighting these blazes exceeded $6.7 million.

Lightning caused 716 of the fires (28 percent of the total); 695 were started by careless recreationists and smokers; while the balance were triggered by loggers, railroads and assorted other industrial operations.

In our reforestation program, 53.8 million seedlings were planted by the Forest Service and by industry, compared to 56.2 million in 1973. The decrease was due to unfavourable weather conditions in many parts of the province.

A Seed Production Section was established within the Reforestation Division, and new seed production orchard sites were established at Saanich (near Victoria) and at Skimikin (near Salmon Arm).

Our Inventory Division during the year produced more than 560 forest cover maps and reports for 21,000,000 acres which had been surveyed in 1973.

The year also saw the establishment of a special interdepartmental task force on rangeland management. It started detailed studies on three main issues: How to reorganize the approach to rangeland management to enable integrated management of the grassland resource, trade-offs with the forest resource, and related problems; necessary staff additions to do the job effectively; and legislative changes required.

Range forage production was generally good, and use of Crown range by domestic stock increased slightly — reversing the trend of the past several years.

During the year there was a marked expansion in adoption and implementation of the resource planning folio system throughout the province.

Introduced about three years ago as a trial, the new resource planning system calls for input from all land-use agencies involved before any Crown (publicly owned) land is committed to logging or any other form of industrial operation. The system considers fish, wildlife, watersheds, recreation, soils, stream protection and a host of other factors related to the environment.

Task Force on Crown Timber Disposal

The early-1975 appointment of the Task Force on Crown Timber Disposal was of particular significance. Its members were Dr. Peter H. Pearse, Department of Economics at the University of British Columbia, chairman; Edward L. Young, B.C.'s Chief Forester: and Arvid V. Backman, prominent industrial forester.

The Task Force was commissioned to investigate the policies, legislation, procedures and practices governing the disposal of timber in the province, and to suggest changes to protect the public interest in the Crown forest resources.

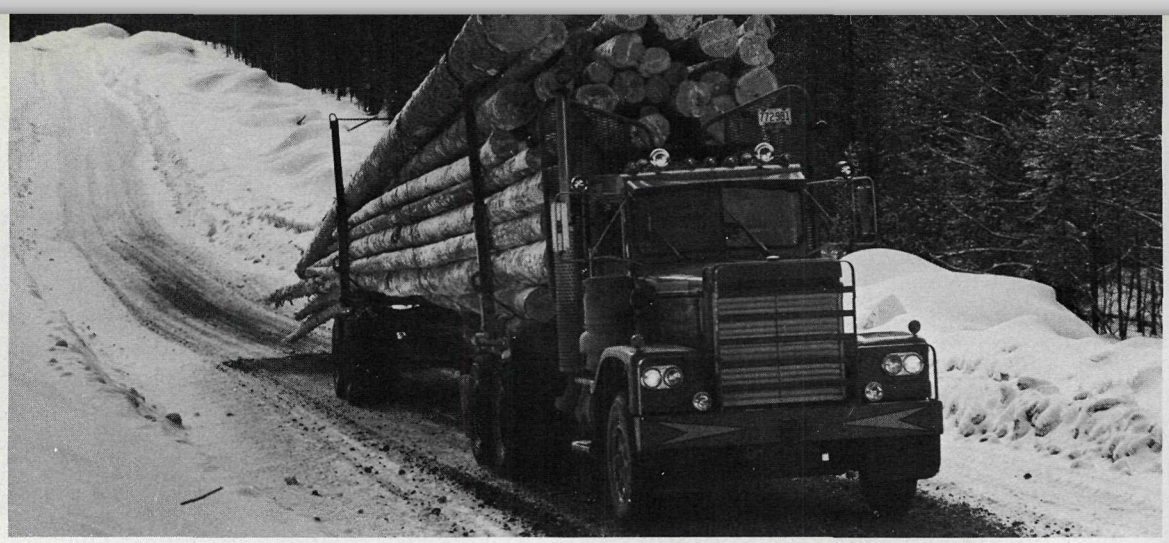
An interim report was required before February 28, 1974, with recommendations for improvements governing the Crown charges for timber and harvesting rights on the five classes of old temporary tenures — Timber Leases, Timber Licences, Pulp Leases, Pulp Licences, and Timber Berths. The task force published two detailed reports during 1974 which dealt essentially with charges for Crown timber.

The first dealt with royalties and taxes applicable to old temporary tenures. Its major recommendations comprised:

1. Basing Crown royalty charges upon individual appraisals of the timber values for each timber tract rather than the previous blanket royalty rates fixed by legislation for groups of species on a regional basis. The change was to be effective September 30, 1974, and enabling legislation was approved by the legislature in the Forest Amendment Act 1974. The date for implementation, however, was left to the discretion of the Lieutenant-Governor-in-Council and was withheld pending an improvement in market conditions.

2. Abolition of the forest land tax after the end of the 1974 calendar year. This is a matter for the Department of Finance which administers this tax rather than the Forest Service, and depends on implementation of recommendation No. 1.

3. Easing the burden of the special tax on logging profits by reducing the rate from 15 to 10 percent and increasing the provincial tax credit to 1/3 of the logging tax paid, also by adopting the federal definition of logging income for tax purposes. This also comes under the Department of Finance and is awaiting implementation.



The second report dealt with timber appraisals. In addition to numerous recommendations concerning the complex details of appraisal procedures, major recommendations included:

1. Steps to improve the dependability of log markets so the market could be expected to encourage the distribution of various types of logs to their best end use and to promote public confidence that the log market prices reflect the true log values.

   Legislation was enacted on this matter under the "Timber Products Stabilization Act" and implementation is in progress.

2. Modernization of coastal log grades to make them more consistent with present industrial practice and more compatible with tree quality cruising requirements for appraisal valuation purposes.

3. Establishment of a Marketing Division of the Forest Service to strengthen the staffing and attention assigned to the cruising, appraising, and scaling of Crown timber. Steps were taken toward implementation of this recommendation early in 1975.

4. That the cost of approved logging roads forming part of a basic road system to be available for public use be borne directly by the government through direct stumpage credit or direct payment.

   This policy has been instituted and is being applied as rapidly as individual road evaluations and other arrangements can be completed for each case.

5. That various other procedures be adopted respecting the technical aspects of appraisals. These relate to the methods of calculating profit ratios; collection and compilation of data on operating costs and product selling prices; treatment of certain categories of costs in the appraisal, particularly those dealing with slash disposal site rehabilitation; reforestation; depreciation and interest on investments; the determination of the point of appraisal where the log marketing or processing is assumed to occur; grouping of species or stand-as-a-whole appraisal concept; sale of timber on the basis of cruise volume estimates rather than the scale volume of timber recovered; utilization standards; minimum stumpage rates; publicity of appraisal procedures; training of staff in appraisal methods; and provisions for the training, examination, and licensing of timber cruises.

Most of these recommendations are being implemented. Some have already been instituted and others will be adopted during the coming year. Some cannot be commenced until additional qualified personnel are available.

Coast Guidelines

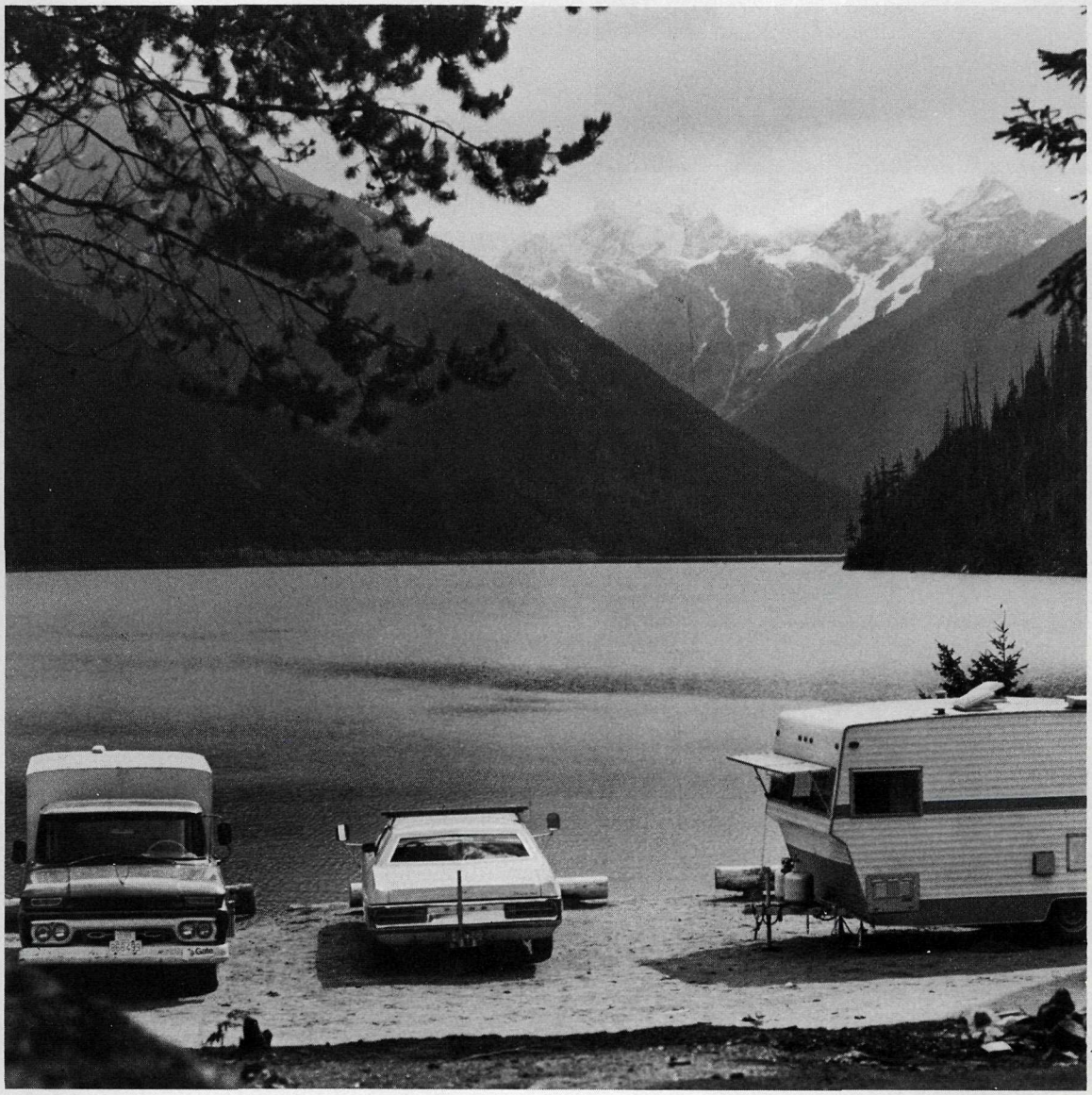
Good land use practices do not occur as a matter of course. On the other hand, problems in land management can often be avoided, sometimes quite simply, by the application of basic forestry and engineering principles. *The Planning Guidelines For Coast Logging Operations,* prepared and issued in 1972, are intended to show generally how compatibility can be reached and maintained between timber harvesting, soil protection, watershed management, and the management and use of other resources within the forest.

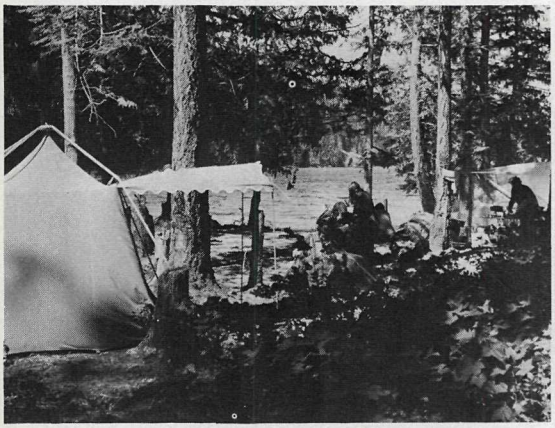
In the preparation of the guidelines neither the list of resource considerations nor the series of statements on corrective and precautionary measures is complete. Resource management is much too complex and difficult a subject to permit entirely satisfactory consolidation in the form of guidelines. Nevertheless, the guidelines were prepared because land use problems existed and well known forestry knowledge was often being neglected.

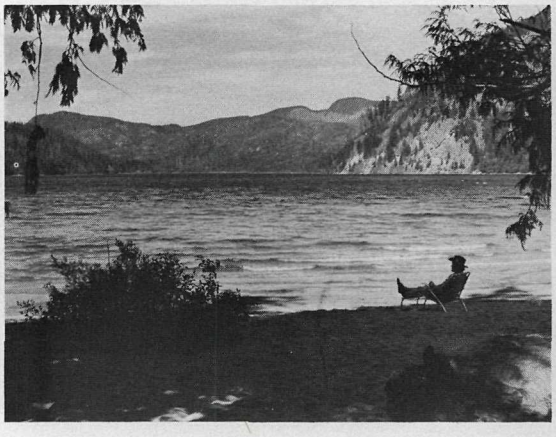
In spite of the brevity of the guidelines, many aspects of land management are discussed. For instance, the forest industry is reminded that every setting, road plan, culvert, and bridge design must be examined for its effect on all resource components. They discuss road location and design in relation to landform, soils, and topographic features the disturbance of which will be detrimental. Methods of preventing soil movement and stream siltation are discussed generally. Maintenance of stream and site stability is given special attention, particularly in the context of the logged area size, shape, orientation and location in relation to areas withheld from logging for firebreaks, animal migration corridors, and aesthetics.

From the outset it has been acknowledged the guidelines are an interim measure only until site specific constraints can be specified for the planned forest harvesting operation. With the recently developed integrated planning system, commonly referred to as the resource folio system, now being introduced on the coast, the controversial Coast Guidelines may be given less prominance in 1975.

Recreation







The forest recreation program expanded significantly in 1974 with 181 serviced sites added to the previously developed 606 sites, for a year end total of 787 sites. A further 175 sites are planned for 1975, and upon completion of these most of the existing public recreation locations on forest lands will be under maintenance.

The low-key concept, stressing a rustic type of site development, was again followed in 1974. Public opinion about this approach continues to be most encouraging, as is the acceptance of rustic log picnic tables introduced during the year.

Public use of the sites increased greatly during the year, showing a progression from 153,000 in 1972, to 385,000 in 1973, to 672,000 in 1974. All figures are conservative, due to incomplete tallies of visitors at many sites.

A much larger maintenance load, resulting from more visitors and more sites, was competently handled by temporary help, with students working under ranger staff direction once again performing a major role.

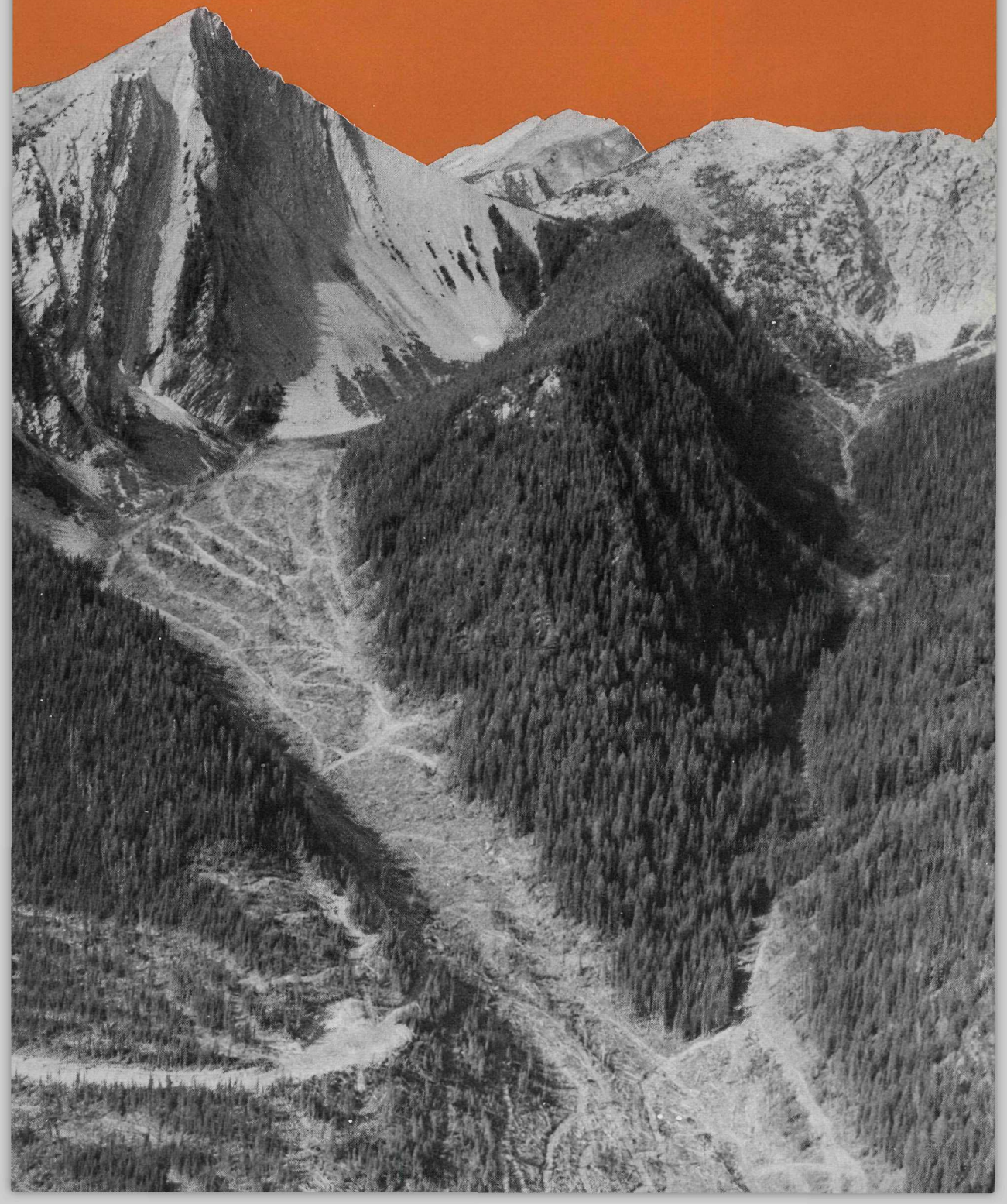
Trail systems, signposting, and map brochures were initiated and will receive increasing emphasis.

Recreation inventory data was incorporated in a large number of P.S.Y.U. and folio plans. Delineation of sight zones in forest lands along travel corridors was expanded and will continue.

A provincial guideline is in preparation covering recreation policy and operational procedures.

Participation in public meetings and seminars, and assistance with recreation education programs occupied a considerable amount of staff time during the year, as did interdepartmental liaison and co-operative planning on recreation issues.

High Elevation Restocking Problems



Research is necessary to solve the problems that arise from the movement of logging operations away from the valley floor to higher elevations. Here grow trees that are not as well understood as those of species from lower elevations. The climate is generally colder and the growing and reproductive season is shorter. Natural regeneration may be poor and too slow to support existing sustained yield concepts.

Removal of the forest cover from high elevation sites, which are thinly covered by soil and low in nutrients, may result in losses due to erosion. There is added logging loss from the removal of nutrients which are in the tree and normally return to the soil during decomposition. Logging regulations are needed if regeneration capabilities are limited.

These matters are receiving the attention of the Research Division, which has studies in hand to provide some of the answers. They fall into three categories: basic understanding of species that grow at high elevations, particularly in regard to seed production capabilities; site studies, to determine their capability of supporting future stands; and economic evaluation of environmental constraints and regulations.

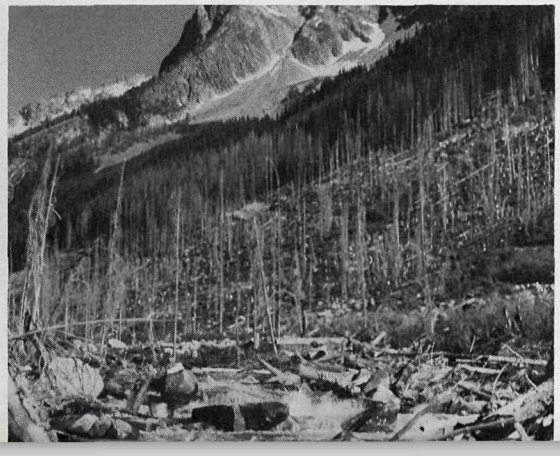
Under the first category are studies being done on yellow cedar and mountain hemlock. Results so far give encouraging indications that hormonal treatments may offer a practical method of producing crops in yellow cedar orchards at a cost well below that incurred for wild stand collections. However, all experimental treatments have failed to produce cones on mountain hemlock. This species is being observed in its natural state and sampled regularly for microscopic analysis to determine when changes occur in the reproductive cycle.

Research on the rooting of yellow cedar cuttings started on a small scale in 1971 and was repeated in 1972 and 1974. In the last experiment, from 800 cuttings taken, 89 percent are considered satisfactory for production planting. This may provide a satisfactory alternative to raising seedlings.

Another study is being made of a species that will grow up to 2,000 metres in elevation. (A metre is approximately 3½ feet) This is amabilis fir, more commonly known as balsam. The study started this year in co-operation with the Canadian Forestry Service and its objective is an assessment of the suitability of restocking upper elevations of the Vancouver Forest District with this species after logging. Removal of the dominant trees releases the smaller, suppressed ones. Data on this growth response after logging and susceptibility to fungal attack after damage by logging equipment is needed. The study is not finished yet and there is much data to be analyzed. Preliminary results indicate the threat is low from the Indian Paint fungus up to 30 years after logging, probably due to enhanced growth rates which quickly cover the wounds.

In the fall of 1974 two high elevation test sites were planted with coastal Douglas fir. The seed from which these seedlings germinated came from high elevation areas. Observation and measurement of the trees will provide information on suitability of high elevation regeneration with this species, which does not normally grow above 1,300 metres.

An investigation to characterize sites with the emphasis on forest management problems at high elevation was pursued this year. Landforms, soils and vegetation types of several areas including Templeton River at 1,200 to 3,000 metres have been mapped on airphotos. Surveys on the ground were made to identify and describe soil and vegetation units. Work is now being done on the interpretation of mapping units. These interpretations will include mass soil movement, waterborne erosion, soil compaction, hydrologic characteristics, nutrient supply and availability. The vegetation data will be looked at with silviculture, wildlife and recreation in mind.



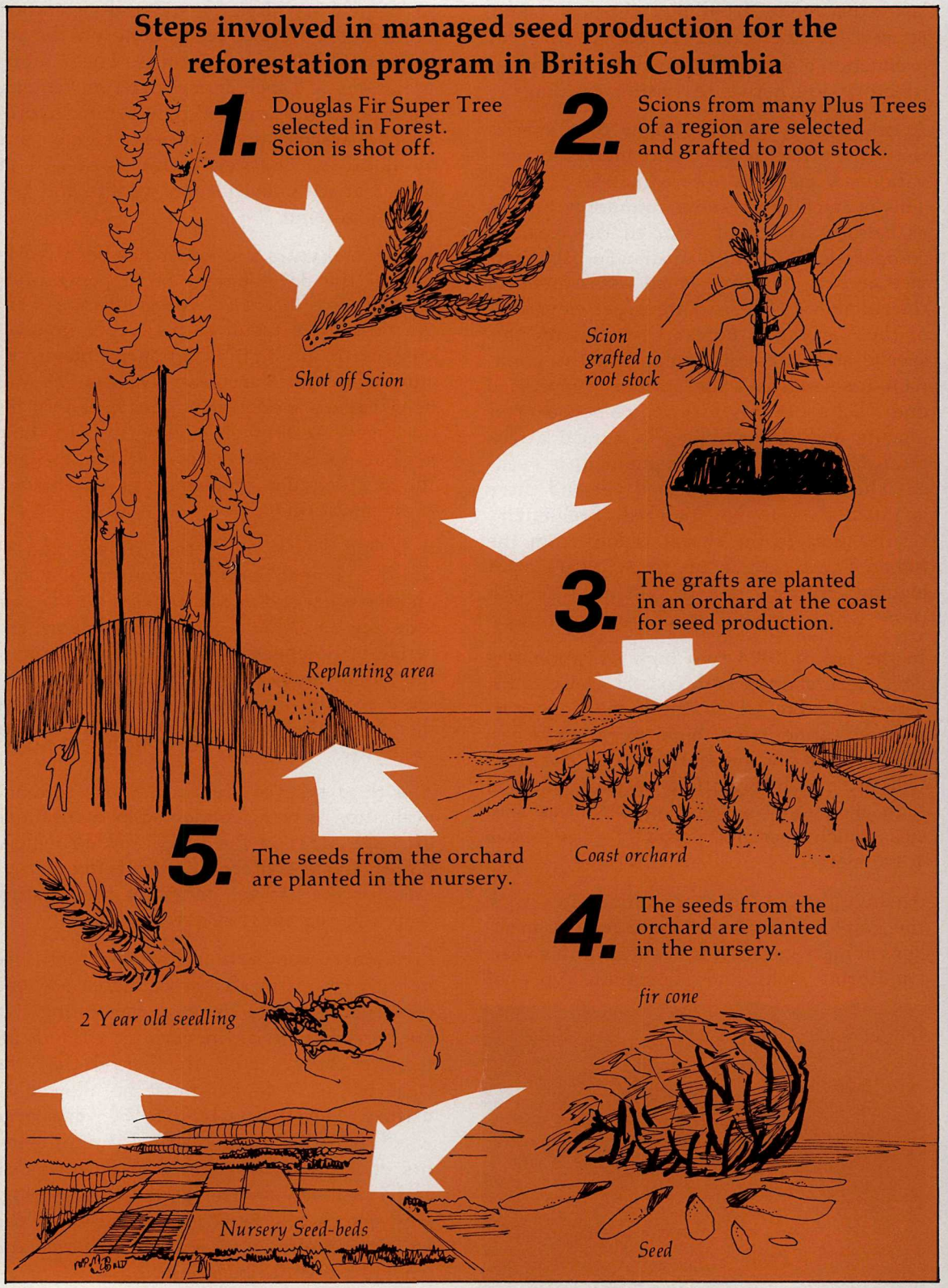
For several years a scientist has been working on the development of mapping units suitable for intensive forest management practices. As a result of his recent involvement with the high elevation problems occurring in the Vancouver District, he has been paying special attention to landforms on these areas, their ability to withstand various forest harvesting techniques, and the post-logging problems associated with these landforms.

It is hoped that, with the co-operation of the B.C. Forest Service, Inventory Division and the other specialists working on the various aspects of high elevation problems, criteria for delineating appropriate mapping units that can be employed as a basic framework for the high elevation land management practices will be developed during next year.

The third type of study, that of economic evaluation, is being conducted in two sample drainage areas in the Chilliwack Provincial Forest. Costs and benefits are being considered for the harvest period of the existing crop and for the next crop.

Preliminary comparisons indicate there are heavy costs associated with increased road construction early in the harvesting sequence and with an increase in road maintenance charges over the period that the large blocks of timber must be allowed to mature. These costs tend to be very large when compared to the relatively minor benefits of improved regeneration performance and a relatively shorter period between logging than would be possible otherwise. The indirect benefits of recreation, fisheries and wildlife are yet to be assessed.

Tree Improvement



It is important to the logging industry that seedlings used for reforestation should grow into trees of quality. These should be superior in volume and have good form, vigour and fine branching with a healthy, narrow crown. To realise them, a suitable environment must exist coupled to basic characteristics which are determined by heredity.

At Cowichan Lake Experiment Station there is a stand of Douglas fir planted 20 years ago. It has grown from seed collected from trees displaying both good and bad form. That individual trees in the stand resemble their female parent and their brethren, is evidence of the importance of understanding as much as possible about the genetics of the trees upon which the forest industry is based. Desirable characteristics can then be perpetuated and undesirable ones removed or reduced through breeding.

The Research Division of the B.C. Forest Service has a two-pronged approach to the business of tree improvement, through provenance testing and tree breeding.

The term provenance relates a species to a specific geographic locality. Work is done to determine how seed will fare when planted in a different part of the province from its place of origin. It is important to establish seed transfer rules so that should it be necessary to use other than local seed (perhaps there aren't enough due to poor seed production and much logging) it will be known what provenances will grow well.

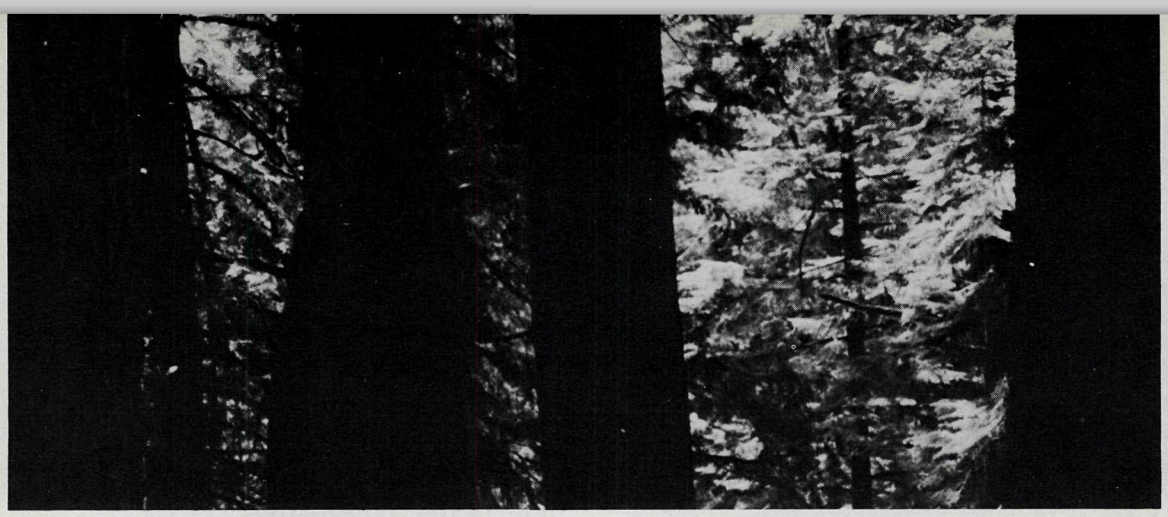
Test sites of Douglas fir, spruce and lodgepole pine have been established in contrasting climates and elevations of the province covering several hundred acres and including many seed sources. Information can be expected to accumulate for many years to come.

The tree breeding approach to tree improvement also involves comparing the progency of known parents on different test sites. From 1966 to 1971, 28 such sites were established and data is being analysed. Results indicate there are highly significant differences in volume between six-year-old trees on the same site even when only one parent is different. For example, some crosses made in 1963 had a common female parent, yet on good sites the volume produced by the best are almost three times those of the poorest cross.

The selection of superior trees — those exhibiting superior growth and form, and known as "plus trees" — are brought together to produce progency which will inherit some of those characteristics. To obtain seed from these specimens is not easy since growth characteristics and reproductive frequency is often opposed and, if cones are produced, they are a long way from the ground. Even when a cone is procured from one of these giants, the resulting seedling would not be much value to the geneticist since only one parent is known, the other having possible inferior characteristics.

These problems are overcome by shooting down branches with a rifle and grafting a small part, the scion, to a rootstock in the nursery. These are called clones and grow well, often producing pollen and seed within a few years. They can then be crossed with cones from other plus trees. The seedlings produced are used for further genetic studies, their parents both being known, and as material for future seed orchards.

A breeding and reselection program was started involving 350 of the Douglas fir "plus trees" from coastal B.C. and northern Washington. In 1974 the reproductive buds in the clonal seed orchards of Pacific Logging Company and Tahsis Company in Saanich were made available for the controlled pollination program. Together with those from the Cowichan Lake Experiment Station, it was possible to work on 235 crosses. Parent trees are grouped in sixes and each sub-program, or diallel, consists of 15 crosses.



Eight of these diallels were started in 1973 and in 1974 a further 10 were attempted with the result that 108 "plus trees" are now being included in the program. When the seed had been collected and cleaned, 11 of these 18 diallels had sufficient seed in all the crosses and a further three were deficient in only a single cross.

It will be possible to move on to the field testing phase of the program in 1975 and seeds from 10 diallels will be raised for planting out. The field design calls for 200 seedlings from each cross which will be distributed widely across coastal British Columbia. The seed will be sown in the greenhouse at Cowichan Lake in styro foam seedling containers and will be ready for planting in the fall of 1975 or spring 1976.

The selection of uniform test sites poses a problem and already the process of screening recent logging areas for their suitability has been started. These areas will have to be selected and prepared by staking during the summer of 1975. In the meantime the controlled pollination program will be continuing as rapidly as the occurrence of reproductive buds permits.

A different study on Douglas fir has involved making controlled crosses from trees at different ends of their species range. Vigour is often achieved in plants by making wide crosses. Another method to achieve vigour is to self-fertilize the plant and after producing an inbred strain, to cross with others. This is how our corn is bred. Inbreeding with Douglas fir tends to produce dwarfs, which are sterile. A danger can be seen here in that matings between closely related trees could be a problem in nurseries, seed orchards and seed production areas.

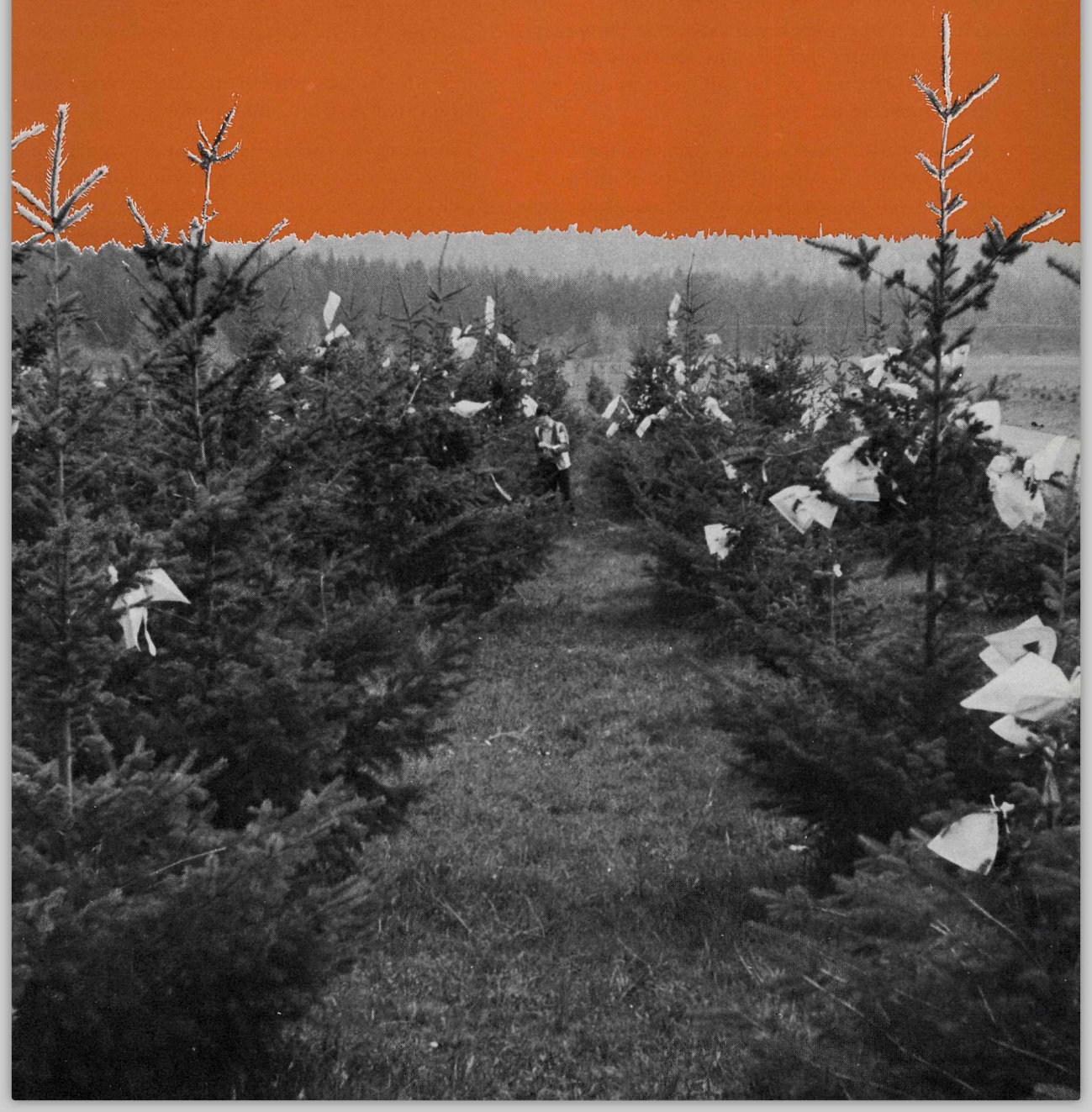
The other two major species which concern the Research Division at the genetic level are spruces from the interior of the province and lodgepole pine. While provenance testing has begun on the latter species, controlled crossing experiments await the arrival of a geneticist, who is being hired to do the work.

Research work on the interior spruces, mainly white spruce, is centred on the Forest Service nursery at Red Rock near Prince George. Selections have been made from stands of trees over a wide area and seedlings are being planted out. In 1974, 54,000 seedlings were planted on 19 sites in the Smithers Selection Unit with over 95% survival, and in the East Kootenay Selection Unit 15 sites have been chosen for planting in 1975.

A wide crossing program has been started similar to work being done with Douglas fir. Grafts are doing well and the arboretum now includes 70 eastern white spruce families and other exotic white spruces.

Clone banks have been established at the Red Rock Nursery using material from most of the 445 "plus trees" so far selected. The oldest clones are now four years old and next spring will be planted in a newly established tree breeding area near Enderby in the Okanagan Valley. Here the climate is warmer during the flowering period and conditions are more suitable for the production of cone crops than can be hoped for near Prince George.

Expanding Capability for Forest Research



In 1970 there were 15 foresters and 22 supporting staff in the Research Division of the B.C. Forest Service. Today there are 26 regular professionals, nine on contract and 36 in support. The expansion has occurred due to pressures on the division for specialized assistance and advice, and to a restructuring to better meet the demands created by intensification of forest practices.

There has been a shift in emphasis in the work of the Regional Research Officer, one of whom is stationed in each of the six Forest Districts. His first responsibility is that of defining the research needs and priorities of the District, and has put some of these into effect through experimental work. However as the industry grows and Districts Headquarters expands, so his advisory and interpretation role increases.

His responsibilities include advising the District Forester on the acceptability of the cost of research by industry to ensure that the taxpayer is the beneficiary. In practice, the Regional Research Officer obtains recommendations from headquarters in Victoria to guard against duplication and to ensure the work fulfills a general provincial requirement, and that statistically relevant data is sought in a correct manner.

In addition to this Research Officer in each Forest District, a pedologist or soil scientist will soon be appointed to each headquarters. Although primarily concerned with soils in their District, these men have different backgrounds and specialties. One has 15 years' experience in resource capability analyses and related soil problems, while another has a strong ecological background. Their functions will not be limited within administrative boundaries — their expertise will be used wherever important needs are defined.

Specialized work of the division has resulted in the formation of several small groups over the past few years. Here there is a natural fit into which scientists and their assistants belong. They are: tree improvement, which includes provenance testing and tree breeding sections; silviculture, which includes the Regional Research Officers and those concerned with tree physiology and nursery practice, spacing and fertilization;

and site factors, which include ecology and integrated resource management.

The work of forest mensuration (measurement to ascertain tree volume for timber yield purposes) is undertaken by a research scientist, who is also a member of the B.C. Forest Service Productivity Committee, itself concerned with maximum yield through fertilization, herbicide application and thinning.

The next group comes under the heading of "site factors". Here there is an authority on landforms, an ecologist, an expert in land-use planning and a researcher concerned with problems of regeneration on high elevation sites.

In addition to the necessary but small administrative and clerical staff in Victoria, there is a systems analyst and computer programmer. Recent strength to this supporting staff has been added with the appointment of a biometrician who will be responsible for the design and analysis of projects with the emphasis on genetics and provenance work. He will help ensure that only statistically sound research is undertaken.

Finally the research stations of the division continue to expand.

The Cowichan Lake Experiment Station controls a total area of 170 hectares, in which 44 have been planted and a further 32 cleared for planting. (a hectare is approximately 2½ acres.) A fence surrounds 85 hec-

tares in which there is a Douglas fir breeding arboretum containing 320 provenances, a native arboretum of 17 species from B.C., a yellow cedar plantation of some 20 provenances and Douglas fir clone banks containing 650 young trees. A lodgepole pine arboretum, almost five hectares in extent, is close by. In addition to a small nursery and the usual office buildings, a large greenhouse is used to raise seedlings under controlled conditions.

At the North Road laboratory and greenhouse, near Victoria modernization and enlargement of the building is in progress. This stands on a one-hectare site, half of which is kept as a nursery that presently contains yellow cedar clonal material, rooted Douglas fir cuttings and weevil resistant spruce. Trials with various herbicides and growth studies are also conducted here.

The tree improvement group includes the work of provenance testing, that is the testing of trees of diverse geographic origins within the species range to determine how they fare outside their natural habitat in comparison to the local variety. Data from this work gives important information on the suitability of reforestation after logging with other than the local provenance, should sufficient seed be unavailable or should a different provenance be more suitable by reason of resistance to local diseases or general vigour. This section is the responsibility of a forester who now has one technician for each major species — Douglas fir, Sitka spruce and lodgepole pine.

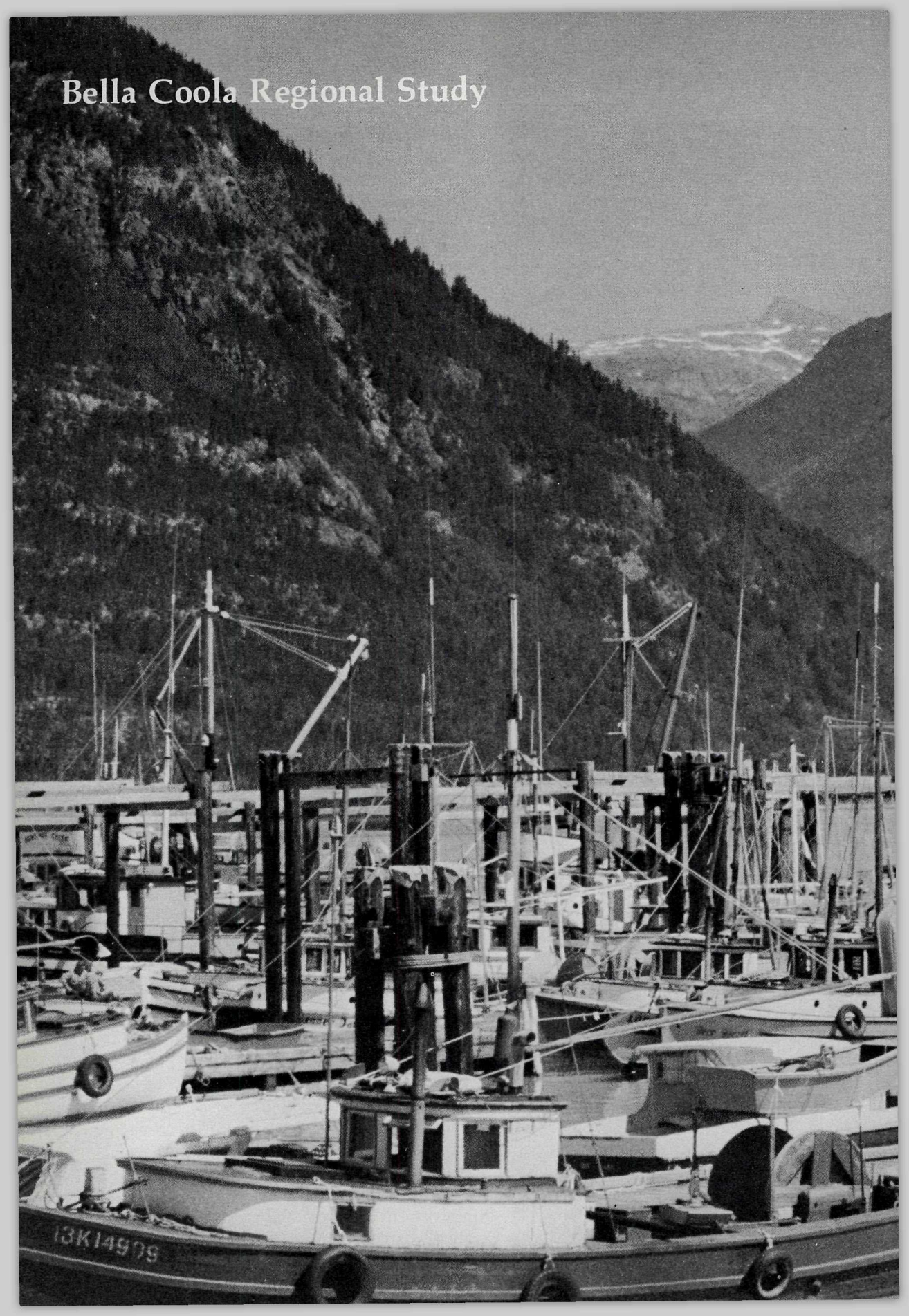
The tree breeding section initially concentrated on Douglas fir, being the species that was being logged principally on Vancouver Island and the lower mainland, and much of the work was done at the Cowichan Lake Experiment Station near Duncan. Four years ago a large genetic program was started on white and Engelmann spruce at Red Rock near Prince George. The young trees of this program are likely to produce cones earlier if grown in a warmer climate and a location near Vernon in the Okanagan has been selected as a suitable site in which to establish a research centre. Plans are in hand to move plant material there next spring. In addition, the amount of lodgepole pine being logged and available for logging necessitates a program of genetic studies, involving intraspecific crosses. A geneticist is being hired for this work.

In the silviculture group, mention of the Regional Research Officers has already been made. Traditionally these scientists spent most of their time on silviculture, but with the shift in their duties in the last two years towards liaison functions and district research program planning, this pattern is changing.

The work of the physiologists and biochemist in the division has expanded in response to increased production of nursery stock. From one full-time scientist in 1970 there are now four with additional contract backing. The North Road facility has expanded its technician staff to keep up with the work generated, particularly analysis of tissue and soil samples, the latter soon to increase rapidly as a result of the hiring of the pedologist in the Forest Districts.

At the Red Rock Nursery and Research Centre there is a nursery, greenhouse and lathhouse standing on a one-and-a-half-hectare site. Together with material belonging to the Reforestation Division in a 120-hectare cleared area, there is a 36-hectare pinetum, 10 hectares of spruce breeding material and four hectares ready for a spruce planting stock trial in 1975. Nearby there is a three-hectare picetum containing white and exotic spruce and two more spruce clone banks of two hectares each.

Bella Coola Regional Study



The Bella Coola Regional Study was initiated in April 1974 and encompasses the Dean, Rivers Inlet and Chilko Public Sustained Yield Units.

The purpose of the study was to establish priorities and set guidelines for forest development and ensure that such development be linked to and be compatible with the social, economical, and environmental needs of the region.

The Forest Service's Special Studies Division co-ordinated the study which was interdepartmental in nature. In addition a citizen participation program was instituted permitting the inclusion of locally elected representatives from the Regional Districts and Indian Band Councils in the planning and on-going decision-making process.

There were three major phases to the study: collecting and collating existing information on the resources of the region; the analysis of data and the identification of integrated land use constraints and; the establishment of priorities and guidelines for development.

Results of the study indicate that surveys of the wildlife and inland fish populations were incomplete, with virtually no information available about many species. Other resources were better inventoried but none completely enough to be adequate for integrated land use planning. Although logging and pulp manufacturing have been major industries since the turn of the century, their impact on the region has been limited. The rate of forest extraction was slow and impacts on other resources were few and localized.

The isolation of the region has restricted development. Workers are reluctant to live in remote communities when there are alternate opportunities closer to more developed areas. Intra-regional transportation networks are inadequate to promote easy distribution of goods and services and add to the costs of goods coming into and going out of the areas. The communities rely on distant centres for supplies as well as markets for local products.

The local communities are faced with the problem of outmigration of younger people in search of employment opportunities. Those communities, which are dependent upon the fishing industry, have had a decline in their economic base. Many residents of these communities do not have sufficient formal education or job skills to take advantage of alternate opportunities. These problems are most acute for the Indian population.

The potential for development and constraints imposed by integrated use were identified as follows:

Mineral Resource — Although a number of small mineralized showings were developed, no productive mine has ever operated in the region. Despite the ruggedness of the terrain, the area has been extensively prospected but the chances of a major find appear small.

Water Resource — Many of the rivers are suitable for hydro-electric development but only at Ocean Falls and Bella Coola has there been any hydro-electric generation developed. Two rivers, the Dean and the Homathko, have been investigated by B.C. Hydro and Power Authority for large-scale development.

Four communities have developed their own water supplies. All are adequate for the present needs of the communities. There are no apparent conflicts of use in any of the watersheds.

Agriculture Resource — Within the Dean and Rivers Inlet Public Sustained Yield Units (P.S.Y.U.) the Bella Coola Valley is the only area suitable for farming.

Although the climate and soil conditions make the valley suitable for horticulture and livestock production, the area is limited and development is restricted due to lack of markets. The only agricultural activity in the Chilko P.S.Y.U. is ranching. However, there is sufficient rangeland suitable for expansion of the industry.

Fisheries Resource — The commercial fishing for anadromous fish achieves full utilization of natural production in the coastal portion of the study areas. Maintaining existing production will require protection of the aquatic habitat of all salmon producing waters. Much of the potential damage to the aquatic environment can be avoided or significantly reduced by applying dispersed logging patterns and avoiding rapid removal of timber within single watersheds to minimize detrimental hydrologic changes.

The study emphasized that the Wannock River and Owikeno Lake watershed are particularly sensitive areas which must be intensively managed to prevent degradation of the fishery resource. It is also indicated that the present log handling facilities in the Rivers Inlet estuary limit the volume of timber which can be extracted from the Owikeno Lake watershed.

Salmon enhancement projects are being considered for the Atnarko and Wannock Rivers.

Wildlife Resource — Logging has a significant influence on the wildlife resource. It changes the environment, variations in the abundance, distribution and species composition of the animal community.

Only the grizzly bear, mountain caribou and mountain goat were selected by the Fish and Wildlife Branch for protection from the impact of logging. Most other species will not be endangered, or will be afforded protection by the same measures taken to ensure the well-being of anadromous fish and mammalian species mentioned above.

The Chilko P.S.Y.U. contains large areas with good capability for producing ungulates. The requirements of these animals must be considered on a site-specific basis, by species, when plans are developed for the area.

Recreation Resource — The Parks Branch identified areas of prime potential for recreational boating and were concerned that all safe anchorages not become occupied by log rafts. Another area of interest was the west side of the Talchako River.

In the Chilko P.S.Y.U. the recreation potential was identified and should be given primary consideration in land use plans by all government agencies.

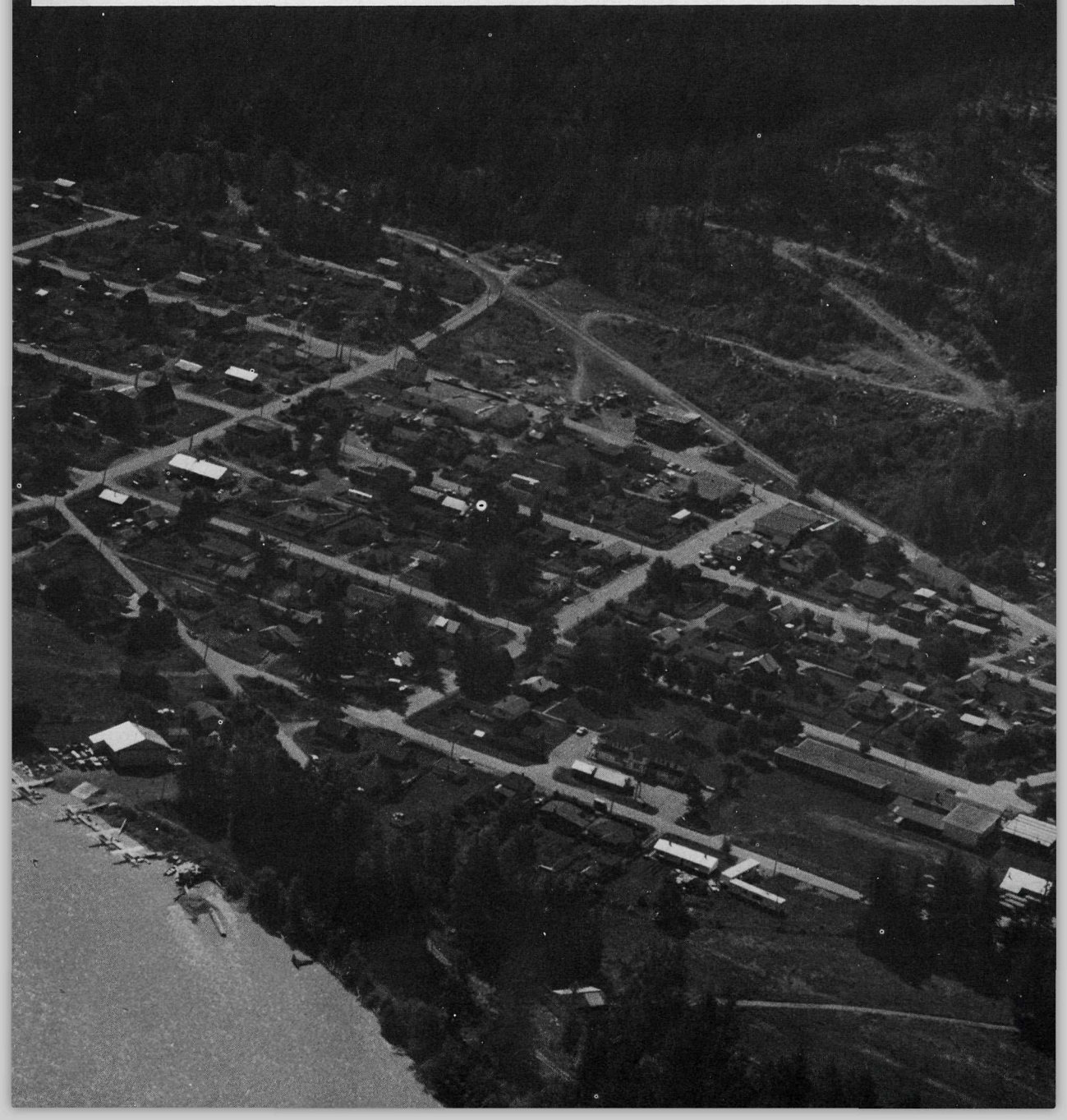
Forest Resource — A deferment in the allowable annual cut was made for all low site lands. In the Dean and Rivers Inlet P.S.Y.U.'s an additional deferment in cut was made for environmentally sensitive sites and marginal stands. The Forest Service designated the Chilcotin Block of the Chilko P.S.Y.U. as a no-logging unit where all logging is deferred until an integrated use plan is prepared.

In the Dean and Rivers Inlet P.S.Y.U.'s the deferment in cut for low site, environmentally sensitive sites and marginal stands was made because:

- The majority of the poor sites which have stands older than 251 years and less than 95 feet in height are located on steep terrain on shallow soil over bedrock. Erosion problems could be created if conventional harvesting practices are used.
- Difficult soil conditions and the decadent condition of poor and low site stands would result in silvicultural problems if conventional logging practices were used.
- Low and poor sites are dominated by low grade cedar which has a market value insufficient to offset the high development cost.
- Past and current harvesting has not occurred on marginal sites. An annual allowable cut which includes these sites will result in an overcut on the good and medium sites.

The following table shows the allowable annual cut (all types, all sites, all access) and reflects the deferment in cut for low sites, environmentally sensitive sites and marginal forest stands.

Unit Name	Allowable Annual Cut 6″ Top D.I.B. Ccf. (100 cubic feet)	Deferment For Low Site Forest Types Ccf.	Deferment For Environmentally Sensitive Sites & Marginal Stands Ccf.	Reduced AAC Ccf.
Dean P.S.Y.U.	519,480	2,400	113,758	403,322
Rivers Inlet P.S.Y.U.	575,130	103,210	42,000	429,920
Chilko P.S.Y.U.	484,000	163,810	66,860	253,330



After deferments, the Crown productive forest land was reduced by 280,716 acres, or 29%, for the Dean P.S.Y.U.; and 427,914 acres, or 47% for the Rivers Inlet P.S.Y.U. In the Chilko P.S.Y.U. the deferment in acreage for the low site forest types and the Chilcotin no-logging subunit was 1,076,942 acres, or 34%, of the total acres of Crown productive forest land.

Although the net allowable annual cut for the Dean P.S.Y.U. is 403,322 Ccf., the Rivers Inlet 429,920 Ccf. and the Chilko 253,330 Ccf., constraints exist which could preclude full realisation of the potential allowable annual cuts. These constraints are:

Existing technology — At present the majority of operations have occurred on the accessible sites in the large river valleys. As these valleys are rapidly being cut on the first pass, future operations will have to move into the more rugged terrain on the higher side slopes, smaller valleys, and upper reaches of the watersheds where road access and current harvesting techniques are too costly or environmentally unacceptable.

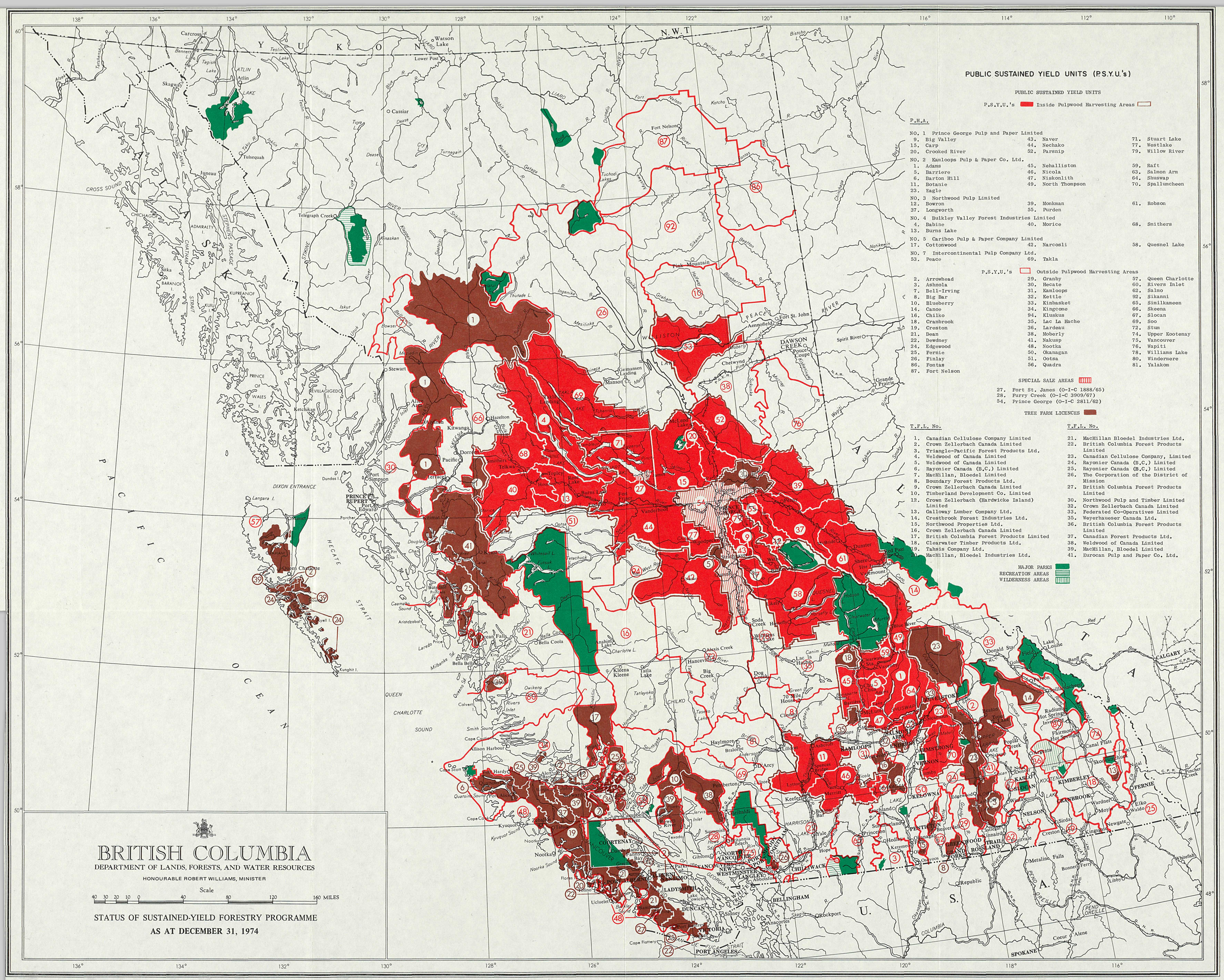
Operations must become highly mobile and innovative. Logging systems, such as skyline yarding, aerial tramways, and balloon or helicopter logging will have to be developed or a large portion of the land on which the A.A.C. is based will not be available for harvesting.

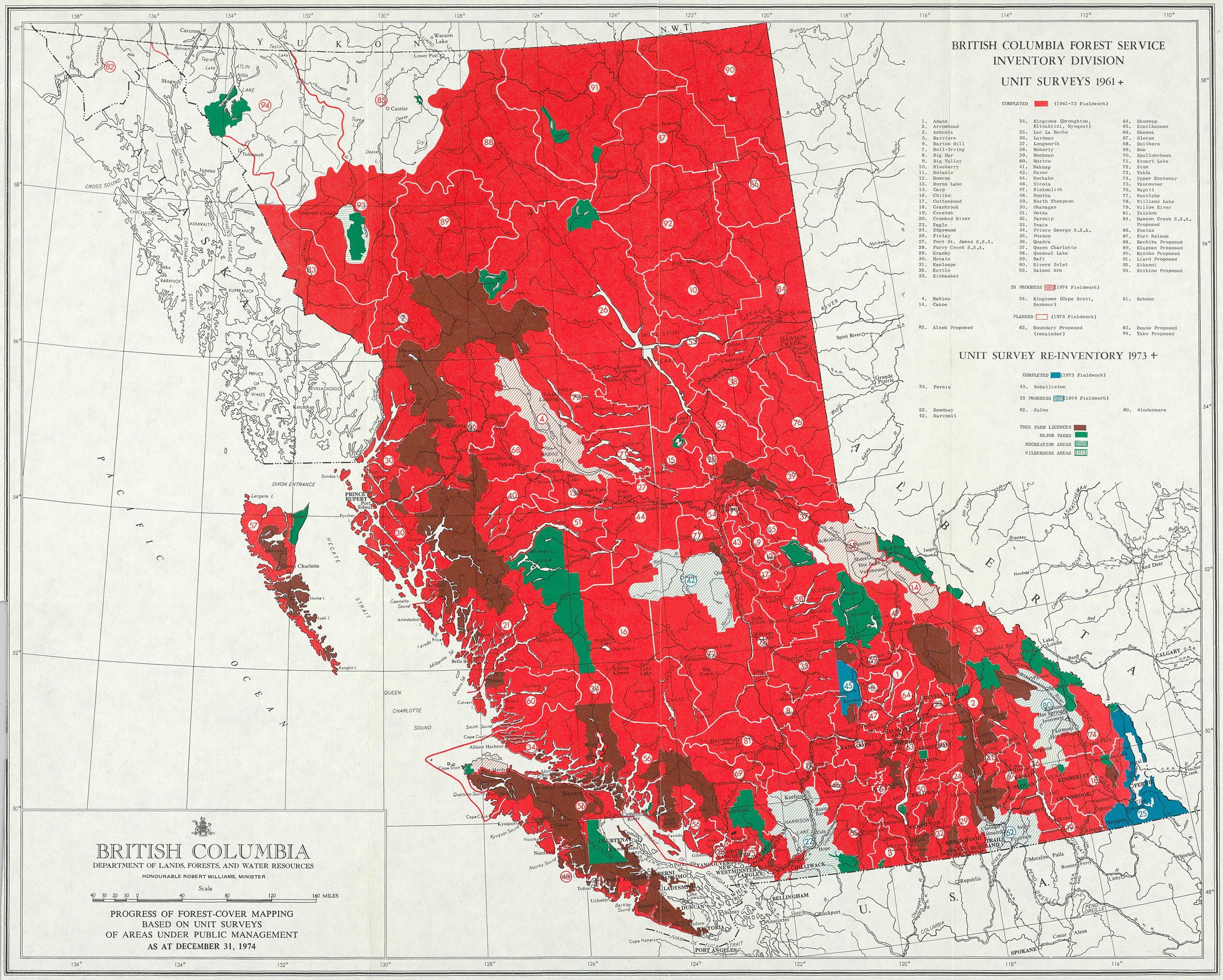
Physiography and climate — the rugged topography of the coast fragments logging operations and hinders transportation and acts as a barrier to the transport of logs to the coast from the Interior Plateau. Heavy rainfall and snowfall on the west side of the Coast Mountains shorten the operating season while the rainshadow on the east side inhibits the growth of commercial forests. The steep terrain and heavy rains also combine to create a sensitive hydrologic regime that must be intensively managed to prevent high peak stream flows, sedimentation and mass wasting.

Watershed management and protection of fish and wildlife — The needs for management and the requirements to protect fish and wildlife restricts the rate at which forest development can proceed in any one watershed. Because of the restrictions in rate of cut in watersheds, operations must be simultaneous on many fronts if the sum of the cuts from individual operations is to total the net allowable cuts.

Conclusions — The study provides a data base for on-going planning. Large scale industrial developments in the region will be severely constrained by the lack of a labour supply and adequate intra-regional transportation infrastructure. To expand the regional economy it is essential to upgrade Highway 20. Because of its position in the transportation network, Bella Coola is a logical regional center and development there would have an impact on the whole region. Bella Bella is another possible growth center.

The forest resources of the region are considered to be suitable for the manufacture of lumber and pulp. Based on the next allowable annual cuts it is indicated there is a significant potential for further development of the forest industry. However, economical, biophysical and technological constraints must be overcome before the full potential of the allowable annual cuts can be realised. Local communities will benefit from increased logging and sawmilling. However, if the forest resource is to be used to support a new pulpmill, careful consideration should be given to the location of the mill and the new pulping technologies being developed which can comply with pollution standards. To maximize the benefits to the people of the province, it may be advantageous to locate near labour supplies, markets or other plants rather than near the wood supply.


PUBLIC SUSTAINED YIELD UNITS (P.S.Y.U.'s)
PUBLIC SUSTAINED YIELD UNITS
P.S.Y.U.'s Inside Pulpwood Harvesting Areas
P.H.A.
NO. 1 Prince George Pulp and Paper Limited
9. Big Valley
15. Carp
20. Crooked River
43. Naver
44. Nechako
52. Parsnip
71. Stuart Lake
77. Westlake
79. Willow River
NO. 2 Kamloops Pulp & Paper Co. Ltd.
1. Adams
5. Barriere
6. Barton Hill
11. Botanie
23. Eagle
45. Nehalliston
46. Nicola
47. Niskonlith
49. North Thompson
59. Raft
63. Salmon Arm
64. Shuswap
70. Spallumcheen
NO. 3 Northwood Pulp Limited
12. Bowron
37. Longworth
39. Monkman
55. Purden
61. Robson
NO. 4 Bulkley Valley Forest Industries Limited
4. Babine
13. Burns Lake
40. Morice
68. Smithers
NO. 5 Cariboo Pulp & Paper Company Limited
17. Cottonwood
42. Narcosli
58. Quesnel Lake
NO. 7 Intercontinental Pulp Company Ltd.
53. Peace
69. Takla
P.S.Y.U.'s Outside Pulpwood Harvesting Areas
2. Arrowhead
3. Ashnola
7. Bell-Irving
8. Big Bar
10. Blueberry
14. Canoe
16. Chilko
18. Cranbrook
19. Creston
21. Dean
22. Dewdney
24. Edgewood
25. Fernie
26. Finlay
86. Fontas
87. Fort Nelson
29. Granby
30. Hecate
31. Kamloops
32. Kettle
33. Kinbasket
34. Kingcome
94. Kluskus
35. Lac La Hache
36. Lardeau
38. Moberly
41. Nakusp
48. Nootka
50. Okanagan
51. Ootsa
56. Quadra
57. Queen Charlotte
60. Rivers Inlet
62. Salmo
92. Sikanni
65. Similkameen
66. Skeena
67. Slocan
69. Soo
72. Stum
74. Upper Kootenay
75. Vancouver
76. Wapiti
78. Williams Lake
80. Windermere
81. Yalakom
SPECIAL SALE AREAS
27. Fort St. James (O-I-C 1888/65)
28. Furry Creek (O-I-C 3909/67)
54. Prince George (O-I-C 2811/62)
TREE FARM LICENCES
T.F.L. No.
1. Canadian Cellulose Company Limited
2. Crown Zellerbach Canada Limited
3. Triangle-Pacific Forest Products Ltd.
4. Weldwood of Canada Limited
5. Weldwood of Canada Limited
6. Rayonier Canada (B.C.) Limited
7. MacMillan, Bloedel Limited
8. Boundary Forest Products Ltd.
9. Crown Zellerbach Canada Limited
10. Timberland Development Co. Limited
12. Crown Zellerbach (Hardwicke Island) Limited
13. Galloway Lumber Company Ltd.
14. Crestbrook Forest Industries Ltd.
15. Northwood Properties Ltd.
16. Crown Zellerbach Canada Limited
17. British Columbia Forest Products Limited
18. Clearwater Timber Products Ltd.
19. Tahsis Company Ltd.
20. MacMillan, Bloedel Industries Ltd.
21. MacMillan Bloedel Industries Ltd.
22. British Columbia Forest Products Limited
23. Canadian Cellulose Company, Limited
24. Rayonier Canada (B.C.) Limited
25. Rayonier Canada (B.C.) Limited
26. The Corporation of the District of Mission
27. British Columbia Forest Products Limited
30. Northwood Pulp and Timber Limited
32. Crown Zellerbach Canada Limited
33. Federated Co-Operatives Limited
35. Weyerhaueser Canada Ltd.
36. British Columbia Forest Products Limited
37. Canadian Forest Products Ltd.
38. Weldwood of Canada Limited
39. MacMillan, Bloedel Limited
41. Eurocan Pulp and Paper Co. Ltd.
MAJOR PARKS
RECREATION AREAS
WILDERNESS AREAS
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS, AND WATER RESOURCES
HONOURABLE ROBERT WILLIAMS, MINISTER
Scale
40 30 20 10 0 40 80 120 160 MILES
STATUS OF SUSTAINED-YIELD FORESTRY PROGRAMME
AS AT DECEMBER 31, 1974
Y U K O N
N.W.T.
A L A S K A
P A C I F I C O C E A N
A L B E R T A
U. S. A.
Watson Lake
Lower Post
Carcross
Atlin
Skagway
Tulsequah
Juneau
Cassiar
Telegraph Creek
Stewart
Ketchikan
Prince Rupert
Port Simpson
Port Edward
Masset
Queen Charlotte
Sandspit
Bella Bella
Ocean Falls
Bella Coola
Tofino
Ucluelet
Port Hardy
Alert Bay
Campbell River
Courtenay
Nanaimo
Ladysmith
Duncan
Victoria
Port Angeles
Cape Flattery
Bellingham
Anacortes
Rockport
Sidney
Vancouver
New Westminster
Langley
Abbotsford
Chilliwack
Hope
Princeton
Penticton
Kelowna
Vernon
Kamloops
Merritt
Lillooet
Williams Lake
Quesnel
Prince George
Dawson Creek
Fort St. John
Fort Nelson
Mackenzie
Smithers
Terrace
Kitimat
Prince Rupert
Dease Lake
Atlin
Haines
Skagway
Whitehorse
Dawson
Fort Simpson
Fort Nelson
Fort St. John
Dawson Creek
Chetwynd
Mackenzie
Prince George
Quesnel
Williams Lake
Lillooet
Merritt
Kamloops
Salmon Arm
Revelstoke
Golden
Cranbrook
Kimberley
Fernie
Nelson
Trail
Grand Forks
Kaslo
Nakusp
Vernon
Kelowna
Penticton
Princeton
Hope
Chilliwack
Vancouver
Victoria
Calgary
Banff
Lake Louise
Spokane
Coeur d'Alene
Libby
Kalispell
Cranbrook
Lethbridge
Medicine Hat
Great Falls
Havre
Glacier National Park
Yellowstone National Park
Jasper National Park
Banff National Park
Kootenay National Park
Yoho National Park
Waterton Lakes National Park
Glacier National Park
Wilderness Areas
Recreation Areas
Major Parks
Inside Pulpwood Harvesting Areas
Outside Pulpwood Harvesting Areas
Special Sale Areas
Tree Farm Licences
Pacific Ocean
Queen Charlotte Sound
Hecate Strait
Dixon Entrance
Juan de Fuca Strait
Georgia Strait
Puget Sound
Columbia River
Peace River
Fraser River
Kootenay Lake
Okanagan Lake
Shuswap Lake
Quesnel Lake
Williston Lake
Kinbasket Lake
Arrow Lake
Pend Oreille Lake
Lake Louise
Banff
Jasper
Golden
Revelstoke
Kamloops
Vernon
Kelowna
Penticton
Nelson
Trail
Kimberley
Cranbrook
Fernie
Kaslo
Nakusp
Grand Forks
Salmo
Creston
Sirdar
Newgate
Moyie
Wardner
Elko
Waldo
Fernie
Canal Flats
Skookumchuck
Radium Hot Springs
Invermere
Fairmont Hot Springs
Golden
Donald Station
Revelstoke
Salmon Arm
Sicamous
Shuswap
Chase
Clearwater
Vavenby
Blue River
Valemount
McBride
Dunster
Shelley
Tête Jaune Cache
Red Pass Junction
Prince George
Vanderhoof
Fort Fraser
Fort St. James
Fort Nelson
Fort St. John
Dawson Creek
Chetwynd
Mackenzie
Tumbler Ridge
Hudson Hope
Pink Mountain
Takla Landing
Manson Creek
Germansen Landing
Gitanyow
Kitwanga
Hazelton
Smithers
Telkwa
Houston
Topley
Burns Lake
Fort Fraser
Vanderhoof
Fraser Lake
Fort St. James
Mackenzie
Tumbler Ridge
Chetwynd
Dawson Creek
Fort St. John
Fort Nelson
Prince George
Quesnel
Williams Lake
Lillooet
Pemberton
Squamish
Whistler
Gibsons
Sechelt
Powell River
Campbell River
Port Alberni
Ucluelet
Tofino
Port Hardy
Alert Bay
Port McNeill
Port Alberni
Nanaimo
Ladysmith
Duncan
Victoria
Sidney
Saltspring Island
Salt Spring Island
Galiano Island
Mayne Island
Pender Islands
Gabriola Island
Denman Island
Hornby Island
Texada Island
Lasqueti Island
Quadra Island
Cortes Island
Vancouver Island
Haida Gwaii
Queen Charlotte Islands
Graham Island
Moresby Island
Langara Island
Dixon Entrance
Hecate Strait
Queen Charlotte Sound


BRITISH COLUMBIA FOREST SERVICE
INVENTORY DIVISION
UNIT SURVEYS 1961 +
COMPLETED (1961-73 Fieldwork)
1. Adams
2. Arrowhead
3. Ashnola
5. Barriere
6. Barton Hill
7. Bell-Irving
8. Big Bar
9. Big Valley
10. Blueberry
11. Botanie
12. Bowron
13. Burns Lake
15. Carp
16. Chilko
17. Cottonwood
18. Cranbrook
19. Creston
20. Crooked River
23. Eagle
24. Edgewood
26. Finlay
27. Fort St. James S.S.A.
28. Furry Creek S.S.A.
29. Granby
30. Hecate
31. Kamloops
32. Kettle
33. Kinbasket
34. Kingcome (Broughton, Klinaklini, Kyuquot)
35. Lac La Hache
36. Lardeau
37. Longworth
38. Moberly
39. Monkman
40. Morice
41. Nakusp
43. Naver
44. Nechako
46. Nicola
47. Niskonlith
48. Nootka
49. North Thompson
50. Okanagan
51. Ootsa
52. Parsnip
53. Peace
54. Prince George S.S.A.
55. Purden
56. Quadra
57. Queen Charlotte
58. Quesnel Lake
59. Raft
60. Rivers Inlet
63. Salmon Arm
64. Shuswap
65. Similkameen
66. Skeena
67. Slocan
68. Smithers
69. Soo
70. Spallumcheen
71. Stuart Lake
72. Stum
73. Takla
74. Upper Kootenay
75. Vancouver
76. Wapiti
77. Westlake
78. Williams Lake
79. Willow River
81. Yalakom
84. Dawson Creek S.S.A. Proposed
86. Fontas
87. Fort Nelson
88. Kechika Proposed
89. Klappan Proposed
90. Kotcho Proposed
91. Liard Proposed
92. Sikanni
93. Stikine Proposed
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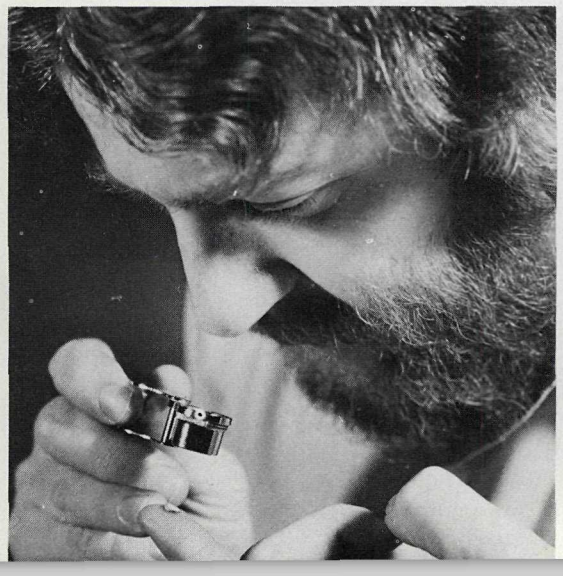
4. Babine
14. Canoe
34. Kingcome (Cape Scott, Seymour)
61. Robson
PLANNED (1975 Fieldwork)
82. Alsek Proposed
83. Boundary Proposed (remainder)
85. Dease Proposed
94. Taku Proposed
UNIT SURVEY RE-INVENTORY 1973 +
COMPLETED (1973 Fieldwork)
25. Fernie
45. Nehalliston
IN PROGRESS (1974 Fieldwork)
22. Dewdney
42. Narcosli
62. Salmo
80. Windermere
TREE FARM LICENCES
MAJOR PARKS
RECREATION AREAS
WILDERNESS AREAS
BRITISH COLUMBIA
DEPARTMENT OF LANDS, FORESTS, AND WATER RESOURCES
HONOURABLE ROBERT WILLIAMS, MINISTER
Scale
40 30 20 10 0 40 80 120 160 MILES
PROGRESS OF FOREST-COVER MAPPING
BASED ON UNIT SURVEYS
OF AREAS UNDER PUBLIC MANAGEMENT
AS AT DECEMBER 31, 1974
Y U K O N
N.W.T.
ALBERTA
U.S.A.
PACIFIC OCEAN
QUEEN CHARLOTTE SOUND
DIXON ENTRANCE
HECATE STRAIT
CROSS SOUND
PRINCE RUPERT
Queen Charlotte
Prince of Wales I.
Ketchikan
Skagway
Juneau
Sitka
Stewart
Kitimat
Terrace
Prince George
Quesnel
Williams Lake
Kamloops
Vernon
Kelowna
Penticton
Nelson
Trail
Cranbrook
Kimberley
Fernie
Revelstoke
Golden
Jasper
Dawson Creek
Fort St. John
Fort Nelson
Fort St. James
Fort Fraser
Vanderhoof
Burns Lake
Smithers
Hazelton
Atlin
Carcross
Watson Lake
Lower Post
Cassiar
Telegraph Creek
Tulsequah
Victoria
Vancouver
Nanaimo
Port Alberni
Courtenay
Campbell River
Port Hardy
Tofino
Ucluelet
Zeballos
Port Alberni
Cape Scott
Cape Flattery
Port Angeles
Bellingham
Spokane
Coeur d'Alene
Calgary
Edmonton
Grande Prairie
Fort St. John
Dawson Creek
Chetwynd
Mackenzie
Hudson's Hope
Pine Mountain
Spirit River
Peace River
Notikewin
Liard River
Fort Nelson
Muskwa
Kwadacha
Tsitsutl
Nechako
Stuart
Takla
Babine
Tahtsa
Ootsa
Kitimat
Skeena
Nass
Stikine
Taku
Alsek
Tatshenshini
Yukon
Peace
Liard
Fraser
Thompson
Columbia
Kootenay
Okanagan
Similkameen
Nicola
Bella Coola
Chilcotin
Chilko
Quesnel
Cariboo
Thompson
Lillooet
Shuswap
Kootenay
Boundary
Selkirk
Rocky Mountains
Cariboo Mountains
Coast Mountains
Omineca Mountains
Cassiar Mountains
Selkirk Mountains
Purcell Mountains
Rocky Mountains
Queen Charlotte Islands
Vancouver Island
Gulf Islands
Haida Gwaii
Stikine Plateau
Nechako Plateau
Chilcotin Plateau
Okanagan Highland
Kootenay Lake
Okanagan Lake
Shuswap Lake
Quesnel Lake
Williams Lake
Kamloops Lake
Nicola Lake
Okanagan Lake
Kootenay Lake
Arrow Lake
Slocan Lake
Columbia River
Fraser River
Peace River
Liard River
Stikine River
Skeena River
Nass River
Yukon River
Alsek River
Tatshenshini River
Kootenay River
Okanagan River
Similkameen River
Thompson River
Nechako River
Stuart River
Takla Lake
Babine Lake
Tahtsa Lake
Ootsa Lake
Kitimat River
Skeena River
Nass River
Stikine River
Taku River
Alsek River
Tatshenshini River
Yukon River
Peace River
Liard River
Fraser River
Thompson River
Columbia River
Kootenay River
Okanagan River
Similkameen River
Nicola

Seed Production Program

Since the Crown controls 93 percent of the productive forest land in British Columbia, the Forest Service has an overiding responsibility to see that adequate supplies of quality seed are maintained. With the recent expansion in artificial regeneration mainly by planting, this need has become critical. To meet this need a seed production section has been set up in the Reforestation Division with the following objectives:

1. to ensure procurement of sufficient seed from natural stands and to provide technical guidance and training assistance to enable improvement on the overall quality of seed from natural stands,
2. to process, test, register, store, and maintain an inventory of all seed and prepare for use in nurseries, direct seeding, and other purposes,
3. to establish first phase seed production orchards either by grafting of scions or use of seedlings from selected high quality parent trees to produce regular supplies of seed with high germinative vigour and wide adaptability,
4. to review, integrate and control, and provide technical guidance to company programs which are on an approved forestry costs basis,
5. to establish second-phase seed orchards from progeny tested breeds of proven superior genetic quality produced by the tree improvement program of the Research Division.



Objectives 3 and 5 are designed to progressively — over the next 20 to 40 years — reduce dependence on chance collections from wild stands.

In the interim period seed requirements will be met by upgrading collections from natural stands by selecting and improving these stands, by seed production areas and by existing Forest Service and company seed orchards. To date 30 S.P.A.'s have been established throughout the province on 134 acres. In addition forest companies on the coast have established an additional 24 S.P.A.'s on another 134 acres.

Seed production areas are generally portions of naturally established young stands with a high proportion of well formed trees. By removing the more poorly formed trees, opening up the spacing to provide better air ventilation and more sunlight and by fertilization and other techniques enhanced seed production is expected. Some areas have responded well to such treatment while others have not.

Approximately 2,000 "plus" or parent trees have already been selected in the natural forests of British Columbia. These selections have been made in coastal Douglas fir, western hemlock, Sitka spruce and in the interior spruce, lodgepole pine and Douglas fir. The selection of these trees was made by foresters from companies, the University of British Columbia, the Research Division and the Reforestation Division working both under the auspices of the Tree Improvement Board in Plus Tree Weeks and individually. "Plus" trees are those selected as the one or two best growth-wise and form-wise in a forest stand which has been completely examined. Parent trees are those believed to be the best in a portion of a stand.

The Reforestation Division is charged with maintaining a register of all "plus" trees and parent trees selected in the Province. Information from this register will be used not only in the establishment of seed production orchards, but also in the Research Division program of developing superior breeds. Scions from selected trees are grafted into clone banks for preservation and seed collected from them goes into cold

storage where it may maintain its vigour for 20 years or more.

A number of seed orchards have already been established. The Reforestation Division has established three Coastal Douglas fir orchards at Campbell River and Duncan and a lodgepole pine orchard near Prince George. In addition several forest industrial companies have established seed orchards in coastal Douglas fir, western hemlock and Sitka spruce occupying an area of 80 acres.

One of the main purposes of the seed production section is to avoid duplication of effort by Forest Service and company foresters. To this end a review is currently under way to predict long term seed requirements, to establish priorities for seed production orchards and breeding programs for the major species in British Columbia.

Considerable planning is necessary to establish a program of seed production orchards which will match the seed requirements of the reforestation program. At present, no information is available to indicate the location and elevation of areas to be cutover and which will require reforestation 20 to 40 years hence. Considerable informed guesswork is required.

To achieve its objectives the seed production section has three subsections operating under the forester-in-charge. One of these is located at the Koksilah Nursery at Duncan; another is located at the Red Rock Nursery and Research Centre near Prince George; and a third section operates from the Skimikin Nursery near Salmon Arm to serve the southern interior.

To achieve this objective considerable support will be necessary from the various Ranger staffs, the forest districts and forester in industry throughout the province.

Staff and facilities of the seed production section will be attached to nurseries which will enable joint use of facilities, equipment and direct consultation on matters of propagation, development and establishment of orchards. Some orchards will be located adjacent to nurseries, others will be located in clusters close to a nursery which will serve as a headquarters for administrative and maintenance purposes.

Considerable land reconnaissance has been done to obtain land suitable for seed orchard sites. One 30-acre site has been secured in the Saanich peninsula (near Victoria) which is a desirable location because of the regular cone crops. This site will be used to establish a seedling of half-syb. orchard to produce high elevation Douglas fir seed for the Harrison-Lillooet Lake region. The orchard will be planted in the spring of 1975.

A 20-acre site adjacent to the Skimikin nursery near Salmon Arm has been cleared and fenced and planting of grafted interior spruce material will commence in 1976. This orchard will provide spruce seed for the interior plateau (Stuart Lake area).

Plans for 1976 call for commencement of parent tree selection for an orchard to provide spruce seed for the Smithers-Babine region and another to provide spruce seed for the southern interior. It is hoped to establish three orchards a year.

In an effort to try and stimulate flowering, orchards are generally located in areas with a warmer sunnier climate than the region where the parent trees were selected. To prevent contamination of the orchard by local pollen, it is necessary to delay flowering of the orchard by cooling with intermittent overhead irrigation. This requires considerable water and makes the location of suitable orchard sites more difficult.

While considerable expense is involved in the establishment of these seed production orchards it is warranted by the value to the economy of an assured supply of high quality seed. And as the tested breed of known genetic gain produced by the Research Division's tree improvement program begins to be available in 20 to 40 years to replace the seed production orchards, the required sites and facilities will be available and the seed production potential of various regions and sites for various species will be known.

Smoke Management

So long as old decadent timber stands are being logged, it is necessary to reduce the accumulation of logging waste and debris. At this stage, just about everything usable is being removed but in some areas the slash is too heavy to leave "as is" because of the fire hazard created and the difficulty for replanting. Actually about one-third of the logged areas fall into this category.

Mother Nature puts nutrients back into the soil by the use of fire and the normal decomposition which is, in reality, an extremely slow process of allowing oxygen to decompose the residual wood. This rotting is actually a slow burning process.

By using proper burning procedures in certain logged areas, the ground can be quickly brought back to grow a clean young stand of healthy trees relatively safe from a wildfire.

Satisfactory burning cannot be done when the debris and the weather is wet. Spring burning has been found to be far too risky. Late summer and the fall permit the best results. Even at this period, timing is important. If the debris is too dry, the burn is too hot and soil or other damage occurs. On the other hand, if the debris is too wet, there is little beneficial effect and a subsequent wildfire is likely to destroy all the new trees, many of which are planted by hand.

This means slash burns should be started on clear sunny days and the nuisance of smoke is present.

Wildfires continue to start. In excess of 2,000 occur each year. More than one-third of them are started by lightning and the rest are started by people. Fast initial attack using fire suppression crews with air tankers and helicopters, has reduced the extent of most of the wildfires so that little such smoke persists to obscure the summer scenery.

Slash fires lend themselves to control as to when they are started. This allows the privilege of restricting the number of fires in any one locality. Some slash areas have a much heavier amount of slash than others. This is considered. The topography is a big factor when burning slash and the chance of the right kind of weather continuing is very important.

The main factor is the presence of an upper wind for scattering the slash smoke at a relatively high altitude. A good slash burn produces a fast-rising column of smoke. The technique employs the principle of a very fast light-up so the air is drawn to the centre and rises due to the higher temperature. Incidentally, slash smoke is mainly water vapour with a small percentage of fine wood fly ash.

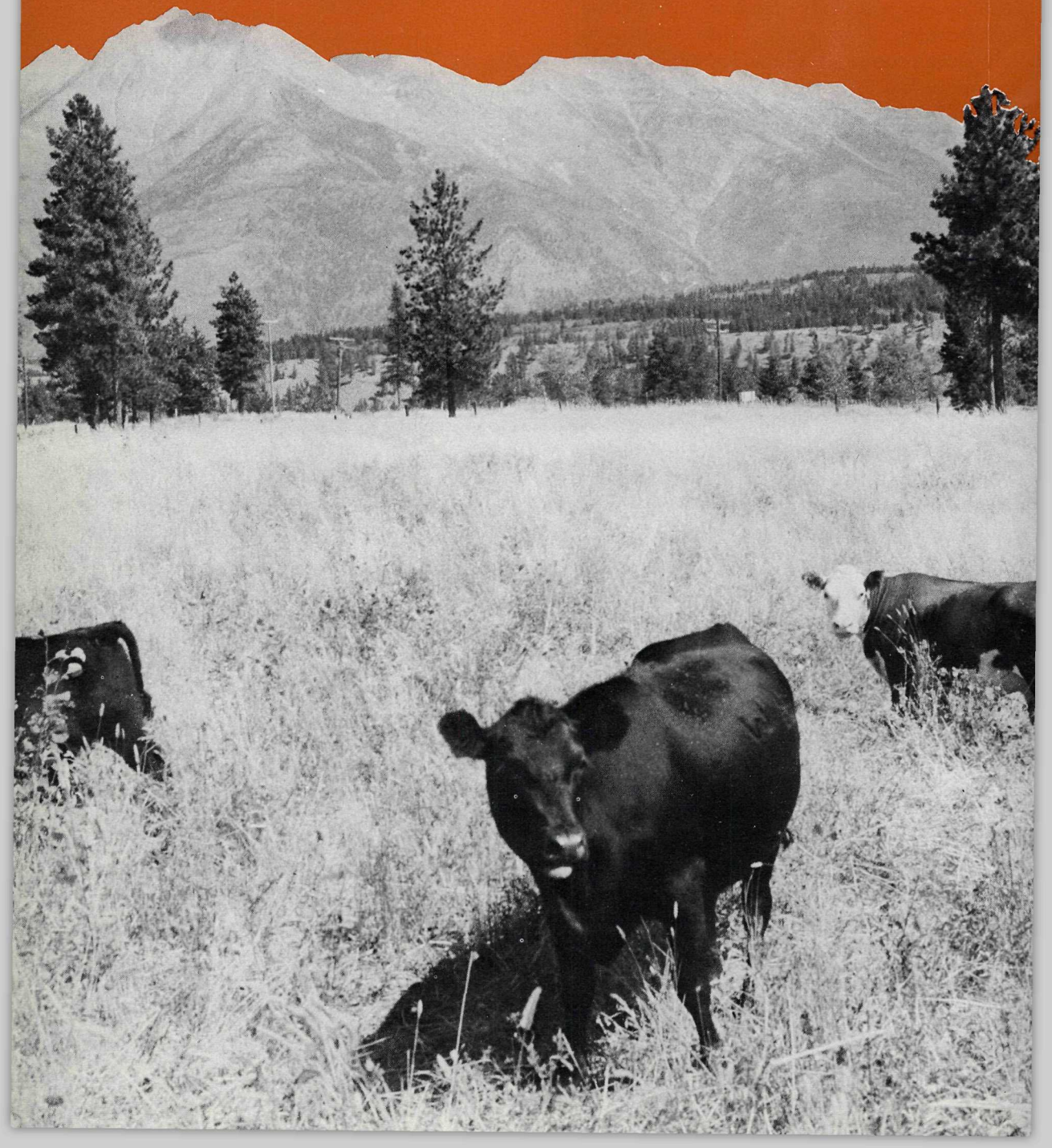
The key to this quick evacuation of the smoke is the altitude of the upper air flow. It must be present and it must be at an altitude that the column of smoke can reach before slowing down to allow it to drift aimlessly for several days.

Special equipment and trained observers are used by the Atmospheric Environmental Service. These weather prediction crews are an important part of the program. Other weather predictors are needed to furnish a reliable weather forecast for the ground level situation.

Good results of smoke management have been obtained for the Greater Vancouver area where most of the residents of the province live. This area often develops an undesirable air situation from the automobile and industry in the area. To add wood smoke may not increase the hazard but it certainly makes the situation far more noticeable. The principles of smoke management have been used for the areas that could produce smoke on the Vancouver area for the past two years. The result has been that very little slash smoke was visible during the summer and fall.

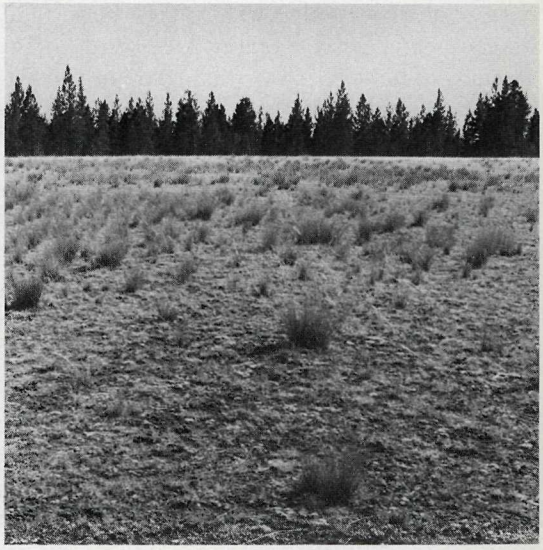
A start has been made on the Terrace-Kitimat area and the North Okanagan. The program is being actively pursued with the idea of having it apply to all areas where it is necessary.

Forest Range Seeding



In the more open timber stands found in the interior drybelt, nature has provided a ground cover of forage plants used by both domestic stock and wildlife. More than 80 percent of the range used by cattle in British Columbia is forest range. It is essential this multi-use forest land be managed for the production of meat as well as wood, recreation, clean water, and the maintenance of a desirable environment. The responsibility for such management rests with the Forest Service.

Our native forest range plans provide good forage. However, through plant selection and breeding, varieties of grasses and legumes have been developed which are higher producing, more nutritious and better able to withstand grazing by cattle. The seeding of such grasses and legumes can be a valuable adjunct to good range management to improve forage production for both livestock and wildlife. Seeding can also help protect or repair the forest environment where it has been disturbed by industrial activity or natural disasters such as wildfire. On the other hand, seeding has limitations and even creates problems under certain circumstances. There are many factors the forest land manager must consider in making the best use of this tool.



First, even the best adapted grasses and legumes for which seed can be obtained have special requirements for their establishment and survival. They need a suitable seed-bed and reasonable amount of light. The undisturbed forest which cannot be cultivated and casts deep shades presents little opportunity for forage improvement through seeding. Here we must rely on the shade-tolerant plants, which have developed in this environment, and manage grazing to ensure they are not destroyed and maintain both their forage producing and soil protection roles.

The opportunity and need for seeding normally arises as a result of man's other activities in the forest such as logging, powerline and road construction, and similar operations. These activities result in the tree cover being removed or thinned and much bare soil being exposed. Wildfires often burn

so intensely that both the overstory and the ground cover of native plants is completely destroyed.

Occasionally, openings in the forest are deliberately created to improve conditions for both cattle and wildlife. These are the sites on which seed will germinate and introduced grasses and legumes will survive for many years. Thousands of acres of such sites are seeded by the Forest Service each year. In 1974 approximately 98,000 pounds of grass and clover seed was used for this purpose. Lost grazing values are not only restored but improved — an obvious benefit to livestock and many kinds of wildlife.

Seeding has many other benefits. When ground is stripped of vegetation and left bare, valuable soil may be washed away leaving an ugly barren site and silted streams. The seeding of fast-growing grasses can quickly bind the soil and prevent or greatly reduce this serious loss.

Bare ground is also an open invitation for weeds and other undesirable plants to become established. Many of our noxious weed problems today are the result of carelessly left bare ground. A sturdy growth of grass and clover gives weeds little chance to invade the site.

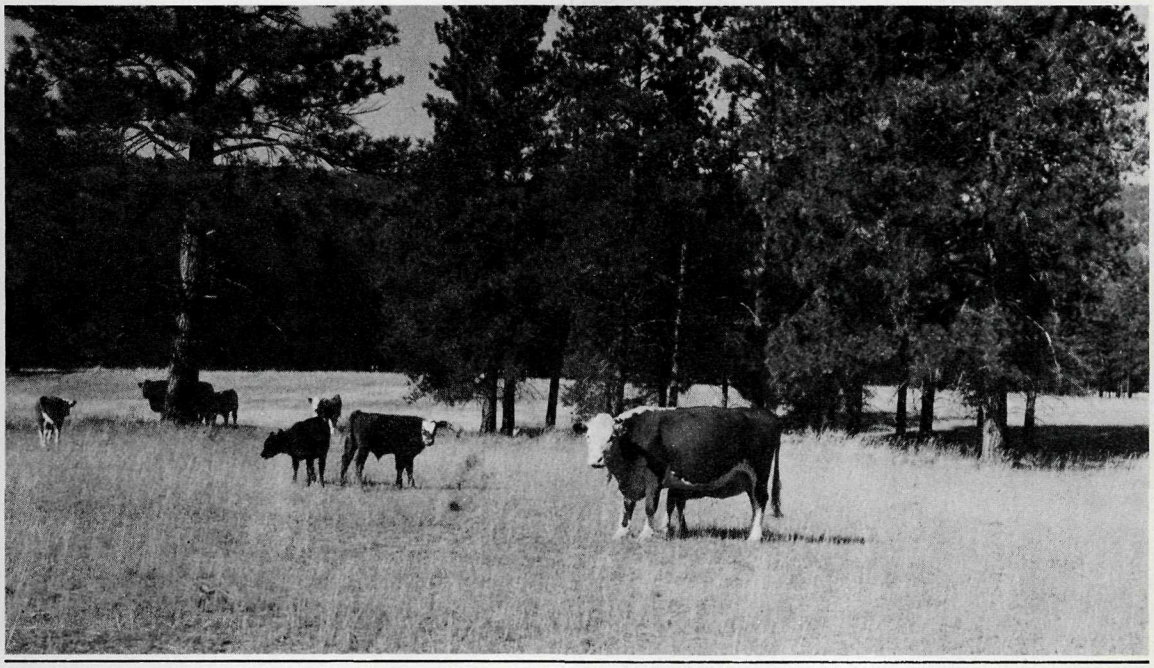
Trees and other plants draw mineral nutrients from the soil. As these plants die and rot on the ground these nutrients are slowly released into the soil and taken up by growing plants. This is nature's way of "recycling" and conserving valuable plant food. However, many of the nutrients found in plants are converted to soluble compounds when burned and are scattered as ash. In this form nutrients are readily washed away or leached out of the soil. Nature usually provides some quick-growing plants in an effort to recapture these nutrients and hold them in the cycle. But when a forest burns, vast quantities of nutrients are released and nature may need help. Seeded grasses and legumes — clovers and the like — can provide this assistance.

In addition to their roles of erosion control and preventing weed invasion and nutrient loss, grasses and legumes are great builders of soil fertility. Their extensive root systems build up organic matter in the soil. The legumes are among the few plants which can capture free nitrogen from the air and convert this essential nutrient to a form which they and other plants can use. They are natural fertilizer factories.

In spite of these advantages, not all burned or logged forest land is seeded. In some cases there are enough good native plants left to quickly reproduce and restore lost grazing values and protect the soil. In this situation the native plants would prevent the introduced grasses from becoming established and seeding would be a costly waste.

Grasses and legumes compete with other plants for space, water, nutrients and light. The degree to which grasses will compete successfully with other plants varies widely according to a variety of complex factors including the nature of the associated plants. Fortunately, on most forest range sites competition by properly selected and seeded grasses does not unduly impede tree regeneration or growth and the increased forage production and soil improvement more than compensates for any slowdown in early tree growth.

However, on some sites — particularly at higher elevations — seeding of grass remains a controversial issue. Here, tree regeneration is difficult anyway and when it does become established it will soon crowd out the grasses. On the other hand, grass grows so luxuriantly on these sites that some fear it will unduly delay tree regeneration. The Forest Service, in co-operation with other agencies, is carrying out research to determine the advantages of seeding on such sites without undue adverse effect on tree production.



GRAZING PERMITS ISSUED, 1974

Forest District	Number of Permits Issued	Number of Stock Permitted			AUM's* use of Crown Range
		Cattle	Horses	Sheep	
Kamloops	584	77,920	509	850	320,110
Nelson	358	19,216	719	12	81,706
Prince George	390	16,161	1,835	918	57,793
Cariboo	657	69,634	2,483	37	349,013
Vancouver	11	225	—	4	616
Totals, 1974	2,000	183,156	5,546	1,821	809,238
Totals, 1973	1,920	177,785	5,748	1,616	783,677
Totals, 1972	1,968	174,617	6,166	1,432	787,589
Totals, 1971	1,920	178,772	6,186	1,484	829,337
Totals, 1970	1,985	178,332	5,651	2,739	822,442
Totals, 1969	2,018	180,579	5,545	5,106	837,405
Totals, 1968	2,053	188,183	6,338	7,090	857,219
Totals, 1967	2,114	188,126	6,837	6,272	866,539
Totals, 1966	2,244	189,286	6,572	8,970	
Totals, 1965	2,218	188,339	6,677	12,509	

** A.U.M. (Animal Unit Month) is the equivalent of one mature cow for one month.*

Figures not available prior to 1967.

APPENDIX

TABULATED DETAILED STATEMENTS TO SUPPLEMENT

THE REPORT OF THE FOREST SERVICE, 1974

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UNIT STANDARD INVENTORY

(1) **1974 FIELD WORK**

Public Sustained-yield Unit	Maps Classified	Number of Samples		Total Estimated Acreage
		Mature	Immature	
Babine	127	205	56	2,096,635
Canoe	76	266	57	936,194
Dewdney	92	120	230	1,969,929
Kingcome (Cape Scott, Seymour)	62	118	7	793,223
Narcosli	106	144	166	2,064,112
Robson	73	169	168	1,400,360
Salmo	41	71	320	867,813
Windermere	52	145	209	1,070,323
Totals	**629**	**1,238**	**1,213**	**11,198,589**

(2) **PRODUCTION OF FINAL FOREST COVER MAPS FOR 1974 PROJECTS**

Public Sustained-yield Unit	Number of Maps	Forest and Nonforest Area in Acres			Volume in Cunits for Mature Crown Area (Close "U")
		Crown	Alienated	Total	
Bell-Irving	28	1,580,988	15,657	1,596,645	1,981,506
Boundary (Proposed, S ½)*	49	3,038,153	—	3,038,153	1,493,936
Carp*	76	1,517,024	6,120	1,523,144	2,269,965
Creston*	36	748,369	31,100	779,469	522,270
Crooked River*	45	673,269	2,393	675,662	1,229,261
Fernie*	81	1,399,920	138,941	1,538,861	1,021,938
Kechika (Proposed)	106	7,067,683	6,637	7,074,320	1,950,578
Liard (Proposed, W ½)	62	3,742,166	—	3,742,166	2,307,046
Nehalliston	26	390,372	19,594	409,966	596,825
Williams Lake*	52	776,093	180,495	956,588	617,889
Totals	**561**	**20,934,037**	**400,937**	**21,334,974**	**13,991,214**

*Area and Volume Figures Based on Earlier Surveys

(3)

STATUS OF RESEARCH PROJECTS IN 1974

Active at beginning of year	127
Terminated	13
New Projects	13
Active at end of year	127

Subject	Vancouver	Prince Rupert	Prince George	Kamloops	Nelson	Cariboo
Land classification	—	—	1	1	—	—
Tree breeding	5	—	1	—	—	—
Plant ecology	5	—	2	—	1	—
Silvicultural systems	—	—	1	—	2	—
Natural regeneration	1	1	1	1	1	—
Choice and trial of species	10	5	2	3	1	1
Nursery practice	24	—	2	—	—	—
Direct seeding	1	3	—	2	—	1
Planting	4	3	4	—	1	1
Spacing	4	4	2	1	1	—
Forest fertilization	1	—	—	—	—	—
Tending of stands	10	1	—	1	2	—
Statistics	2	—	—	—	—	—
Management: Economics	—	—	—	—	1	—
Integrated Resource Management	5	—	—	—	—	—
Totals	**72**	**17**	**16**	**9**	**10**	**3**

(4)

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(5)

SUMMARY OF PLANTING, 1965-74

Year	Forest Service on Crown Land		Forest Service on Crown-granted Land (Forest Act, Sec. 152)		Companies on Tree-farm Licences		Companies on Timber Sale Harvesting Licences		Other Private		Totals	
	Trees in Thousands	Acres	Trees in Thousands	Acres	Trees in Thousands	Acres	Trees in Thousands	Acres	Trees in Thousands	Acres	Trees in Thousands	Acres
Coast												
1974	8,352.1	20,131	—	—	11,921.3	31,643	1,374.2	3,021	3,501.4	8,905	25,149.0	63,700
1973	13,855.7	31,170	—	—	12,769.1	33,994	1,550.3	3,441	4,046.0	10,016	32,221.1	73,621
1972	12,993.8	30,458	—	—	12,176.0	34,002	187.6	379	4,872.6	11,153	30,235.0	75,997
1971	9,627.0	22,696	55.0	128	11,603.8	31,735	82.4	236	4,756.0	11,370	26,124.2	66,165
1970	7,202.0	17,719	118.0	270	10,616.5	30,512	—	—	7,914.6	20,065	25,851.1	68,566
1969	4,791.0	11,356	107.0	201	9,931.6	28,666	—	—	5,673.6	14,946	20,553.2	55,169
1968	3,731.9	8,541	82.0	211	8,797.3	25,139	—	—	5,470.1	16,688	18,081.3	50,579
1967	4,052.1	9,237	—	—	7,036.6	21,784	—	—	3,860.6	11,710	14,949.3	42,731
1966	3,856.0	9,241	19.0	55	8,431.9	24,762	—	—	3,828.8	11,352	16,135.7	45,410
1965	3,221.7	9,398	628.0	1,453	7,038.5	20,742	—	—	4,432.5	13,023	15,320.7	44,616
Previously planted	94,229.2	119,552	14,459.9	25,497	58,262.1	142,043	—	—	12,614.4	32,460	179,565.6	319,552
Totals to date	**165,917.5**	**289,499**	**15,468.9**	**27,815**	**158,634.7**	**425.022**	**3,194.5**	**7,077**	**60,970.6**	**161,693**	**404,186.2**	**911,106**
Interior												
1974	16,128.2	31,971	—	—	3,076.8	7,904	9,380.3	18,620	82.8	89	28,668.1	53,589
1973	14,371.1	27,068	—	—	3,551.1	7,497	5,521.1	10,587	541.6	894	23,984.9	46,046
1972	14,256.0	26,600	—	—	1,692.0	3,721	2,066.0	4,136	145.0	340	18,159.0	34,797
1971	15,449.2	31,049	—	—	1,461.0	3,311	743.0	1,497	69.0	165	17,722.2	36,022
1970	7,201.0	14,672	—	—	753.0	2,094	40.0	66	166.0	369	8,160.0	17,201
1969	5,019.9	11,167	—	—	301.7	911	—	—	70.7	127	5,392.3	12,205
1968	2,512.3	5,854	—	—	360.0	921	—	—	129.3	222	3,001.6	6,997
1967	1,785.3	3,747	—	—	635.5	1,557	—	—	95.5	207	2,516.3	5,511
1966	2,292.6	4,835	—	—	579.7	1,957	—	—	120.7	304	2,993.0	7,096
1965	1,755.9	5,442	—	—	614.9	2,669	—	—	130.4	382	2,501.2	8,493
Previously planted	5,838.7	11,311	—	—	1,849.5	4,858	—	—	295.2	479	7,983.4	16,648
Totals to date	**86,610.2**	**173,716**	**—**	**—**	**14,875.2**	**37,400**	**17,750.4**	**34,906**	**1,846.2**	**3,578**	**121,082.0**	**249,600**
All planted to date	**252,527.7**	**463,215**	**15,468.9**	**27,815**	**173,509.9**	**462,422**	**20,944.9**	**41,983**	**62,816.8**	**165,271**	**525,268.2**	**1,160,706**
All planted this year	**24,480.4**	**52,102**	**—**	**—**	**14,998.1**	**39,547**	**10,754.4**	**21,641**	**3,584.2**	**8,994**	**53,817.1**	**122,284**

Subject to minor adjustments for late returns

(6)

PLANTING BY FOREST DISTRICT 1974 (1)

(Number of trees in thousands, acres in parentheses below)

District	Forest Service Crown Land			Companies on TSHL's Crown Land	Companies on Tree-farm Licences			Tree-farm	Companies on Other Private Land	District Total
	F.S. Proj.	Contract	Total F.S.		Crown Land	Crown-granted Land	Total			
Vancouver	1,468.2 (3,419)	6,234.2 (15,011)	7,702.4 (18,430)	1,334.3 (2,945)	8,628.9 (23,654)	2,211.9 (5,462)	10,840.8 (29,116)	1,174.1 (3,251)	2,327.3 (5,654)	23,378.9 (59,396)
Pr. Rupert	2,275.8 (5,413)	57.6 (125)	2,333.4 (5,538)	1,304.8 (2,594)	1,078.7 (2,522)	1.8 (5)	1,080.5 (2,527)	—	—	4,718.7 (10,659)
Pr. George	3,932.0 (7,469)	737.0 (1,254)	4,669.0 (8,723)	2,951.0 (6,098)	1,627.0 (4,888)	—	1,627.0 (4,888)	—	—	9,247.0 (19,709)
Cariboo	3,557.0 (6,886)	677.8 (1,203)	4,234.8 (8,089)	1,839.9 (3,451)	112.4 (223)	—	112.4 (223)	—	—	6,187.1 (11,763)
Kamloops	1,581.8 (2,952)	—	1,581.8 (2,952)	2,191.6 (4,366)	1,190.7 (2,363)	—	1,190.7 (2,363)	—	—	4,964.1 (9,681)
Nelson	3,093.0 (6,684)	866.0 (1,686)	3,959.0 (8,370)	1,132.8 (2,187)	146.7 (430)	—	146.7 (430)	82.8 (89)	—	5,321.3 (11,076)
Totals	**15,907.8** **(32,823)**	**8,572.6** **(19,279)**	**24,480.4** **(52,102)**	**10,754.4** **(21,641)**	**12,784.4** **(34,080)**	**2,213.7** **(5,467)**	**14,998.1** **(39,547)**	**1,256.9** **(3,340)**	**2,327.3** **(5,654)**	**53,817.1** **(122,284)**

Subject to minor adjustments for late returns

(7) SUMMARY OF BASIC DATA FOR TREE-FARM LICENCES (PRIVATE SUSTAINED-YIELD UNITS)

Forest District	Number of Tree-farm Licences	Productive Area (Acres)			Total Area (Acres)	Allowable Cut (Cunits)
		Schedule B	Schedule A	Total		
Vancouver	17[1]	2,983,521	1,145,359	4,128,880	6,821,566	4,629,053
Prince Rupert	6[1]	3,541,531	204,556	3,746,087	11,046,746	1,778,100
Prince George	1	390,933	1,733	392,666	447,946	149,000
Cariboo	1	80,643	671	81,314	85,046	44,000
Kamloops	7	730,843	1,846	732,689	781,645	260,505
Nelson	5	1,389,164	38,730	1,427,894	3,344,843	566,350
Grand Totals	**34**	**9,116,635**	**1,392,895**	**10,509,530**	**22,527,792**	**7,427,008**

[1] *Three tree-farm licences located in both districts.*

Schedule "B" is vacant Crown land.

Schedule "A" is land for which the Tree-Farm Licence holder has cutting rights other than those conveyed by the Tree-Farm Licence Agreement. This may include lands held in fee simple or temporary tenures; e.g., Timber leases, licences and berths. Following removal of the mature timber, lands held under temporary tenure are transferred to Schedule "B".

(8) SUMMARY OF BASIC DATA FOR CERTIFIED TREE-FARMS (PRIVATE SUSTAINED-YIELD UNITS OVER CROWN-GRANTED LANDS) 1974

Within Tree-farm Licences

Forest District	Number of Tree-farms	Productive Area (Acres)				Total Area (Acres)	Estimated Productive Capacity (Cunits)
		Mature	Immature	N.S.R. and N.C.C.	Total		
Vancouver	14	59,665	227,616	37,664	324,945	364,070	329,977
Prince George	1	33	1,033	155	1,221	1,280	458
Nelson	2	530	4,719	4,358	9,607	10,158	4,312
Total	**17**	**60,228**	**233,368**	**42,177**	**335,773**	**375,508**	**334,747**

Not Included Within Tree-farm Licences

Vancouver	22	97,868	305,001	39,164	442,033	480,750	425,582
Nelson	10	108,752	212,191	96,527	417,470	486,903	84,489 (339,596)
Total	**32**	**206,620**	**517,192**	**135,691**	**859,503**	**967,653**	**510,071 (339,596)**
Grand Totals	**49**	**266,848**	**750,560**	**177,868**	**1,195,276**	**1,343,161**	**844,818 (339,596)**

Figures in parentheses ( ) are Christmas trees

(9) SUMMARY OF BASIC DATA FOR FARM WOOD-LOT LICENCES (PRIVATE SUSTAINED-YIELD UNITS) 1974

Forest District	Number of Farm Wood-lot Licences	Productive Area (Acres)			Total Area (Acres)	Allowable Annual Cut (Cunits)
		Crown	Private	Total		
Vancouver	12	1,860	220	2,080	2,887	851
Pr. Rupert	4	1,274	147	1,421	2,436	284
Pr. George	4	997	—	997	1,032	400
Cariboo	10	2,690	337	3,027	3,586	716
Kamloops	3	691	96	787	859	223
Nelson	4	1,359	617	1,976	2,071	267
Grand Totals	**37**	**8,871**	**1,417**	**10,288**	**12,871**	**2,741**

(10)

SUMMARY OF BASIC DATA FOR PUBLIC SUSTAINED-YIELD UNITS

Forest District and Unit Name	Date of Survey	Mature Volume (Cunits)	Productive Area (Acres)			Total Area (Including Non-forest Acres)	C.U. Allowable Annual Cut (Cunits)	Volume Scaled (Cunits)
			Mature	Immature	Total Productive (Includes NSR and NCC)			
Vancouver[1]								
Dewdney	1962e63	53,072,210	590,709	304,441	1,000,890	1,774,686	458,705	350,588
Kingcome	1958,61,66,69,71	74,745,010	892,254	225,226	1,147,130	2,482,443	447,845	296,778
Nootka	1959	60,130,320	653,606	68,328	731,874	862,335	356,880	246,250
Quadra	1966e67e68	49,196,080	562,701	691,854	1,346,792	2,866,688	713,050	499,167
Soo	1964	29,152,690	344,512	161,691	541,928	1,523,562	222,835	198,565
Vancouver	1970	13,279,340	135,920	152,269	319,576	550,367	113,115	96,457
District Total		**279,575,650**	**3,179,702**	**1,603,809**	**5,088,190**	**10,060,081**	**2,312,430**	**1,687,805**
Prince Rupert (Coast[1])—								
Dean	1962e63	62,424,590	881,134	80,045	968,273	3,916,986	173,025	105,689
Hecate	1964e65	100,823,060	1,558,329	100,615	1,695,026	4,228,235	202,620	108,698
Queen Charlotte	1967	67,309,680	945,294	76,480	1,026,867	1,346,809	128,445	143,413
Rivers Inlet	1968	67,879,520	841,139	52,660	913,938	1,966,175	103,605	72,845
District Sub Total		**298,436,850**	**4,225,896**	**309,800**	**4,604,104**	**11,458,205**	**607,695**	**430,645**
Prince Rupert (Interior[2])—								
Babine	1958,60	33,644,640	1,007,491	588,589	1,720,713	2,087,415	219,967	134,690
Bell Irving	—	19,815,060	302,394	14,725	343,179	1,574,437	—	—
Burns Lake	1964	14,011,060	411,810	529,850	991.529	1,125,044	208,280	75,671
Morice	1972	28,082,330	577,640	220,646	861,367	1,420,877	83,400	30,392
Ootsa	1965	42,201,300	1,112,636	850,873	2,006,822	2,658,653	424,160	257,482
Skeena	1961,63 & 66	102,637,680	1,668,059	390,298	2,124,385	3,924,708	447,746	415,699
Smithers	1966	26,648,260	736,966	344,456	1,099,714	1,461,926	160,486	97,458
Sub Total		**267,040,330**	**5,816,996**	**2,939,437**	**9,147,709**	**14,253,060**	**1,544,039**	**1,011,392**
District Total		**565,477,180**	**10,042,892**	**3,249,237**	**13,751,813**	**25,711,265**	**2,151,734**	**1,442,037**
Prince George[2]								
Big Valley-Blk. 1	1969	7,219,620	156,251	16,222	183,653	199,645	78,030	62,630
Blueberry	1964	13,404,870	464,110	1,090,513	1,919,971	2,748,392	57,107	106,461
Canoe	—	7,008,480	170,396	94,650	298,671	929,136	63,893	59,495
Carp	1959e60	22,699,650	465,950	843,920	1,366,547	1,517,024	268,879	240,047
Crooked River	1960	12,292,610	294,789	269,036	613,038	673,269	169,160	135,457
Finlay	1972	93,607,370	3,566,573	1,866,840	5,897,187	11,652,835	1,333,330	523,604
Fort Nelson	1968	14,704,830	477,637	1,444,501	2,188,252	4,751,019	—	87,605
Kluskus	1962,65	10,368,680	417,609	334,987	782,775	956,916	—	—
Longworth	1971	31,980,410	742,778	72,015	853,565	1.215.095	176,703	166,038
Moberly	1970	20,738,420	700,688	650,821	1,491,486	1,889,393	70,573	53,938
Monkman	1966	23,751,650	693,610	32,716	747,086	1,353,615	146,293	120,861
Naver	1969	6,669,060	145,183	120,771	303,502	325,233	100,053	88,104
Nechako	1962	28,836,340	866,205	1,260,233	2,163,749	2,409,999	501,594	490,505
Parsnip	1965	22,973,290	787,082	166,187	1,097,919	1,475,932	204,210	179,884
Peace	1972	22,478,140	738,509	384,930	1,210,994	1,744,883	122,323	58,145
Purden	1967	16,269,520	417,234	74,842	533,282	590,461	158,347	165,599
Robson	1959	10,711,830	366,787	244,360	638,080	1,354,933	65,359	78,507
Stuart Lake	1970	25,591,910	660,216	496,168	1,204,637	1,510,800	170,260	136,467
Takla	1971	48,555,960	1,301,992	839,421	2,235,170	3,060,611	339,900	174,409
Wapiti	1969	17,486,360	609,329	1,290,137	2,111,420	2,871,553	90,467	65,469
Westlake	1961	7,460,370	193,778	362,608	567,231	599,086	153,984	121,058
Willow River	1969	6,293,540	140,441	126,129	301,273	319,807	112,246	84,887
District Total		**471,102,910**	**14,377,147**	**12,082,007**	**28,709,488**	**44,149,617**	**4,382,711**	**3,199,170**

Cariboo[2]								
Big Bar (Partial)	1962	6,966,640	458,201	586,389	1,119,299	1,325,756	140,324	47,660
Big Valley Blk. 2	1969	6,006,970	147,818	24,417	182,483	192,945	65,080	68,696
Bowron	1967	4,013,430	93,993	49,179	150,686	168,773	49,003	48,626
Chilko	1966	30,468,500	1,561,854	1,604,857	3,277,739	5,306,996	40,000	8,150
Cottonwood	1969	14,319,160	312,522	105,217	452,808	480,242	200,583	188,425
Lac la Hache	1972	22,949,580	792,363	654,235	1,524,466	1,779,099	292,072	301,885
Narcosli	1961,65	17,601,330	671,568	1,202,897	1,894,313	2,025,883	348,544	302,587
Quesnel Lake	1971	40,952,460	898,012	542,380	1,536,854	2,073,296	340,876	313,360
Stum	1964,66	23,196,240	1,490,927	1,471,337	3,049,404	3,590,698	271,680	201,892
Williams Lake	1960	6,178,890	231,658	466,597	708,351	776,093	136,432	157,394
District Total		**172,653,200**	**6,658,916**	**6,707,505**	**13,896,403**	**17,719,781**	**1,884,594**	**1,638,675**
Kamloops[2]								
Adams	1968	9,463,770	225,311	246,190	496,335	584,686	140,777	100,232
Ashnola	1969	9,049,410	293,128	160,985	469,970	586,258	90,833	49,996
Barriere	1967	4,796,280	120,140	157,123	292,190	326,925	85,347	32,590
Barton Hill	1970	4,385,540	125,574,	19,823	150,036	162,173	39,503	21,504
Big Bar (Partial)[3]	1962	1,467,810	99,278	176,317	285,004	321,412	—	21,562
Botanie	1970	13,024,100	526,056	274,734	861,654	1,298,414	114,466	79,844
Eagle	1971	8,326,940	145,870	87,784	254,507•	351,854	90,728	42,341
Kamloops	1968	6,191,360	284,335	333,818	678,963	805,980	111,712	83,625
Nehalliston	1965	3,703,720	112,552	235,831	358,037	395,196	98,146	72,234
Nicola	1970	10,282,250	370,429	353,464	815,533	950,883	127,626	99,693
Niskonlith	1968	3,420,670	95,632	165,003	277,225	295,057	76,054	72,731
North Thompson	1967	16,253,360	351,010	84,940	470,385	983,673	93,236	107,941
Okanagan	1964	12,044,200	402,335	665,605	1,094,585	1,327,951	222,288	157,859
Raft	1967	7,677,310	192,134	275,607	505,395	557,435	119,937	129,109
Salmon Arm	1962	1,258,530	37,380	117,844	163,505	203,127	32,266	26,841
Shuswap	1963	12,363,210	216,648	260,999	502,362	749,850	110,320	95,938
Similkameen	1969	14,640,930	347,392	379,260	781,706	872,515	214,486	107,522
Spallumcheen	1972	16,371,610	350,460	391,030	783,094	980,584	274,860	211,164
Yalakom	1965	17,431,570	489,603	386,217	906.808	1,838,356	203,290	53,435
District Total		**172,152,570**	**4,785,267**	**4,772,574**	**10,147,294**	**13,592,329**	**2,245,875**	**1,566,161**
Nelson[2]								
Arrowhead	1962	5,070,520	111,907	81,194	201,181	509,020	43,774	33,408
Cranbrook[4]£	1964	11,775,330	304,742	768,527	1,226,164	1,777,227	217,950	211,644
Creston	1959	5,222,700	137,804	434,177	672,985	748,369	101,014	78,488
Edgewood	1967	3,316,650	96,993	150,704	262,074	297,938	67,173	36,748
Fernie	1963	10,219,380	274,476	480,268	958,815	1,399,920	182,286	82,874
Granby	1967	3,687,370	96,684	382,180	504,008	643,186	82,320	59,281
Kettle	1963	5,175,690	189,863	510,428	763,124	822,487	122,197	72,903
Kinbasket	1969	23,533,800	409,753	328,076	787,514	2,287,243	241,054	165,311
Lardeau[4]	1969	19,030,500	373,337	500,198	931,866	1,827,754	148,532	95,054
Nakusp	1967	3,967,070	81,502	93,546	192,992	311,847	53,913	66,357
Salmo	1962	2,983,550	69,148	348,712	461,536	617,997	102,047	67,429
Slocan	1967	3,423,440	84,076	197,572	301,981	517,862	70,413	41,563
Upper Kootenay[5][5]	1965	12,232,920	345,185	371,258	759,468	1,263,728	161,490	145,744
Windermere[4]	1961,68	5,015,870	131,652	279,801	440,321	902,893	61,406	37,457
District Total		**114,654,790**	**2,707,122**	**4,926,641**	**8,464,029**	**13,927,471**	**1,655,569**	**1,194,261**
Total for Province		**1,775,616,300**	**41,751,040**	**33,341,773**	**80,037,217**	**126,101,700**	**14,632,913**	**10,728,109**

[1] - *9.1" + d.b.h.* [2] - *7.1" + d.b.h.* [3] - *See Cariboo for commitment* [4] - *Reduction for Purcell Conservancy Area* [5] - *Reduction for Top of the World Park*

(11) TOTAL AMOUNT OF TIMBER SCALE BILLED IN BRITISH COLUMBIA, 1973 AND 1974 (IN CUNITS)

Forest District	10-Year Average 1965 - 1974	1973	1974	Decrease
Vancouver	8,154,453.03	9,547,106.98	8,114,317.27	1,432,789.71
Prince Rupert (C.)	1,527,211.33	2,009,909.98	1,730,047.20	279,862,.78
Totals, Coast	**9,681,664.36**	**11,557,016.96**	**9,844,364.47**	**1,712,652.49**
Prince Rupert (I.)	1,112,732.74	1,820,355.26	1,464,852.25	355,503.01
Prince George[1]	3,285,187.44	4,010,602.51	3,886,380.18	124,222.33
Cariboo[2]	362,442.00	1,848,875.13	1,775,544.91	73,330.22
Kamloops[1]	2,593,483.31	2,957,948.08	2,216,576.88	741,371.20
Nelson	1,787,781.85	2,573,783.21	2,031,401.62	542,381.59
Totals, Interior	**9,141,627.34**	**13,211,564.19**	**11,374,755.84**	**1,836,808.35**
Grand Totals	**18,823,291.70**	**24,768,581.15**	**21,219,120.31**	**3,549,460.84**

[1] *Includes Cariboo District in previous years.*
[2] *Reported by Kamloops and Prince George Districts in previous years.*

(12) SPECIES CUT, ALL PRODUCTS (IN CUNITS)

Forest District	Fir	Cedar	Spruce	Lodgepole Pine	Hemlock	Balsam	White Pine
Vancouver	1,462,322.69	1,748,965.79	110,956.29	5,437.48	3,038,986.39	1,465,943.41	44,550.76
Prince Rupert (C.)	34,366.11	304,155.68	305,191.25	908.58	830,055.16	197,716.09	129.18
Totals, Coast	**1,496,688.80**	**2,053,121.47**	**416,147.54**	**6,346.06**	**3,869,041.55**	**1,663,659.50**	**44,679.94**
Prince Rupert (Int.)	.48	72,413.74	331,878.27	369,836.69	406,468.99	228,727.97	14,787.20
Prince George	90,105.07	24,338.01	2,087,707.96	1,287,621.01	9,603.88	331,281.92	4.15
Cariboo	482,742.48	10,647.99	550,460.75	614,093.97	1,679.11	110,148.47	—
Kamloops	582,111.52	168,714.74	611,249.97	365,328.26	127,401.89	250,803.04	25,040.03
Nelson	220,697.53	283,580.52	528,151.75	331,876.52	290,604.43	220,168.44	35,614.57
Totals, Interior	**1,375,657.08**	**559,695.00**	**4,109,448.70**	**2,968,756.45**	**835,758.30**	**1,141,129.84**	**75,445.95**
Grant Totals	**2,872,345.88**	**2,612,816.47**	**4,525,596.24**	**2,975,102.51**	**4,704,799.85**	**2,804,789.34**	**120,125.89**

Forest District	Yellow Pine	Cypress	Larch	Hardwood	Cotton-wood	Unspeci-fied	Total
Vancouver	205.34	176,245.21	—	23,804.34	26,785.63	10,113.94	8,114,317.27
Prince Rupert (C.)	.14	19,276.32	—	758.47	36,922.78	567.44	1,730,047.20
Totals, Coast	**205.48**	**195,521.53**	**—**	**24,562.81**	**63,708.41**	**10,681.38**	**9,844,364.47**
Prince Rupert (Int.)	—	.54	—	7,174.99	33,561.77	1.61	1,464,852.25
Prince George	—	—	.87	32,728.08	18,791.50	4,197.73	3,886,380.18
Cariboo	380.71	—	—	840.21	104.23	4,446.99	1,775,544.91
Kamloops	43,829.71	39.57	21,331.79	8,242.80	4,058.87	8,424.69	2,216,576.88
Nelson	10,044.77	—	97,802.17	184.10	4,021.89	8,654.93	2,031,401.62
Totals, Interior	**54,255.19**	**40.11**	**119,134.83**	**49,170.18**	**60,538.26**	**25,725.95**	**11,374,755.84**
Grand Totals	**54,460.67**	**195,561.64**	**119,134.83**	**73,732.99**	**124,246.67**	**36,407.33**	**21,219,120.31**

(13)

TOTAL SCALE OF ALL PRODUCTS BILLED IN 1974 (IN CUNITS) (SEGREGATED BY LAND STATUS AND FOREST DISTRICTS)

Land Status	Vancouver	Prince Rupert (Coast)	Prince Rupert (Interior)	Prince George	Cariboo	Kamloops	Nelson	Total
Timber Licences ...	1,783,625.95	399,417.50	—	41,734.47	—	82,701.63	26,035.58	2,333,515.13
Timber Berths	130,567.48	—	—	—	—	90,742.94	78,753.60	300,064.02
Timber Leases	213,537.68	—	—	—	—	—	—	213,537.68
Pulp Leases	280,385.19	50,521.94	—	—	—	—	—	330,907.13
Pulp Licences	36,413.03	110,339.07	—	—	—	—	—	146,752.10
Farm Wood-Lots .	721.93	—	302.66	288.70	246.10	29.37	79.55	1,668.31
Timber Sales	470,787.58	172,629.56	240,923.48	1,648,779.10	608,401.10	569,500.65	373,676.79	4,084,698.26
Harvesting Licences	1,235,612.37	297,909.98	632,701.88	1,518,495.07	941,603.08	891,686.05	766,766.40	6,284,774.83
Tree-Farm Licences	1,809,291.00	501,786.96	457,437.64	143,484.25	31,587.21	256,296.13	489,310.78	3,689,193.97
Beachcomb, Trespass	158,463.70	24,320.53	191.76	—	—	—	—	182,975.99
Miscellaneous	8,763.65	—	664.83	299,972.93	63,149.33	35,595.70	20,135.86	428,282.30
Sub-Totals, Crown Lands	**6,128,169.56**	**1,556,925.54**	**1,332,222.25**	**3,652,754.52**	**1,644,986.82**	**1,926,552.47**	**1,754,758.56**	**17,996,369.72**
Federal Lands	41,959.85	43,954.11	985.66	38,024.35	900.95	21,723.24	2,395.81	149,943.97
Crown Lands to 1887	1,509,250.73	3,579.98	—	303.68	1,144.39	68,183.43	23,586.27	1,606,048.48
Crown Lands 1887-1906	85,982.73	93,373.35	924.74	378.72	11,650.85	16,647.05	94,523.46	303,480.90
Crown Grants 1906-1914	58,157.93	13,997.88	13,701.80	21,614.88	13,895.43	57,018.26	22,160.73	200,546.91
Crown Grants to date	290,796.47	18,216.34	117,017.80	173,304.03	102,966.47	126,452.43	133,976.79	962,730.33
Totals	**8,114,317.27**	**1,730,047.20**	**1,464,852.25**	**3,886,380.18**	**1,775,544.91**	**2,216,576.88**	**2,031,401.62**	**21,219,120.31**

(13a)

ACREAGE LOGGED 1974

Forest District	Clear Cutting	Selective Cutting	Total
Vancouver	62,883	3,636	66,519
Prince Rupert	47,066	2,029	49,095
Prince George	97,200	89	97,289
Cariboo	34,861	19,317	54,178
Kamloops	32,511	13,669	46,180
Nelson	42,161	5,748	47,909
Totals, 1974	**316,682**	**44,488**	**361,170**
Totals, 1973	**368,792**	**59,121**	**427,913**
Totals, 1972	**328,553**	**48,005**	**376,558**
Totals, 1971	**334,994**	**73,039**	**408,033**

(14) **NUMBER OF ACRES OPERATING UNDER APPROVED ANNUAL ALLOWABLE CUTS, 1965-74**

Year	Tree-farm Licences		Tree-farms[1]		Christmas-tree Permits		Farm Wood-lots		Public Sustained-yield Units		Total Acres
	Number	Productive Acres	Number	Productive Acres	Number	Productive Acres[2]	Number	Productive Acres	Number	Productive Acres	
1965	40	8,796,577	31	709,452	352	120,065	51	13,978	75	69,781,944	79,301,951
1966	38	9,633,579	32	712,152	347	115,175	47	12,632	76	75,536,237	85,894,600
1967	36	9,637,984	31	714,901	351	119,421	46	12,522	76	75,727,896	86,143,303
1968	36	9,770,637	31	806,123	350	116,594	43	11,165	77	78,545,907	89,133,832
1969	35	9,806,590	30	809,207	344	116,498	43	11,155	77	79,158,869	89,785,821
1970	34	10,214,155	32	867,319	331	110,543	42	11,378	78	79,791,602	90,884,454
1971	34	9,945,772	33	838,539	279	96,401	45	12,523	78	79,698,666	90,495,500
1972	34	10,512,474	32	827,698	327	124,417	42	11,757	78	79,442,457	90,794,386
1973	34	10,477,390	32	826,404	264	114,851	39	11,168	80	81,111,729	92,426,691
1974	34	10,509,530	32	859,503	224	96,211	37	10,288	80	80,057,217	91,436,538

[1]Exclusive of tree-farms incorporated into tree-farm licences.
[2]Also included in productive acres under public sustained-yield units.

(15) **TOTAL SCALE OF ALL PRODUCTS FROM AREAS OPERATED UNDER APPROVED ANNUAL ALLOWABLE CUTS, 1965-74**

Year	Tree-farm Licences		Tree-farms[1]		Christmas Trees			Farm Wood-lots		Public Sustained-yield Units		Total[3] (Cunits)
					Permits		Other Sources[2] (Number of Trees)					
	Number	Cunits	Number	Cunits	Number	Number of Trees		Number	Cunits	Number	Cunits	
1965	40	3,740,623	31	395,877	352	509,876	207,643	51	2,165	75	6,874,929	11,013,594
1966	38	4,056,234	32	450,587	347	494,798	239,378	47	1,670	76	6,409,467	10,917,958
1967	36	4,493,868	31	433,083	351	541,930	454,031	46	3,783	76	6,395,422	11,326,156
1968	36	5,154,661	31	655,740	350	499,373	413,398	43	2,892	77	7,005,608	12,818,901
1969	35	4,990,935	30	576,465	344	470,044	317,801	43	2,407	77	7,288,446	12,358,253
1970	34	4,942,324	32	383,490	333	381,050	344,466	42	1,333	78	8,428,943	13,756,090
1971	34	5,264,878	33	418,460	279	370,563	88,712	45	2,372	78	9,677,115	15,362,823
1972	34	4,794,155	32	447,190	327	290,581	249,720	42	2,050	78	10,483,780	15,727,175
1973	34	6,364,838	32	529,970	264	286,367	290,187	39	3,274	80	12,689,639	19,587,721
1974	34	6,004,685	32	433,666	224	281,057	268,358	37	1,667	80	10,728,109	17,168,127
Ten-year average, 1965-74	**36**	**4,980,720**	**32**	**472,453**	**317**	**412,562**	**287,369**	**43**	**2,361**	**78**	**8,598,146**	**14,053,680**

[1]Exclusive of tree-farms incorporated into tree-farm licences.
[2]Includes Christmas trees cut from tree-farm licences, tree-farms, and farm wood-lots.
[3]Total Christmas-tree cut is not shown.

(16)

LOGGING INSPECTIONS, 1974

Forest District	Type of Tenure Operated				Number of Inspections Made		
	Timber Sale Licences	Cutting Permits (Tree-farm Licences, Farm Wood-lot Licences, and Timber Sale Harvesting Licences)	Leases, Licences, Crown Grants, and Other Tenures	Total	Timber Sale Licences and Cutting Permits	Other Tenures	Total
Vancouver	814	412	1,853	3,079	2,607	1,813	4,420
Prince Rupert	172	330	970	1,472	2,406	1,914	4,320
Prince George	266	839	1,100	2,205	3,725	1,571	5,296
Cariboo	110	356	1,432	1,898	1,741	801	2,542
Kamloops	170	505	549	1,224	1,537	1,800	3,337
Nelson	156	329	743	1,238	2,047	1,721	3,768
Totals, 1974	1,698	2,771	6,647	11,116	14,063	9,620	23,683
Totals, 1973	1,772	2,457	5,758	9,987	16,063	10,431	26,494
Totals, 1972	1,821	2,162	5,593	9,576	16,158	8,974	25,132
Totals, 1971	2,163	1,609	6,602	10,374	15,374	10,037	25,411
Totals, 1970	2,881	1,272	6,230	10,383	16,080	10,112	26,192
Totals, 1969	3,511	876	7,358	11,945	17,518	8,682	26,200
Totals, 1968	4,719	([1])	7,758	12,477	17,480	10,092	27,572
Totals, 1967	5,118	([1])	7,431	12,549	17,663	9,488	27,151
Totals, 1966	5,566	([1])	6,174	11,740	18,593	9,576	28,169
Totals, 1965	6,231	([1])	6,514	12,745	17,869	6,365	24,234
Ten-year average, 1965-74	**3,548**	**—**	**6,606**	**11,269**	**16,686**	**9,338**	**26,024**

[1] *Figures not available prior to 1969.*

TRESPASSES, 1974

Forest District	Number of Cases	Area Cut Over (Acres)	Quantities Cut							Number of Resulting Seizures	Assessment in Dollars
			Cunits	Lineal Feet	Cords	Christmas Trees	Cedar Shakes	Posts, Car Stakes	Reserved Trees		
Vancouver	73	285	4,791	—	2,028	19	28,107	—	—	4	154,816.34
Prince Rupert	37	110	2,312	—	30	—	—	—	—	1	25,123.53
Prince George	39	231	4,603	—	—	—	—	—	—	—	50,230.19
Cariboo	44	400	8,735	—	—	—	—	—	—	—	135,862.36
Kamloops	53	723	4,884	—	1	—	350	110	—	1	52,950.36
Nelson	34	223	7,466	—	—	400	—	853	—	1	139,654.18
Totals, 1974	280	1,972	32,791	—	2,059	419	28,457	963	—	7	588,636.96
Totals, 1973	377	2,868	65,942	—	292	—	41,779	1,755	36	7	1,135,332.95
Totals, 1972	322	2,377	50,881	—	29	160	—	704	74	3	479,300.53
Totals, 1971	321	2,636	58,046	20,327	53	6,839	23,412	900	29	6	270,451.85
Totals, 1970	380	3,545	60,958	23,093	70	2,800	34,759	—	4	8	248,468.40
Totals, 1969	399	2,595	47,251	6,220	56	22,526	124,464	2,373	4	17	371,964.95
Totals, 1968	378	2,229	30,679	34,013	778	4,127	13,234	29,976	141	6	260,438.20
Totals, 1967	319	1,724	27,859	9,365	2,910	3,934	49,635	176	6	1	184,724.80
Totals, 1966	435	2,921	41,850	64,535	37	11,001	121,604	1,990	405	5	272,439.56
Totals, 1965	436	4,517	40,938	93,546	118	13,204	25,290	75	580	5	239,156.97
Ten-year average, 1965-74	**365**	**2,738**	**45,719**	**25,110**	**640**	**6,501**	**46,263**	**3,891**	**128**	**6**	**405,091.52**

AREAS CRUISED FOR TIMBER SALES AND TIMBER SALE HARVESTING LICENCE CUTTING PERMITS, 1974

(18)

Forest District	Number Cruised	Acreage	Logs (Cunits)	Pit-props, Poles, and Piles (Lin. Ft.)	Shingle-bolts and Cordwood (Cords)	Car Stakes, Posts, Shakes, Etc. (No.)
Vancouver	361	40,503	2,196,053	—	8,052	542,200
Prince Rupert	156	41,834	2,123,164	—	—	—
Prince George	216	130,533	3,542,731	—	—	—
Cariboo	9	13,094	61,828	10,000	—	10,000
Kamloops	194	116,956	1,827,893	—	1,000	160,400
Nelson	118	49,819	1,544,611	—	—	—
Totals, 1974	1,054	392,739	11,296,280	10,000	9,052	712,600
Totals, 1973	1,049	489,345	11,176,582	2,461,100	11,995	173,602
Totals, 1972	1,049	468,001	15,152,503	1,622,192	7,104	721,045
Totals, 1971	427	112,668	2,369,910	9,500	2,520	51,650
Totals, 1970	622	193,737	4,687,620	61,400	5,277	225,850
Totals, 1969	732	233,491	4,451,260	15,300	13,392	2,910,012
Totals, 1968	890	314,595	6,738,850	3,269,400	6,769	704,950
Totals, 1967	848	310,325	5,498,070	6,014,850	12,352	319,450
Totals, 1966	998	361,021	6,794,860	3,674,100	25,675	837,244
Totals, 1965	1,357	495,254	9,519,950	2,650,400	7,616	937,100
Ten-year average, 1965-74	**903**	**337,218**	**7,768,588**	**1,978,824**	**10,175**	**764,350**

(19)

TIMBER SALES AND CUTTING PERMITS (TIMBER SALE HARVESTING LICENCES) AWARDED BY FOREST DISTRICTS, 1974

Forest District	No. of Sales	No. of Cutting Permits	Acreage	Logs (Cunits)	Poles and Piling (Lin. Ft.)	No. of Posts	No. of Cords	No. of Christmas Trees	No. of Car Stakes	No. of Cedar Shakes	No. of Fence Rails and Palings	Estimated Revenue
Vancouver	230	72	54,391	1,702.979	—	930	6,307	—	—	13,000	—	21,001,173.84
Prince Rupert	201	51	39,605	1,665,748	141,883	9,587	534	500	4,600	116,340	—	8,359,341.25
Prince George	282	135	186,316	2,375,494	5,505	103,246	130	—	—	121,400	32,279	21,379,628.75
Cariboo	245	149	162,528	2,088,141	70,437	32,610	425	—	1,000	—	18,911	14,705,520.77
Kamloops	599	165	174,178	1,833,356	43,995	75,143	2,465	—	—	—	11,278	16,854,926.07
Nelson	266	76	103,779	947,006	1,530,874	109,375	2,828	—	—	77,100	14,900	6,808,986.95
Totals, 1974	1,823	648	720,797	10,612,724	1,792,694	320,891	12,689	500	5,600	327,840	77,368	89,109,577.63
Totals, 1973	1,510	775	1,268,372	11,351,964	1,879,612	322,619	18,229	650	6,850	469,800	16,586	175,521,202.60
Totals, 1972	1,002	707	695,786	12,815,248	794,910	205,128	8,982	500	2,250	750,372	251,627	99,441.558.17
Totals, 1971	991	599	530,097	14,100,535	1,180,613	260,158	7,839	493	1,400	144,400	6,860	54,599,946.01
Totals, 1970	1,199	(1)	138,632	2,366,765	1,187,322	317,129	9,520	500	70,700	385,880	4,225	10,164,455.10
Totals, 1969	1,827	(1)	183,116	3,421,106	3,133,706	212,809	16,858	—	4,500	1,583,644	4,685	31,001,758.65
Totals, 1968	1,241	(1)	212,022	3,867,570	2,005,677	213,654	10,969	300	7,066	424,125	8,875	24,293,171.92
Totals, 1967	1,149	(1)	242,011	4,231,926	2,528,440	160,540	8,816	1,750	7,515	210,930	12,584	13,679,675.37
Totals, 1966	1,126	(1)	208.945	3,281,741	3,952,770	194,353	11,538	1,760	3,650	70,380	3,298	14,166,872.69
Totals, 1965	1,614	(1)	384,850	5,594,617	1,900,163	428,920	16,766	150	13,200	540,860	14,658	23,677,018.31
Ten-year average, 1965-74	**1,298**	**—**	**458,463**	**7,167,420**	**2,035,591**	**264,620**	**12,221**	**660**	**12,273**	**490,823**	**40,077**	**53,565,523.65**

[1] *Cutting permits not included before 1971.*

(20)

AVERAGE STUMPAGE PRICES BY SPECIES AND FOREST DISTRICTS ON CUTTING PERMITS OF TIMBER SALE HARVESTING LICENCES AND TIMBER SALES ISSUED DURING 1974 (PER CUNIT LOG SCALE)

Forest District	Douglas Fir			Cedar			Spruce			Hemlock			Balsam		
	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit
Vancouver	163,041	$18.07	$1.70-$68.30	297,766	$9.46	$1.10-$57.70	32,124	$27.24	3.70-49.90	650,088	$9.34	$0.55-$44.80	494,452	$9.58	$2.10-$27.30
Prince Rupert (Coast)	19,094	8.85	5.20-23.30	42,704	5.52	3.30-11.80	97,360	14.37	7.50-34.60	167,225	5.68	3.50-21.80	46,769	4.24	3.10-4.40
Prince Rupert (Int.)	—	—	—	29,884	6.82	1.10-27.80	327,502	6.98	1.10-27.00	223,245	3.67	0.55-11.00	291,939	2.83	0.55-22.30
Prince George	77,607	14.84	1.10-37.30	39,876	2.49	1.10-16.50	1,156,782	11.33	1.10-29.60	18,745	2.01	1.10-10.10	221,615	4.95	1.10-16.40
Cariboo	345,785	14.81	1.10-28.90	33,951	1.10	—	741,779	9.06	1.10-25.00	10,244	1.14	1.10-8.80	191,610	2.36	1.10-14.60
Kamloops	245,361	17.63	1.10-31.70	159,518	3.14	1.10-16.80	529,147	12.37	1.10-26.70	150,411	2.98	1.10-14.10	306,486	3.19	1.10-18.50
Nelson	80,963	11.38	1.10-29.10	76,774	3.97	1.10-18.70	297,538	11.71	1.10-26.90	83,023	1.56	1.10-19.80	160,235	2.64	1.10-7.10
Totals For Province	**931,851**	**$15.70**	**$1.10-$68.30**	**680,473**	**$6.17**	**$1.10-$57.70**	**3,182,232**	**$10.81**	**$1.10-$49.90**	**1,302,981**	**$6.50**	**$0.55-$44.80**	**1,713,106**	**$2.74**	**$0.55-$27.30**

Forest District	White Pine			Lodgepole Pine			Larch			Other Species			All Species		
	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit
Vancouver	2,708	$9.58	$0.55-$39.50	700	$3.75	$0.55-$5.00	—	—	—	62,101	$56.19	$0.70-$127.00	1,702,980	$12.31	$0.55-$127.00
Prince Rupert (Coast)	—	—	—	30	2.77	2.70-2.90	—	—	—	2,733	23.41	1.10-87.40	375,915	8.03	1.10-87.40
Prince Rupert (Int.)	—	—	—	411,706	2.91	0.55-18.10	—	—	—	5,557	1.11	1.10-17.00	1,289,833	4.14	0.55-27.80
Prince George	42	79.40	—	849,024	6.91	1.10-22.20	—	—	—	11,803	1.23	0.55-16.40	2,375,494	9.00	0.55-79.40
Cariboo	—	—	—	764,072	3.08	1.10-21.80	—	—	—	700	2.70	1.10-15.20	2,088,141	7.04	1.10-28.90
Kamloops	14,172	63.77	30.50-83.50	405,526	6.34	1.10-15.30	9,724	$18.27	$3.30-$30.40	13,011	30.04	1.10-43.60	1,833,356	9.19	1.10-83.50
Nelson	8,286	49.63	15.10-80.30	187,564	1.71	1.10-12.90	40,931	12.87	1.10-24.60	11,698	23.74	1.10-28.50	947,012	7.18	1.10-80.30
Totals For Province	**25,208**	**$53.10**	**$0.55-$83.50**	**2,618,622**	**$4.71**	**$0.55-$22.20**	**50,655**	**$13.90**	**$1.10-$30.40**	**107,603**	**$39.45**	**$0.55-$127.00**	**10,612,731**	**$8.39**	**$0.55-$127.00**

AVERAGE STUMPAGE PRICES RECEIVED BY SPECIES AND FOREST DISTRICTS ON TIMBER SCALED FROM TREE-FARM LICENCE CUTTING PERMITS DURING 1974

Forest District	Douglas Fir			Cedar			Spruce			Hemlock			Balsam		
	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit
Vancouver	144,240	$20.69	$2.20-$36.26	429,034	$12.95	$1.33-$19.80	18,389	$32.15	$0.55-$73.68	763,694	$12.33	$0.55-$21.60	389,937	$13.05	$0.55-$19.00
Prince Rupert	29	5.53	3.90-5.60	115,344	3.55	0.71-6.02	161,245	21.37	1.11-52.30	486,667	3.10	0.61-16.14	130,228	3.07	0.77- 7.62
Prince George	2,043	26.40	6.50-33.50	3	7.70	7.60- 7.90	104,390	24.70	11.80-43.50	158	17.00	1.10-18.30	26,714	11.00	2.20- 7.50
Cariboo	19,151	25.16	1.60-31.00	—	—	—	11,222	19.44	5.40-26.00	—	—	—	3,463	5.87	1.10-10.70
Kamloops	45,288	22.63	1.10-55.05	5,608	11.32	1.10-40.65	90,158	16.53	1.10-48.15	4,302	11.01	1.10-24.60	34,261	4.96	1.10-18.70
Nelson	21,558	14.13	1.10-29.20	99,935	5.84	1.10-33.30	120,694	13.44	1.10-29.00	129,411	1.52	0.55-29.00	44,522	4.87	1.10-29.00
All Districts	**232,309**	**$20.87**	**$1.10-$55.05**	**649,924**	**$10.17**	**$0.71-$40.65**	**506,098**	**$19.66**	**$0.55-$73.68**	**1,384,232**	**$8.07**	**$0.55-$29.00**	**629,125**	**$9.83**	**$0.55-$29.00**

Forest District	Lodgepole Pine			White Pine			Larch			Other Species			All Species		
	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit	Volume (Cunits)	Price per Cunit	Price Range per Cunit
Vancouver	131	$8.93	$1.77-$10.00	5,902	$7.51	$1.11-$10.00	—	—	—	40,675	$61.42	$0.55-$108.19	1,792,002	$14.61	$0.55-$108.19
Prince Rupert	113,880	2.63	1.19-18.06	14,831	3.76	0.90- 5.05	—	—	—	37,001	14.24	0.61- 80.25	959,225	6.65	0.61- 80.25
Prince George	6,798	13.60	4.90-24.80	—	—	—	—	—	—	37	1.50	1.50- 1.50	140,143	21.60	1.10- 43.50
Cariboo	4,545	14.31	1.10-22.60	—	—	—	—	—	—	—	—	—	38,381	20.46	1.10- 31.00
Kamloops	73,954	5.64	1.10-30.60	757	18.53	1.10-84.30	903	$14.75	$1.10-$30.40	2,426	11.81	1.10- 39.90	257,657	12.69	1.10- 84.30
Nelson	54,019	3.01	1.10-29.00	4,174	39.27	1.10-87.70	9,244	15.06	1.10-30.10	1,121	3.21	1.10-29.00	484,678	7.00	0.55- 87.70
All Districts	**153,327**	**$5.06**	**$1.10-$30.60**	**25,664**	**$10.83**	**$0.90-$87.70**	**10,147**	**$15.03**	**$1.10-$30.40**	**81,260**	**$37.63**	**$0.55-$108.19**	**3,672,086**	**$11.72**	**$0.55-$108.19**

(22) TIMBER CUT AND BILLED FROM TIMBER SALES AND TIMBER SALE HARVESTING LICENCES

Forest District	Cunits	Board-feet	Lineal Feet	Cords	Posts	Christmas Trees	Car Stakes	Fence Rails, Palings	Slag Poles	Shingle Shakes	Shake Blanks
Vancouver	1,698,069	—	4,368	1,761	7,110	—	1,100	—	—	3,211,523	16,950
Prince Rupert (Coast)	470,540	—	—	—	—	—	—	—	—	—	—
Prince Rupert (Interior)	873,625	—	—	—	—	—	—	—	—	—	—
Prince George	3,167,128	—	—	3	—	—	—	975	—	66,660	—
Cariboo	1,548,656	—	73,867	450	35,915	—	1,000	17,952	—	—	—
Kamloops	1,459,867	—	7,573	354	90,932	—	—	—	—	—	—
Nelson	1,136,779	—	1,130,052	703	190,126	207,889	—	—	—	—	—
Totals, 1974	10,354,644	—	1,215,860	3,271	324,083	207,889	2,100	18,927	—	3,278,183	16,950
Totals, 1973	12,419,197	—	185,850	7,369	89,629	220,086	4,045	7,785	—	5,217,017	63,931
Totals, 1972	10,592,009	—	390,014	3,815	35,322	346,115	1,547	—	—	4,281,398	100,252
Total, 1971	9,935,172	3,957,998	775,330	5,440	89,015	442,956	742	—	—	4,423,122	322,740
Totals, 1970	9,004,256	9,699,203	1,918,009	4,327	36,720	446,549	1,253	—	—	4,379,241	866,431
Totals, 1969	8,048,571	6,250,091	3,280,599	7,046	103,192	479,284	3,494	2,441	61,829	5,676,051	1,856,028
Totals, 1968	7,143,846	6,416,864	3,862,509	7,819	172,642	483,503	3,751	—	—	4,369,011	1,133,289
Totals, 1967	6,193,358	6,083,295	6,107,876	8,719	283,712	458,795	6,277	—	—	3,264,427	553,397
Totals, 1966	7,127,733	7,705,804	8,254,946	12,558	134,518	445,423	2,303	—	—	4,296,938	379,893
Totals, 1965	7,285,213	13,198,159	5,732,671	14,576	200,017	448,385	9,454	—	—	4,795,873	395,119
Ten-year average, 1965-74	**8,810,402**	**5,331,141**	**3,172,366**	**7,494**	**146,885**	**397,899**	**3,497**	**2,915**	**6,183**	**4,398,126**	**568,803**

WOOD-PROCESSING PLANTS OF THE PROVINCE

Forest District	Operating								Shut Down			
	Sawmills				Shingle-mills		Number of Pulp Mills	Number of Veneer and Plywood Plants	Sawmills		Shingle-mills	
	Number	Estimated Eight-hour Daily Capacity, M B.F.	Number of Attached Chippers	Number of Attached Barkers	Number	Estimated Eight-hour Daily Capacity, M B.F.			Number	Estimated Eight-hour Daily Capacity, M B.F.	Number	Estimated Eight-hour Daily Capacity, M B.F.
Vancouver	192	9,888	124	86	70	723	12	11	31	287	9	8
Prince Rupert	80	1,410	14	16	5	4	4	—	104	727	1	1
Prince George	135	4,036	52	53	1	1	5	3	222	1,788	—	—
Cariboo	67	3,395	40	46	2	3	1	3	42	280	1	2
Kamloops	170	4,282	59	70	12	10	1	6	34	628	—	—
Nelson	143	3,585	37	33	13	202	2	4	62	313	3	32
Totals, 1974	787	26,596	326	304	103	943	25	27	495	4,023	14	43
Totals, 1973	810	31,129	320	307	86	960	24	30	455	3,657	11	79
Totals, 1972	603	26,842	305	272	74	935	23	30	506	3,342	28	55
Totals, 1971	627	24,315	244	243	68	606	21	27	576	3.433	12	30
Totals, 1970	881	23,670	230	202	59	531	20	24	322	1,801	9	17
Totals, 1969	974	23,432	227	194	62	643	19	22	309	1,850	17	39
Totals, 1968	902	22,822	186	164	59	705	19	22	332	2,297	13	28
Totals, 1967	931	22,757	197	164	62	784	17	21	340	3,211	5	16
Totals, 1966	1,116	26,729	183	153	57	826	15	20	429	3,344	13	27
Totals, 1965	1,191	27,641	161	144	63	820	12	19	478	2,903	9	26
Ten-year average, 1965-74	**882**	**25,593**	**238**	**215**	**69**	**775**	**20**	**24**	**424**	**2,986**	**13**	**36**

(24) EXPORT OF LOGS (IN CUBIC FEET)

Species	Grade 1	Grade 2	Grade 3	Ungraded and Lumber Reject	Total	Exportable[1]	Exported Under Permit[2]
Fir	55.72	1,182.11	9,637.57	—	10,875.40	7,548.46	3,326.94
Cedar	256.45	1,296.90	7,399.15	—	8,952.50	6,801.99	2,150.51
Spruce	3,401.36	15,642.23	23,751.94	—	42,795.53	23,275.36	19,520.17
Hemlock	1,175.29	5,745.91	47,709.91	—	54,631.11	39,064.02	15,567.09
Balsam	—	—	—	6,839.43	6,839.43	5,517.13	1,322.30
Lodgepole Pine	—	119.91	1,160.63	—	1,280.54	1,062.47	218.07
Cypress	1,268.33	7,839.91	60,958.13	—	70,066.37	17,108.91	52,957.46
Hardwood	—	—	—	9,584.03	9,584.03	9,312.64	271.39
Cottonwood	2.93	79.38	4,924.10	—	5,006.41	3,576.54	1,429.87
Totals, 1974	6,160.08	31,906.35	155,541.43	16,423.46	210,031.32	113,267.52	96,763.80
Totals, 1973	1,547.29	6,379.71	32,746.90	6,834.56	47,508.46	32,679.96	14,828.50
Totals, 1972	7,170.96	23,086.45	67,532.09	4,088.45	101,877.95	30,058.46	71,819.49
Totals, 1971	28,743.15	60,941.92	168,170.90	23,244.25	281,100.22	46,304.25	234,795.97
Totals, 1970	32,223.51	76,299.24	308,001.74	83,962.11	500,486.60	134,557.34	365,929.26
Totals, 1969	5,988.29	30,313.47	172,708.17	50,402.81	259,412.74	106,553.49	152,859.25
Totals, 1968	36,195.62	44,828.35	201,117.53	26,956.46	309,097.96	162,651.30	146,446.66
Totals, 1967	20,213.74	68,868.00	214,992.39	34,954.73	339,028.86	114,189.13	224,839.73
Totals, 1966	16,251.72	45,537.90	146,668.99	28,218.74	236,677.35	73,488.20	163,189.15
Totals, 1965	5,592.04	17,943.67	59,744.62	14,401.05	97,681.38	64,589.26	33,092.12
Ten-year average, 1965-74	**16,008.64**	**40,610.50**	**152,722.48**	**28,948.66**	**238,290.28**	**87,833.89**	**150,456.39**

[1] *Export privilege — Exported from lands Crown Granted prior to March 13, 1906*

[2] *Exported under permit from Crown lands and lands granted after March 12, 1906 under authority of Section 97 of the "Forest Act"*

(25) EXPORTS FROM THE PROVINCE OF MINOR FOREST PRODUCTS

Forest District		Quantity Exported	Approximate Value F.O.B.	Where Marketed		
				Canada	United States	Other Countries
Vancouver						
Poles	Lin. Ft.	3,098,439	9,295,317.00	864,474	2,184,181	49,784
Piling	Lin. Ft.	52,188	156,564.00	47,638	4,550	—
Shakes	Pieces	2,514,774	502,954.80	601,005	1,913,769	—
Pulp Chips	Units	321,590	10,612,470.00	—	321,590	—
Prince Rupert						
Poles	Pieces	51,074	3,365,213.00	26,048	25,026	—
Shakes	Squares	180	5,670.00	45	135	—
Shakes	Pieces	47,041	9,408.20	47,041	—	—
Posts	Pieces	1,775	3,728.00	195	1,580	—
Ties	Pieces	2,100	5,250.00	2,100	—	—
Prince George						
Poles	Pieces	3,201	320,100.00	3,201	—	—
Posts	Pieces	17,683	27,287.00	17,683	—	—
Rails	Pieces	1,125	900.00	1,125	—	—
Shakes	Pieces	68,000	13,530.00	68,000	—	—
Cariboo						
Christmas Trees	Pieces	18,512	27,405.44	2,553	2,553	13,406
Cedar Shakes	Bundles	1,815	12,705.00	—	1,815	—
Kamloops						
Poles	Lin. Ft.	211,200	73,920.40	155,400	55,800	—
Christmas Trees	Pieces	35,483	30,160.55	3,531	31,952	—
Posts	Cords	20	900.00	20	—	—
Nelson						
Poles & Piling	Lin. Ft.	1,463,862	59,046.00	1,463,862	—	—
Corral Rails	Lin. Ft.	136,953	4,109.00	136,953	—	—
Mine Timbers	Lin. Ft.	4,500	135.00	—	4,500	—
Pickets	Cords	35	325.00	35	—	—
Fence Posts	Cords	2,892	123,807.00	392	2,500	—
Christmas Trees	Pieces	604,176	598,134.00	166,711	437,465	—
Pulp Chips	Units	9,074	154,258.00	9,074	—	—
Total Value 1974			**25,403,297.39**			
Total Value 1973			**14,229,486.25**			

(26)

TIMBER MARKS ISSUED, 1965-74

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	10-year Average, 1965-74
Old Crown grants	328	341	277	328	361	220	197	280	328	258	292
Crown grants, 1887-1906	150	130	147	173	159	82	109	120	150	139	136
Crown grants, 1906-1914	172	144	163	190	203	111	126	144	188	171	161
Section 58, *Forest Act*.	649	679	680	805	781	540	524	561	828	749	680
Stumpage reservations.	133	63	61	48	48	19	7	8	9	12	41
Pre-emptions	8	3	6	9	13	10	4	2	6	1	6
Timber berths	14	10	4	1	11	6	2	1	1	1	5
Indian reserves	24	27	11	24	30	14	12	12	24	20	20
Section 24, *Forest Act*.	—	20	214	347	502	418	384	346	362	285	288
Timber sales	1,614	1,126	1,149	1,241	1,327	1,199	991	1,002	1,510	1,823	1,298
Special marks and rights-of-way	153	117	95	101	143	89	115	114	90	74	109
Pulp leases	3	12	4	5	2	—	—	2	1	1	3
Pulp licences	—	4	1	1	2	1	—	2	—	—	1
Totals	**3,248**	**2,676**	**2,812**	**3,273**	**3,582**	**2,709**	**2,471**	**2,594**	**3,497**	**3,534**	**3,040**
Transfers and changes of marks	740	908	593	773	554	686	548	583	506	364	626

(27)

NUMBER OF WEIGH-SCALES BY DISTRICT

Forest District	Number of Weigh Scales at December 31—										10-year Average 1965-74
	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	
Vancouver	1	1	5	5	4	6	6	8	11	20	7
Prince Rupert	1	8	8	10	16	20	20	25	35	36	18
Prince George	9	16	21	27	31	37	42	44	47	50	32
Cariboo	—	—	—	—	—	—	—	14	18	16	5
Kamloops	4	12	17	19	20	26	33	27	35	36	23
Nelson	1	3	4	20	20	22	29	30	37	36	20
Totals	**16**	**40**	**55**	**81**	**91**	**111**	**130**	**148**	**183**	**194**	**105**

(28)

GRAZING PERMITS ISSUED, 1974

Forest District	Number of Permits Issued	Number of Stock Permitted			AUM's Use of Crown Range
		Cattle	Horses	Sheep	
Kamloops	584	77,920	509	850	320,110
Nelson	358	19,216	719	12	81,706
Prince George	390	16,161	1,835	918	57,793
Cariboo	657	69,634	2,483	37	349,013
Vancouver	11	225	—	4	616
Totals, 1974	2,000	183,156	5,546	1,821	809.238
Totals, 1973	1,920	177,785	5,748	1,616	783,677
Totals, 1972	1,968	174,617	6,166	1,432	787,589
Totals, 1971	1,920	178,772	6,186	1,484	829,337
Totals, 1970	1,985	178,332	5,651	2,739	822,442
Totals, 1969	2,018	180,579	5,545	5,106	837,405
Totals, 1968	2,053	188,183	6,338	7,090	857,219
Totals, 1967	2,114	188,126	6,837	6,272	866,539
Totals, 1966	2,244	189,286	6,572	8,970	
Totals, 1965	2,218	188,339	6,677	12,509	

[1]*A.U.M. (Animal Unit Month) is the equivalent of one mature cow for one month. Figure not available prior to 1967.*

(29) FIRE OCCURRENCES BY MONTHS, 1974

Forest District	March	April	May	June	July	August	September	October	Total	Per Cent
Vancouver	—	1	8	38	36	92	121	34	1 331	12.9
Prince Rupert	—	4	13	14	16	58	42	1	— 148	5.8
Prince George	—	1	8	119	40	74	44	15	— 301	11.8
Kamloops	1	5	21	175	103	230	98	116	5 754	29.5
Nelson	1	3	9	158	106	223	86	72	1 659	25.7
Cariboo	5	8	30	70	32	128	49	43	— 365	14.3
Totals	**7**	**22**	**89**	**574**	**333**	**805**	**440**	**281**	**7 2,558**	**100.0**
Per Cent	0.3	0.8	3.5	22.4	13.0	31.5	17.2	11.0	.3 100.0	—
Ten-Year Average	16	68	374	418	658	794	220	57	1 2,606	—
Per Cent	0.6	2.6	14.4	16.0	25.3	30.5	8.4	2.2	— 100.0	—

(30) NUMBER AND CAUSES OF FOREST FIRES, 1974

Forest District	Lightning	Recreational (Campers, Hunters, Fishermen, etc.)	Railroads Operating	Smokers	Brush-burning (not Railway or Right-of-way Clearing)	Range-burning	Road, Power, Telephone, and Pipe-line Construction	Industrial Operations (Logging, Etc.)	Incendiary	Miscellaneous Known Causes	Unknown Causes	Total	Per Cent of Total Fires in Province
Vancouver	26	60	22	98	6	—	1	77	6	34	1	331	12.9
Prince Rupert	21	27	6	21	10	1	1	30	1	28	2	148	5.8
Prince George	74	44	15	27	38	11	2	49	9	26	6	301	11.8
Kamloops	183	92	67	158	22	3	12	45	30	140	2	754	29.5
Nelson	344	43	35	65	8	2	10	67	7	70	8	659	25.7
Cariboo	68	22	2	38	18	17	10	51	80	57	2	365	14.3
Totals	**716**	**288**	**147**	**407**	**102**	**34**	**36**	**319**	**133**	**355**	**21**	**2,558**	**100.0**
Per Cent	28.0	11.3	5.7	15.9	4.0	1.3	1.4	12.5	5.2	13.9	.8	100.0	
Ten-year Average	893	248	200	352	116	113	57	216	57	328	26	2,606	
Per Cent	34.3	9.5	7.7	13.5	4.4	4.3	2.2	8.3	2.2	12.6	1.0	100.0	

(31) NUMBER AND CAUSES OF FOREST FIRES FOR THE LAST TEN YEARS

Causes	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	Total
Lightning	1,000	374	958	708	646	1,803	1,327	583	810	716	8,925
Recreational (Campers, hunters, fishermen, etc.)	315	230	288	131	188	302	211	188	338	288	2,479
Railroads operating	89	170	455	121	238	246	175	136	218	147	1,995
Smokers	310	281	464	179	374	501	309	267	431	407	3,523
Brush-burning (not Railway or Right-of-way clearing)	89	156	128	65	133	146	129	70	145	102	1,163
Range Burning	193	149	138	53	128	191	105	59	78	34	1,128
Road, Power, Telephone and Pipe-line construction	89	101	93	34	52	30	50	44	38	36	567
Industrial operations (logging, etc.)	223	164	248	126	206	255	205	189	224	319	2,159
Incendiary	24	14	42	23	19	70	70	77	99	133	571
Miscellaneous known causes	309	292	348	193	313	432	303	277	462	355	3,284
Unknown causes	44	36	54	14	21	27	14	13	20	21	264
Totals	**2,685**	**1,967**	**3,216**	**1,647**	**2,318**	**4,003**	**2,898**	**1,903**	**2,863**	**2,558**	**26,058**

FIRES CLASSIFIED BY SIZE AND TIMBER LOSS, 1974

Forest District	Total Fires		Under ¼ Acre			¼ to 10 Acres			Over 10 to 500 Acres			Over 500 Acres in Extent			Damage		
	Number	Per Cent of Total Fires in Province	Number	Per Cent of Total Fires in District	Per Cent of Total Fires in This Class	Number	Per Cent of Total Fires in District	Per Cent of Total Fires in This Class	Number	Per Cent of Total Fires in District	Per Cent of Total Fires in This Class	Number	Per Cent of Total Fires in District	Per Cent of Total Fires in This Class	Under $100	Between $100 and $1,000	Over $1,000
Vancouver	331	12.9	204	61.6	13.2	84	25.4	12.0	42	12.7	14.7	1	.3	4.8	263	25	43
Prince Rupert	148	5.8	86	58.0	5.6	40	27.0	5.7	21	14.0	7.4	1	.7	4.8	119	16	13
Prince George	301	11.8	151	50.2	9.7	85	28.3	12.1	54	17.9	19.0	11	3.6	52.3	238	32	31
Kamloops	754	29.5	473	62.7	30.5	211	27.9	30.0	65	8.6	22.8	5	.8	23.8	665	55	34
Nelson	659	25.7	435	66	28.1	160	24	22.8	62	9	21.8	2	.1	9.5	556	65	38
Cariboo	365	14.3	201	55	12.9	122	33.4	17.4	41	11.2	14.3	1	.3	4.8	300	40	25
Totals	**2,558**	**100.0**	**1,550**	**—**	**100.0**	**702**	**—**	**100.0**	**285**	**—**	**100.0**	**21**	**—**	**100.0**	**2,141**	**233**	**184**
Per cent	100.0	—	60.6	—	—	27.5	—	—	11.1	—	—	.8	—	—	83.7	9.1	7.2
Ten-year Average 1965-74	2606	—	1,531	—	—	802	—	—	229	—	—	44	—	—	2,273	193	140
Per cent	100.0	—	58.7	—	—	30.8	—	—	8.8	—	—	1.7	—	—	87.2	7.4	5.4

(33) LOSS OF PROPERTY OTHER THAN FORESTS — 1974

Forest District	Forest Products Cut, Logs, Lumber, Etc.	Buildings	Railway, Logging, and Sawmill Equipment	Miscellaneous	Total	Per Cent of Total
	$	$	$	$	$	
Vancouver	$ 77,727	$ 139,650	$ 43,120	$ 24,823	$ 285,320	58.1
Prince Rupert	125,852	—	15,984	—	141,836	28.9
Prince George	4,868	—	—	100	4,968	1.0
Kamloops	4,124	1,100	1,720	38,609	45,553	9.3
Nelson	3,923	—	—	3,163	7,086	1.4
Cariboo	1,159	—	3,900	1,600	6,659	1.3
Totals	**$ 217,653**	**$ 140,750**	**$ 64,724**	**$ 68,295**	**$ 491,422**	**100.0**
Per cent	44.3	28.6	13.2	13.9	100.0	—
Ten-year Average 1965-74	$ 226,427	$ 142,214	$ 154,217	$ 67,859	$ 590,717	—
Per cent	38.3	24.1	26.1	11.5	100.0	—

(34) LOSS OF FOREST COVER CAUSED BY FOREST FIRES, 1974 — PART I[1]

Forest District	Merchantable Timber				Immature Timber	
	Net Area Killed	Total Volume Killed	Salvable Volume of Timber Killed	Net Stumpage Loss	Net Area Killed	Present Value
	Acres	M Cu. Ft.	M Cu. Ft.	$	Acres	$
Vancouver	982	5,193	3,233	276,844	1,388	202,307
Prince Rupert	2,450	8,859	6,583	45,604	413	24,542
Prince George	1,897	5,199	2,440	216,893	3,101	223,810
Kamloops	5,002	19,725	18,571	39,148	2,169	115,694
Nelson	2,435	63,830	50,478	212,225	2,077	104,154
Cariboo	1,559	1,047	301	115,477	1,251	92,921
Totals	**14,325**	**103,853**	**81,606**	**906,191**	**10,399**	**763,428**
Per cent	26.7	100.0	78.6	48.7	19.4	41.0
Ten-year average 1965-74	44,759	111,216	41,656	2,445,412	60,854	1,642,819
Per cent	18.9	100.0	37.5	58.0	25.6	38.9

[1] *The dollar value of losses in merchantable and immature timber represents only stumpage loss to the Crown. Loss to the provincial economy may be estimated at approximately 10 times the loss values shown.*

(35)

LOSS OF FOREST COVER CAUSED BY FOREST FIRES, 1974 — PART II[1]

Forest District	Not Satisfactorily Restocked				Noncommercial Cover		Grazing or Pasture Land		Nonproductive Sites		Grand Totals		
	Logged, Not Burned Acres	Logged and Burned Acres	Old Burn (Not Logged) Acres	Value of Loss $	Area Burned Acres	Value of Loss $	Area Burned Acres	Value of Loss $	Area Burned Acres	Value of Loss $	Area Acres	Quantity M. Cu. Ft.	Value of Loss $
Vancouver	732	107	17	5,453	666	3,334	2	14	586	2,904	4,480	1,960	490,856
Prince Rupert	2,478	5	—	13,450	111	562	56	284	717	3,590	6,230	2,276	88,032
Prince George	2,120	168	337	15,031	3,939	34,487	40	201	3,839	8,103	15,441	2,759	498,525
Kamloops	5,138	1,337	300	58,415	96	465	625	3,172	631	3,144	15,298	1,154	220,038
Nelson	965	440	29	11,985	1,058	5,211	304	1,541	323	1,628	7,631	13,352	336,744
Cariboo	1,016	24	71	15,054	234	1,207	397	1,999	18	89	4,570	746	226,747
Totals	**12,449**	**2,081**	**754**	**119,388**	**6,104**	**45,266**	**1,424**	**7,211**	**6,114**	**19,458**	**53,650**	**22,247**	**1,860,942**
Per cent	23.2	3.9	1.4	6.4	11.4	2.4	2.6	.4	11.4	1.1	100.0	21.4	100.0
Ten-year average 1965-74	14,712	2,576	8,546	99,411	54,456	18,451	9,092	1,483	42,590	12,284	237,585	69,561	4,219,869
Per cent	6.2	1.1	3.6	2.4	22.9	.4	3.8	—	17.9	.3	100.0	62.5	100.0

[1] *The dollar value of losses in merchantable and immature timber represents only stumpage loss to the Crown. Loss to the provincial economy may be estimated at approximately 10 times the loss values shown.*

(36)

FIRE CAUSES, AREA BURNED, FOREST SERVICE COST AND TOTAL LOSS, 1974

Causes	Number	Per Cent	Acres	Per Cent	Cost	Per Cent	Damage	Per Cent
Lightning	716	28.0	10,253	19.1	2,378,266	35.4	454,390	19.3
Recreational (campers, hunters, fishermen, etc.)	288	11.3	486	1.0	265,439	3.9	163,925	7.0
Railroads operating	147	5.7	460	.9	158,461	2.3	19,780	.8
Smokers	407	15.9	1,039	2.0	798,535	11.9	24,610	1.1
Brush-burning (not Railway or Right-of-way clearing)	102	4.0	1,202	2.2	139,809	2.1	21,577	.9
Range burning	34	1.3	1,965	3.6	95,629	1.4	21,899	.9
Road, Power, Telephone, and Pipe-line construction	36	1.4	340	.6	46,126	.7	6,147	.2
Industrial operations (Logging, etc.)	319	12.5	34,673	64.6	2,026,519	30.2	1,490,562	63.4
Incendiary	133	5.2	888	1.7	495,616	7.4	53,209	2.3
Miscellaneous known causes	355	13.9	982	1.8	268,769	4.0	70,951	3.0
Unknown causes	21	.8	1,362	2.5	45,961	.7	25,319	1.1
Totals	**2,558**	**100.0%**	**53,650**	**100.0%**	**6,719,130**	**100.0%**	**2,352,369**	**100.0%**

(37)

COMPARISON OF LOSS CAUSED BY FOREST FIRES IN LAST TEN YEARS

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	Total 10 years
Total number of fires	2,685	1,967	3,216	1,647	2,318	4,003	2,898	1,903	2,863	2,558	26,058
Area burned (acres)	307,132	54,788	244,483	33,381	406,763	260,958	868,864	64,413	82,524	53,650	2,376,956
Standing timber destroyed or damaged (M. cu. ft.)	114,585	3,506	170,555	5,361	158,147	144,287	339,285	13,982	58,602	103,853	1,112,163
Amount salvable (M. cu. ft.)	40,872	1,453	110,136	759	21,499	56,474	70,100	6,779	26,876	81,606	416,554
Loss to forests	$ 25,793	$5,194,473	$ 757,017	$4,751,919	$6,776,020	$3,437,205	$12,974,582	$ 713,681	$5,276,975	$1,860,942	$41,768,607
Loss to other forms of property	151,338	567,162	164,352	927,201	663,177	744,901	609,064	459,728	1,056,760	491,422	5,835,105
Total Loss	**$ 177,131**	**$5,761,635**	**$ 921,369**	**$5,679,120**	**$7,439,197**	**$4,182,106**	**$13,583,646**	**$1,173,409**	**$6,333,735**	**$2,352,364**	**$47,603,712**

(38)

FIRES CLASSIFIED BY FOREST DISTRICT, AND COST PER FIRE OF FIRE-FIGHTING, 1974

Forest District	Total Fires	Total Forest Service Cost			Extinguished Without Cost			Cost Money to Extinguish							
		Dollars	Per Cent	Average Expenditure per Cost Fire (Dollars)	Number	Per Cent of Total Fires in District	Per Cent of Total Fires in Province	Number	Per Cent of Total Fires in District	Per Cent of Total Fires in Province	Cost Less Than $100 per Fire	Cost $100 to $1,000 per Fire	Cost Over $1,000 to $5,000 per Fire	Cost Over $5,000 to $10,000 per Fire	Cost Over $10,000 per Fire
Vancouver	331	1,392,215	20.7	7,445	34	10.3	1.3	297	89.7	11.6	103	90	45	16	43
Prince Rupert	148	204,609	3.1	3.009	21	14.0	0.8	127	86.0	4.9	37	42	34	6	8
Prince George	301	1,261,015	18.8	4,636	29	9.9	1.1	272	90.0	10.6	61	90	71	20	30
Kamloops	754	1,790,900	26.6	5,562	145	19.2	5.7	609	80.8	23.8	198	204	131	34	42
Nelson	659	1,094,663	16.3	3,016	121	18	4.7	538	82	21.0	139	194	140	33	32
Cariboo	365	975,728	14.5	3,263	66	18	2.6	299	82	11.7	59	117	81	17	25
Totals	**2558**	**[1]6,719,130**	**100.0**	**26,931**	**416**	**—**	**16.2**	**2,142**	**—**	**83.6**	**597**	**737**	**502**	**126**	**180**
Per cent	100	—	—	—	16.3	—	—	83.6	—	—	23.3	28.8	19.6	4.9	7.0
Ten-year average	2606	5,119,233	100.0	—	521	—	—	2085	—	—	869	730	316	70	100
Per cent	100.0	—	—	—	20.0	—	—	80.0	—	—	33.3	28.0	12.1	2.7	3.9

Cost to other parties (856 cost fires) $3,258,342 Cost to Forest Service (1,417 cost fires) $6,719,130
[1]Cost correct to date Subject to later revision.
Detailed final costs are published one year in arrears in the table "Forest Protection Expenditures" in each annual report.

(39) FOREST-USE RESTRICTIONS

Area	Type of Closure	Date Implemented	Date Terminated
Entire district	Restricted industrial	Aug. 2	Aug. 27
Entire district	Travel and recreation	Aug. 2	Aug. 22[1] Aug. 24[2]
Watershed, City of Penticton	Restricted industrial	Aug. 3	Aug. 19
Zones K1, N1	Travel and recreation	Sept. 12	Sept. 19

[1] Zones N7, N8.
[2] Remainder of forest district.

(40) SUSPENSION OF CAMPFIRES

Area	Forest District	Date Implemented	Date Terminated
Okanagan Lake watershed Similkameen watershed excluding Manning Provincial Park	Kamloops	Aug. 2	Aug. 13
Vancouver Forest District except Zones 4, 5 & 6	Vancouver	Aug. 8	Aug. 20
Zone 8 ban lifted August 16			
Vancouver Forest District except Zones 4, 5 & 6 including Gulf Islands water front areas and beaches	Vancouver	Aug. 29	Sept. 10

(41) FOREST REVENUE, 1970-74

	12 Months to Dec. 31, 1970	12 Months to Dec. 31, 1971	12 Months to Dec. 31, 1972	12 Months to Dec. 31, 1973	12 Months to Dec. 31, 1974
	$	$	$	$	$
Timber licence rentals and fees	668,254.04	640,458.88	623,153.52	585,616.72	569,850.39
Timber berth rentals and fees	123,123.68	112,947.83	95,433.78	87,545.48	81,729.63
Timber lease rentals and fees	92,895.76	93,633.27	91,731.48	84,405.30	86,412.80
Timber sale rentals and fees	898,484.23	798,919.11	674,091.83	736,073.92	696,048.97
Timber sale stumpage	53,524,665.01	49,680,565.02	91,180,674.04	230,648,895.04	181,605,129.21
Timber sale cruising and advertising	163,321.01	166,647.42	140,245.57	132,227.44	144,040.10
Timber royalties	6,217,109.85	5,553,861.92	5,336,035.96	6,879,851.39	7,459,614.20
Grazing permits and fees	438,003.68	469,636.16	532,992.78	542,090.28	661,145.80
Forest protection tax	1,006,742.58	1,123,517.24	1,185,179.11	1,149,528.61	1,028,180.35
Miscellaneous	669,194.53	735,683.76	773,132.95	1,056,014.21	1,654,564.42
Weight-scaling	1,149,637.48	1,514,347.62	2,004,105.62	2,660,410.57	2,772,736.05
Indian Affairs Agreement	—	—	—	—	151,585.78
TSHL fire-fighting costs standby crews	—	—	—	282,596.87	283,095.50
Totals	**64,951,431.85**	**60,890,218.23**	**102,636,776.64**	**244,845,255.83**	**197,200,142.26**

AMOUNT CHARGED AGAINST LOGGING OPERATIONS, 1974

Forest District	Royalty	Miscel-laneous	Scaling Fund		Stumpage	Rentals, Cruising, Advertising, Transfer Fees	Total
			Scaling Expenses	Scaling Fees			
	$	$	$	$	$	$	$
Vancouver	6,010,288.78	309,089.75	512,135.85	2,288,942.14	48,264,741.24	292,043.47	57,677,241.23
Prince Rupert	917,459.23	508,492.61	48,268.27	217,254.82	18,746,064.44	158.986.86	20,596.526.23
Prince George	327,712.94	762,237.67	—	—	39,887,816.28	322,876.60	41,300,643.49
Kamloops	483,951.03	1,264,598.53	—	—	24,398,988.65	163,370.03	26,310,908.24
Nelson	321,530.00	548,262.45	—	—	16,007,790.05	148,645.19	17,026,227.69
Cariboo	160,229.54	448,464.71	—	—	22,393,368.85	127,742.36	23,129,805.46
Totals, 1974	8,221,171.52	3,841.145.72	560,404.12	2,506,196.96	169,698,769.51	1,213,664.51	186,041,352.34
Totals, 1973	6,804,683.59	3,876,214.24	506,980.82	2,385,179.87	251,777,437.15	1,917,706.24	267,268,201.91
Totals, 1972	5,231,473.78	2,510,946.56	403,475.31	1,995,941.13	96,595,977.64	1,921,977.20	108,659,791.62
Totals, 1971	5,519,236.50	1,930,657.09	423,107.49	2,107,899.80	55,347,358.35	2,341,636.62	67,669,895.85
Totals, 1970	6,102,283.77	1,480,701.37	430,081.94	2,242,672.37	50,042,114.17	1,998,891.74	62,296,745.36
Totals, 1969	6,394,215.18	1,335,288.66	417,010.41	2,046,118.14	80,270,727.23	1,900,578.27	92,363,937.89
Totals, 1968	5,240,932.73	215,421.57	457,873.04	1,960,676.35	48,292,949.16	1,868,711.35	58,039,564.20
Totals, 1967	3,097,283.30	155,429.93	460,492.24	1,654,526.83	33,111,713.22	1,561,397.57	40,040,843.09
Totals, 1966	3,033,313.36	34,552.21	409,398.60	1,685,787.86	42,032,738.27	1,567,023.40	48,762,813.70
Totals, 1965	2,599,335.52	13,019.78	325,333.63	1,526,114.51	42,997,720.01	1,520,404.68	48,981,928.13

[1]*Charges for eight months only.*

(43) **AMOUNTS CHARGED AGAINST LOGGING OPERATIONS, FISCAL YEAR 1973/74**

Forest District	Royalty	Miscellaneous	Scaling Fund		Stumpage	Rentals, Cruising, Advertising, Transfer Fees	Total
			Scaling Expenses	Scaling Fees			
	$	$	$	$	$	$	$
Vancouver	4,155,613.95	287,858.34	461,430.90	2,149,316.36	66,182,297.21	842,114.21	74,078,630.97
Prince Rupert	1,011,190.36	607,387.41	52,766.84	148,668.19	30,811,516.97	272,011.99	32,903,541.76
Prince George	451,783.43	797,414.67	—	—	50,798,113.46	389,267.30	52,436,578.86
Kamloops	432,841.00	1,152,473.63	—	—	43,239,942.96	201,007.22	45,026,264.81
Nelson	426,012.73	747,275.57	—	—	29,351,009.47	189,168.09	30,713,465.86
Cariboo	217,368.79	438,704.87	—	—	32,526,765.71	124,708.60	33,307,547.97
Totals, 1973/74	6,694,810.26	4,031,114.49	514,197.74	2,297,984.55	252,909,645.78	2,018,277.41	268,466,030.23
Totals, 1972/73	5,696,871.79	2,755,671.01	435,656.63	2,179,338.81	135,091,040.33	1,883,747.01	148,042,325.58
Totals, 1971/72	5,502,832.37	2,004,531.00	429,262.36	2,124,679.35	68,137,580.27	2,251,080.00	80,449,965.35
Totals, 1970/71	5,508,498.13	1,717,910.69	382,501.42	1,999,070.86	45,558,857.31	1,914,268.47	57,081,106.88
Totals, 1969/70	7,109,112.86	1,362,256.98	463,629.45	2,393,795.94	77,653,886.17	1,854,858.17	90,817,540.17
Totals, 1968/69	5,606,697.44	531,812.86	430,176.61	1,813,633.15	57,086,138.53	2,053,320.31	67,521,778.90
Totals, 1967/68	3,101,010.90	167,243.61	462,292.44	1,730,158.05	32,528,962.43	1,435,377.37	39,425,014.80
Totals, 1966/67	3,014,116.07	97,618.77	418,649.05	1,633,282.45	38,999,030.55	1,614,407.62	45,777,104.51
Totals, 1965/66	2,835,387.89	12,951.13	363,546.48	1,683,900.58	44,658,459.16	1,586,928.06	52,070,068.62
Totals, 1964/65	2,528,753.61	10,200.85	287,344.41	1,148,796.45	40,402,430.17	1,375,540.12	46,570,174.53

(44) **REPORT OF LANDS, FORESTS, AND WATER RESOURCES**
FOREST REVENUE, FISCAL YEAR 1973/74

	$
Timber licence rentals and fees	612,239.59
Timber berth rentals and fees	77,751.23
Timber lease rentals and fees	86,884.30
Timber sale rentals and fees	764,000.74
Timber sale stumpage	247,550,107.93
Timber sale cruising and advertising	129,253.56
Timber royalties	6,895,105.19
Grazing permits and fees	579,369.01
Forest-protection tax	1,198,382.80
Miscellaneous	1,103,797.99
Weight-scaling	2,823,727.19
TSHL fire-fighting costs standby crews	459,020.52
Total	**262,279,640.05**

(45) **FOREST SERVICE EXPENDITURES, FISCAL YEAR 1973/74**

	$
General administration, protection, and management of forests	29,175,738.19
Reforestation and forest nurseries	5,425,101.01
Forestry and Correction Camp Programme	29,900.21
Forest research	351,918.63
Public information and education (Includes S.W. 10)	135,218.81
Forest Service Training School	139,259.06
Grant to Canadian Forestry Association	30,000.00
Engineering services and forest-development roads	3,491,995.93
Fire suppression	9,554,150.28
Forest inventory	1,950,907.12
Scaling Fund (1)	2,831,204.55
Silviculture	1,954,583.70
Grazing Range Improvement Fund[1]	271,935.48
Peace River community pastures	19,039.29
Reservoir Waterway Improvements (1)	2,747,937.88
Accelerated Reforestation Fund (1)	8,255,846.54
Special Warrant 49 Relocation of H.Q. Office	39,481.81
Total	**66,404,218.49**

[4] *Statements provided elsewhere*

(46) **REPORT OF THE FOREST SERVICE, 1974**

SCALING FUND

	$
Deficit, April 1, 1973	597,802.80
Collections, fiscal year 1973-74	2,860,215.78
	2,262,412.98
Expenditures, fiscal year 1973-74	2,831,204.55
Deficit, March 31, 1974	568,791.57
Collections, nine months, April to December, 1974	2,043,211.95
	1,474,420.38
Expenditures, nine months, April to December, 1974	2,489,332.28
Deficit, December 31, 1974	1,014,911.90

(47) **GRAZING RANGE IMPROVEMENT FUND**

	$
Surplus, April 1, 1973	1,690.62
Government contribution (sec. 13, *Grazing Act*)	254,162.37
	255,852.99
Expenditures, fiscal year 1973-74	271,935.48
Deficit, March 31, 1974	16,082.49
Government contribution (sec. 13, *Grazing Act*)	289,684.50
	273,602.01
Expenditures, nine months, April to December, 1974	248,308.50
Surplus, December 31, 1974	25,293.51

(48) **RESERVOIR WATERWAY IMPROVEMENTS**

	$
Expenditures, fiscal year 1973-74	2,747,937.88
Recovered from British Columbia Hydro and Power Authority	2,509,411.92
Balance	238,525.96

(49) **ACCELERATED REFORESTATION FUND**

	$
Surplus, April 1, 1973	9,349,556.97
Expenditures, fiscal year 1973-74	8,255,846.54
Surplus, March 31, 1974	1,093,710.43
Expenditures, nine months, April 6 - December 1974	150,165.95
Surplus, December 31, 1974	943,544.48

(50) **DISTRIBUTION OF PERSONNEL 1974**

Personnel	Vancouver	Prince Rupert	Prince George	Kamloops	Nelson	Cariboo	Victoria	Total
Continuously Employed (Regular)								
Deputy Minister, Chief Forester, and Assistant Chief Foresters	—	—	—	—	—	—	4	4
Director of Services	—	—	—	—	—	—	1	1
District Foresters, Division Heads, Forest Counsel, Staff Consultant	1	1	1	1	1	1	13	19
Assistant District Foresters and 2 i/c Divisions	1	1	1	1	1	1	6	12
Foresters, Engineers, Agrologists, Agriculturist	18	23	26	26	23	29	163	308
Economists, Biologists, Research Officers	—	—	—	1	—	—	5	5
Personnel Officers	1	—	1	1	—	—	5	8
Forest Protection Officers	2	2	2	2	1	2	6	17
Technical Forest Officers	49	35	44	45	44	30	9	256
Engineering Technicians & Assistants	5	2	3	4	4	4	36	58
Forest Assistants & Engineering Aides	181	83	123	96	98	74	144	799
Communication Technicians	4	3	4	3	4	3	10	31
Comptroller, Audit Accountants, Administrative Officers, Property Negotiators, Prog. Analysts	2	1	1	1	1	1	21	28
Public Information Officers, Photographers etc.	—	—	1	—	—	—	8	9
Mechanics and General Tradesmen	16	6	10	5	6	5	67	115
Tradesmen (Carpenters etc.), Bridgemen, Laborers	4	10	9	5	1	16	30	75
Scaling Supervisors (Coast)	15	—	—	—	—	—	—	15
Scalers (Coast)	147	2	—	—	—	—	—	149
Weight Scaler Supervisors	—	4	1	1	2	1	—	9
Weight Scalers	—	38	70	42	43	28	—	221
Superintendents & Assistant Superintendents (Scaling, Nursery, Mechanical etc.)	4	—	1	1	1	—	26	33
Foremen (Trades, Road, General etc.)	14	2	11	5	8	3	23	66
Draughtsmen, Mapping Assistants and Survey Assistants	10	4	24	5	7	10	61	121
Machine Operators	10	9	10	9	7	8	14	67
Launch Crewmen	24	7	—	—	—	—	—	31
Administrative Support Staff	94	39	57	42	47	44	181	504
Total — Continuous Personnel	**602**	**272**	**400**	**296**	**299**	**260**	**833**	**2962**
Non-Continuous Employees (Auxiliary)								
Patrolmen and Lookoutmen	—	25	28	17	35	13	—	118
Dispatchers, Radio Operators & Clerks	4	8	5	7	—	6	10	40
Reforestation, Snag-fallers, Planters etc.	12	527	450	16	—	475	3561	5041
Machine Operators	—	5	5	—	7	3	55	75
Forest Assistants, Engineering Aides	3	124	181	324	262	110	317	1321
Foremen (Trades, Road, General etc.)	4	—	27	19	26	15	218	309
Launch Crewmen	—	—	—	—	1	—	4	5
Mechanics and General Tradesmen	—	—	—	11	—	—	12	23
Tradesmen (Carpenters etc.)	1	1	5	2	6	4	47	66
Scalers (Coast and Interior)	15	6	10	17	—	2	—	50
Administrative Support Staff and others	1	8	40	3	40	6	82	182
Total — Auxiliary Personnel	**40**	**704**	**751**	**416**	**377**	**634**	**4306**	**7228**
Total — All Personnel	**642**	**976**	**1151**	**712**	**676**	**894**	**5139**	**10190**

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