

SOCIO-ECONOMIC FACTORS
AFFECTING LAND USE

SHUSWAP REGION

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DEPARTMENT OF INDIAN AFFAIRS
and NORTHERN DEVELOPMENT

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IN

THE SHUSWAP REGION

JULY 1971



DEPARTMENT OF INDIAN AFFAIRS
AND NORTHERN DEVELOPMENT
VANCOUVER, B. C.

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ACKNOWLEDGEMENTS

Gratitude is extended to those listed below who generously donated time to provide information related to the purpose of this assignment.

Officers of the Department of Indian Affairs and Northern Development, Kamloops, B.C.

District Agriculturist, Kamloops and Salmon Arm, B.C.

Chamber of Commerce, Kamloops and Salmon Arm, B.C.

City Museum, Kamloops, B.C.

Secretary-Manager, Columbia-Shuswap Regional District, Salmon Arm, B.C.

British Columbia Forest Service, Kamloops, B.C.

Provincial Parks Branch, Kamloops and Victoria, B.C.

Department of Mines, Kamloops, B.C.

Soil Survey Division, Department of Agriculture, Kelowna, B.C.

Land Inspector, Department of Lands, Kamloops, B.C.

Provincial Department of Health, Salmon Arm, B.C.

Provincial Assessor, Kamloops, B.C.

Municipal Assessor, Salmon Arm, B.C.

Department of Industrial Development, Trade and Commerce,

Economics and Statistics Branch, "A British Columbia Regional Economics Study, October 1970".

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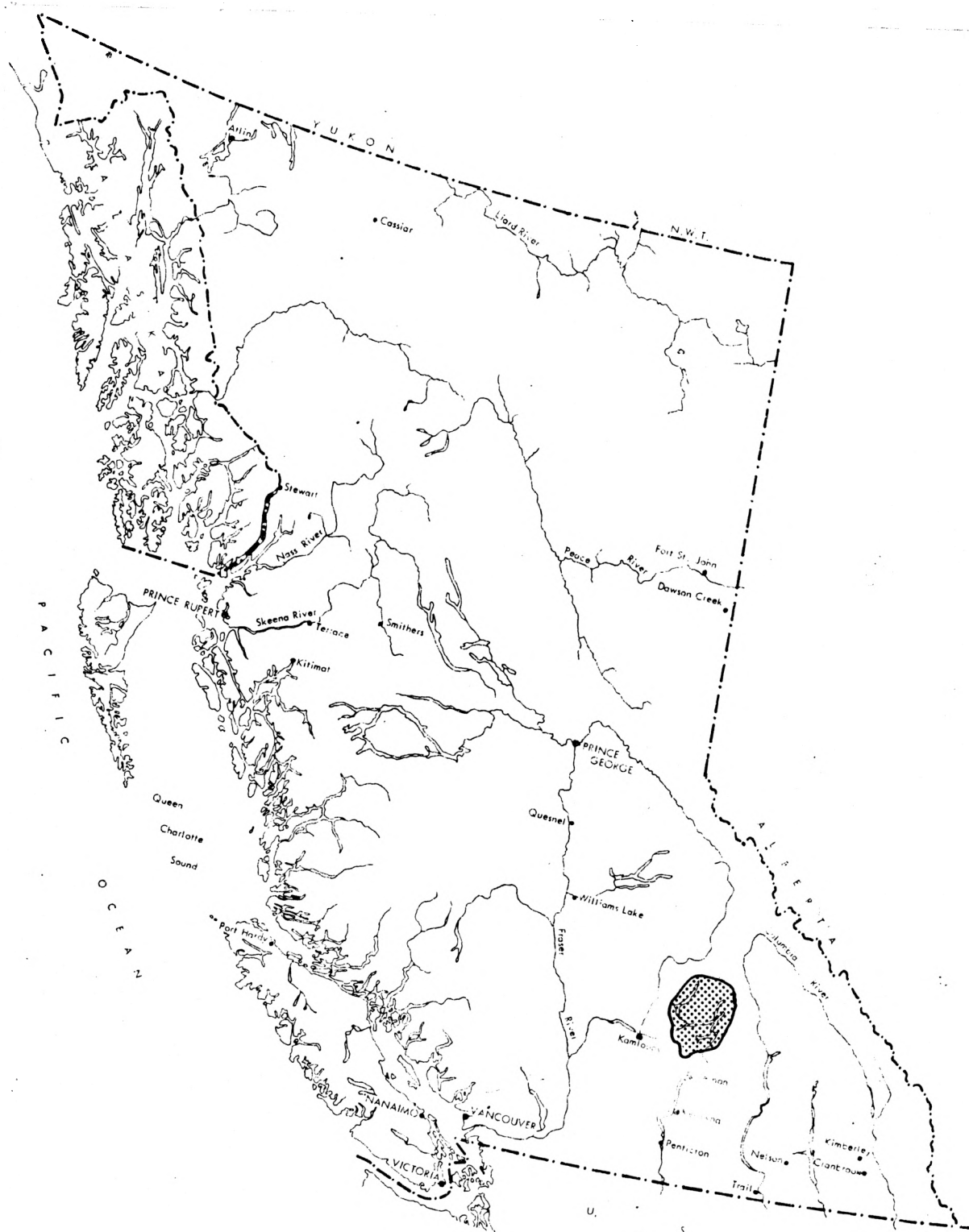
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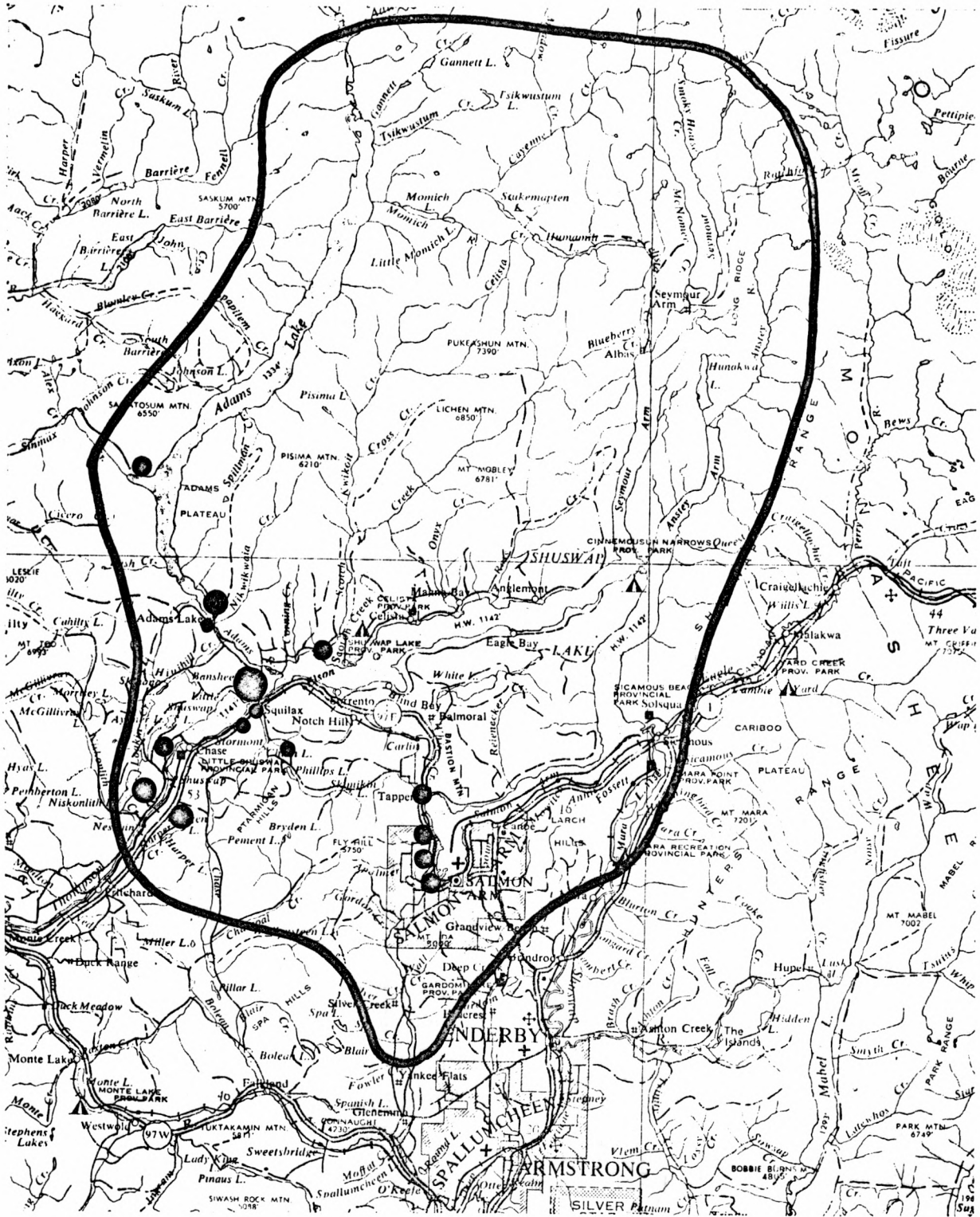
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THE SHUSWAP REGION
(in Relation to British Columbia)



Map Showing
LOCATION OF INDIAN RESERVES
in Relation to
BOUNDARY OF SHUSWAP REGION
1 inch = 10 miles .



PURPOSE AND SCOPE

An accurate analysis of regional socio-economic conditions is an integral part of a land use report, a development feasibility study, or an appraisal of market value. A land use report essentially relates physical characteristics of a specific parcel of land to socio-economic conditions in order to determine the highest and best use of the parcel. A development feasibility study examines the capability of a parcel of land to produce an income if developed for a specific use. An appraisal of market value or an appraisal of loss or damage caused by a taking of land begins with an analysis of regional socio-economic data. This analysis is the one basic component of an appraisal which influences all other calculations.

Basically, these three exercises:- land use studies, land appraisals and development feasibility studies, are involved with establishing land use priorities which must be compatible with regional socio-economic conditions. In fact, it is not unusual to abandon a development project after completing a regional socio-economic study. If socio-economic conditions do not invite profitable development of a parcel for a specific use, there is nothing to be gained by continuing the study to include a detailed analysis of the engineering aspects of the proposal.

The purpose of this report, therefore, is to examine the resources of the region; to offer a historical account of the development of these resources; to examine significant existing developments within the region and finally to co-ordinate these findings to reach significant conclusions regarding future trends. Finally, these conclusions will relate to the use and development of land within the region in order that land managers, such as individual Indian Bands, can use the information as an aid in deciding whether or not a land appraisal, a development proposal or a land use study would be beneficial. Further, it is anticipated that this presentation can be used as a reference document by land use consultants and appraisers in the completion of assignments contracted with the Band or the Indian Affairs Department. When several such assignments have been commissioned within a region, it is repetitious and costly for each researcher to retrace the same routes as his colleagues in search of socio-economic data. He can use this document as a reference text and briefly

comment on its content in his report, thus reducing the bulk of material presented and the final cost of the project.

The usefulness of the document will decrease as time passes. Current statistics and predictions of future trends will eventually become history and the report will be obsolete. However, the Shuswap region is entering a most significant period of its development history. Recreation has emerged as a prime resource and with it, a public concern for environmental protection. Now is the time when the most beneficial contributions will be made to land use planning and some of the greatest errors in this field will inadvertently happen. It is, therefore, evident that a report of this nature is timely in that it will serve its greatest utility during the next five years.

This report does not attempt to analyse world-wide economic conditions as they affect the value and use of land within the region. It is recognized, however, that international economic conditions have a direct effect on the sale and marketing of goods produced within the region and, therefore, significant international economic developments will affect socio-economic conditions of the region. For example, the attitude that various nations have towards the International Common Market, the rise and fall of the interest rate in the United States or the exchange rate of the Canada-U.S. dollar all have a significant effect on the development of the region.

It is emphasized that the scope of the report is restricted to only those socio-economic factors that affect the value and use of land and, therefore, the data will have limitations if used for other purposes.

PART I

GENERAL ANALYSIS

DEVELOPMENT HISTORY

The development of the Shuswap area has been largely influenced by transportation patterns which have been established by the early fur traders and gold miners and more recently, historically speaking, by the completion of the Canadian Pacific Railway and the Trans Canada Highway. The development history can best be described with reference to two main transportation eras; namely before rail and after rail.

"Before rail", the fur-brigade route, established by the Hudsons Bay Company transported furs from Alexandria on the Fraser River to Little Port on the North Thompson, then southward by way of Kamloops and Okanagan and on to the Columbia River south of the 49th parallel. This early route contributed very little to the development of the Shuswap region since, for the most part, it followed the path of least resistance which led through the semi-open country near Monte Lake, Westwold and on to the Okanagan Valley. The lush forested valley of the Shuswap represented difficult development and transportation problems and it was, therefore, avoided. Fort Kamloops benefited from the fur trade when in 1830 a large horse ranch was established to meet the strong demand for pack animals.

The fur-brigade route was abandoned in 1846 with the establishment of the International Boundary and the Shuswap region was left relatively untouched by settlements until 1865 when Placer gold was discovered in the tributaries of the Columbia River north of Revelstoke. The Hudsons Bay Company operated a steamer between Savona on Kamloops Lake and the top end of Seymour Arm on Shuswap Lake. Miners were migrating to the new gold fields from Victoria and the Cariboo and the Shuswap Lake water route was heavily travelled. From the top end of Seymour Arm the miners travelled by trail across country to the Columbia River Valley. It is reported that between 8,000 and 10,000 miners were in the area during this period.

The gold rush slumped in 1887 but some of the miners, on their return route from gold fields, became permanent settlers.

Salmon Arm had not yet been significantly affected by these transportation routes because steamer traffic from Seymour Arm to the south was diverted into Mara Lake and on to the Okanagan Valley. Thus, in spite of its many advantages as a settlement area, Salmon Arm was missed once again

by the early transportation routes and only a handful of settlers were in the area when the Canadian Pacific Railway came through in 1885.

The railway stimulated some settlement activity but even by 1891 the population of Salmon Arm was only 200 persons. By 1905 the population had doubled as industries became established. Communities sprung up along the railway supported by sawmills which were quick to develop in response to the strong demand for lumber in the Prairie provinces. Chase, Tappen, and Salmon Arm all benefited from the payrolls created by these early sawmills.

Early settlers benefited from the agricultural potential of the Salmon Arm area and fruit, vegetables and dairy products were soon being shipped to Kamloops. Early agricultural developments were of an experimental nature testing different localities with different crops. It did not take long to learn that vegetables and dairying represented a much better use of the low lands than the growing of tree fruits. Orchards in the low lands soon gave way to pastures and vegetable fields. Today, fruit farming is practiced only on the upper benches.



Pasture Land Near Salmon Arm.

The Salmon Arm Farmers Exchange was born in 1907 to assist farmers in marketing their fruit and to provide them with more buying power in

the purchase of farm supplies and consumer goods. The Shuswap Consumer Cooperative Association later took over the functions of the Farmers Exchange. During this period early fruit farmers believed that the potential for growing fruit was better in the Shuswap area than in the Okanagan Valley. Before the Okanagan developed their extensive irrigation systems, the lack of water was a serious factor limiting the fruit growing potential. The Shuswap area, with its 20 inches of annual precipitation, looked good compared to the Okanagan's 10-12 inches. Consequently, fairly extensive orchards were planted in and around Salmon Arm and finger westward along the railway corridor as far as Chase. However, marketing systems were not too sophisticated and only marginal success was enjoyed. It was necessary to practice mixed farming in order to maintain a reasonable income level.

A severe winter in 1949-50 killed most orchards and this marked the end of the commercial fruit growing era for some communities. Small marginal orchards which had developed west of Salmon Arm through to Chase were never replanted. Some farmers enlarged other sectors of their mixed farming ventures while others simply took employment in sawmills and the construction trades. Some were able to take advantage of the expanding recreational activity within the neighbourhood and developed their property to meet the demand. The area around Salmon Arm reassessed their land use practices after the setback and only those areas that were best suited for growing fruit trees were replanted. Thus, dairying, beef production and truck gardening was encouraged in areas which were formerly devoted to fruit production. Today, the fruit industry has benefited from its transformation and the marketing of apples, pears, prunes, cherries, strawberries and raspberries are contributing significantly to the total income of the community.

The growth of recreation during the past 10 years has been almost violent. Other areas of the province possessing recreational advantages have experienced growth during this period but not to the same extent as the Shuswap region. Prior to the end of the second World War the region was relatively untouched by recreational development. The settlers within the region enjoyed the natural advantages of a veritable paradise that was unknown to the rest of Canada and even to the rest of British Columbia. Resort developments on the lake were nearly non-existent and private summer

homesites were, for the most part, owned exclusively by people from Kamloops and Salmon Arm. The odd summer visitor from the Prairies was examined with curiosity by local inhabitants. Little did they realize that this foreigner was the front rank of an army of recreation seekers which would soon deprive them of their solitude. The increase of the lakeshore property values was a bold reminder that the quarter section farm on the lake represented significant value to others for recreational purposes. During the 1930's and into the 1940's a quarter section farm fronting on the lake could be purchased for \$1,500. After the war years, a demand for smaller homesite lots became evident and values were presented on a front foot basis. \$10 to \$20 per front-foot was being paid for choice frontage with lesser values being attached to more remote areas. During the early 1950's, the flurry began and sales were being transacted at the exorbitant price of \$40 per front-foot. By the early 1960's, prime frontage was becoming a little scarce and it was unbelievable that people were paying as high as \$80 per front-foot. Today, lake frontage values range between \$100-\$150 per front-foot but very few properties are on the market. Adams Lake is further removed from the main transportation routes and its shorelines are nearly 100% Crown owned. Therefore, it has not experienced the same land acquisition flurry. Lake frontage values range between \$40 and \$50 per front-foot.



Switzemalph Indian Reserve No. 6, Sandy Point

Three main factors caused the sudden rise in lake frontage values on Shuswap Lake. In 1958 the Provincial Government enacted legislation restricting the alienation of Crown lake frontage by leasehold only. It was no longer possible to acquire a new Crown grant on unalienated Crown frontage. About the same time, the Provincial Parks Branch opened their new 268 acre camp ground at Scotch Creek. At that time very few private camp grounds were developed and it was not long until the new camp ground was experiencing 100% occupancy for most of the summer. A well planned public campsite tends to create a recreational focal point within a region and many tourists who were attracted to the Shuswap region for the first time because of the camp grounds, returned repeatedly.

As it became more difficult to obtain a camping space many visitors purchased lake frontage property and the effect on values was felt immediately. In 1961 the opening of the Rogers Pass Highway brought travellers into the region who normally travelled the southern Trans Provincial route. Prior to the construction of the Rogers Pass route it was necessary to suffer the 7 hour drive from Golden to Revelstoke on the Big Bend route. The new highway reduces travel time between Golden and Revelstoke to 1 3/4 hours. Calgary visitors were now able to enter the Shuswap region in 5 hours which put it within reach for weekend holiday visits. The effect of the summer migration from Calgary because of the construction of the Rogers Pass route is probably the most important factor that "opened up" the Shuswap region for recreational use.

Today, the violence of these modern intrusions on what was formerly a sleepy paradise is most evident. Developers and speculators are frantically reacting to the sudden demand for recreational facilities. Lake frontage is scarce and expensive and the value of farm land near the lake but not fronting on the lake has suddenly increased from a nominal \$100 per acre to \$1,000 per acre. A farm with a view possessed a potential for a retirement subdivision. Resorts which formerly earned only marginal returns are squeezing campsites on to their properties to catch the overflow from the Provincial Government Campsite and Public Health Regulations are being strained. A trip to the far reaches of Seymour Arm and Anstey Arm was formerly a daring feat. Now, it is a pleasureable journey by houseboat or quick one hour trip by high powered speed boat. The advance of such a hoard of tourists into the region is alarming to

the original settlers because the recreational potential of the region was never fully appreciated. Recreation will undoubtedly become the number one income producer of the region.

The development history of the forest industry does not vary significantly from trends experienced within other regions. The industry started briskly in the 1890's to serve the tie market and the Prairie lumber market. This market declined in 1914 and many sawmills disappeared while those who remained active struggled along until the end of the second World War when the demand was revived. Several new mills established during this period but the following trend to amalgamation decreased the number of sawmills and stabilized the employment requirements. Chase and Salmon Arm have been most noticeably affected by the amalgamation practices. Chase in particular was once primarily a lumbering and sawmilling town but lumbering operations within the neighbourhood are now restricted to the one large plant, Holding Lumber Co. Ltd., at Adams Lake. Lignum Limited have moved from Salmon Arm to their present site at Tappen. The Federated Cooperatives Limited at Canoe, the largest producer in the region, are involved in a \$1.6 million expansion program which will allow their sawmills to utilize species which formerly could not be cut economically.



A Typical Second Growth
Fir-Yellow Pine Stand, Adams River

Although mineral exploration has played a role in the history of the region, its contribution has never been significant. Non-metallic minerals, in the form of quartzite and silica, have been shipped from Quartzite Point on Shuswap Lake. Scotch Creek was the scene of a minor amount of Placer gold mining in the 1930's while Copper Island carries the scars of some drilling activity.

Agriculture, recreation, the fur trade, forestry and mineral exploration have all played a part in the historical development of the region but agriculture and recreation appear to be emerging as the major land uses influencing the economy. However, the stabilizing effects of the forest industry will always contribute substantially to the viability of the total economy. The effects of the mining industry in the future are more difficult to predict. A change in world markets and an important mineral discovery within the region could substantially affect the importance of mining.

PHYSICAL DESCRIPTION

This report is confined to those lands within the Shuswap Lake and Adams Lake Drainage Basin. The northern half of the region, including Seymour and Anstey Arms of Shuswap Lake and the entire Adams Lake basin is relatively uninhabited. To date, the forest industry has been the main contributor to the development within this portion of the region. The southern portion, containing the main body of Shuswap Lake and Salmon Arm, has experienced development and growth due to agriculture, forestry and recreation since the turn of the century.

Several interesting geological processes have produced the present land masses throughout the region. Irregular masses of granite appears in outcrops throughout which were thrust up during the time that the Coast Mountains were being formed. Continual erosion filled in the spaces between the protrusions and were eventually covered by lava flows. Again erosion, accompanied by a general uplift, deepened the valleys and eroded the surface of the plateaus. Glaciers covered the areas during the Pleistocene Age scouring the larger valleys and depositing a layer of mixed clays, sands and gravel over the bedrock of the plateaus. As the glaciers melted, extensive valley terraces were formed marking the successive levels of glacial lakes.

The Shuswap Highlands, lying between Shuswap and Adams Lakes, display a rugged and uneven surface with relief generally exceeding 5,000 feet. Adams Lake lies at elevation 1,326 while Shuswap lies at 1,131 a.s.l. The plateaus between the two main drainages generally lie at 6,000 feet with isolated peaks reaching over 7,000 feet a.s.l.

The mountains slope steeply into Adams Lake, Seymour Arm and Anstey Arm. These steep slopes often limit the value of lake frontage for recreational purposes. The main body of the lake, on the other hand, displays an extensive terrace development as described above, accompanied by gentle slopes to the lakeshore. Where tributary streams, such as Scotch Creek and Adams River enter the main valley, large fan-like deltas, composed of coarse gravel and boulders have been deposited. This is most evident where the fans of the Adams River have cut off the west arm of Shuswap Lake to create Little Shuswap Lake. The Quaaout Indian Reserve No. 1 is situated on this fan. The Scotch Creek fan is covered mostly by Scotch Creek

Indian Reserve No. 4. The Provincial Parks Branch campsite on Shuswap Lake is also located near the eastern borders of the Scotch Creek fan.

The clarity and purity of Shuswap waters are important characteristics influencing the recreational potential. Summer campers and permanent residents alike pump water from the lake for domestic purposes with little or no fear of contamination. The high level of water quality is largely due to two factors. Soundings have been recorded in excess of 500 feet within the arms of the lake and the annual flushing effect maintains a healthy water exchange. The lake is fed by such large rivers as the Adams, Scotch Creek, Seymour River, Anstey River, Salmon River and Shuswap River by way of Mara Lake. The average annual variation in lake level is 13 feet.

Foreshore slopes into the main bodies of the lake are generally gentle with fairly extensive beaches developed from the annual water level fluctuations. The region is characterized by three main soil orders. The Brown, Dark Brown and Black groups are commonly referred to as the Grassland soils. Soils commonly found under forest cover are referred to as Podzolic and forested Brown orders while the Regosolic soils contain the alluvial subgroups. Grassland soils extend eastward from the drier Kamloops area to Chase where a rapid transition to the Forest soils is evident. Around Shuswap Lake the Forest soils are found either on hillsides above grassland or in valley locations. Sufficient natural moisture is generally available for dryland farming, however, local stoniness, cool climate and relatively low fertility has limited agricultural use of these soils. Alluvial soils are found on the delta of the Salmon River and presently supports a variety of agricultural crops. These soils represent the best agricultural soils in the region and make excellent pasture land. However, the sandy loams and loamy sands exhibit a low moisture holding capacity and require irrigation for successful farming. The Mara loam constitutes the bottom land of the Salmon River valley where dairying is practiced successfully aided by irrigation. Mara clay predominates where the Salmon River delta approaches Shuswap Lake. The water table is high and mixed farming can sometimes be practiced without the aid of irrigation. These soils are reported to be the most productive in the region.

Forest cover can be classified by describing the northern portion of

the region separate from the southern portion. The southern portion, where both agricultural and recreational developments have flourished, exhibits forest types which are influenced slightly by the Montane Forests within the drybelt valleys to the west. These forests are actually a transition type between the drybelt Montane forests and the wetter, cooler Columbia forests. Such species as Douglas Fir, Ponderosa Pine, and Western Red Cedar prevail with mixed stands containing birch and aspen being most common. Although these forest types represent a difficult development chance for agricultural purposes, they present an ideal environment for recreation.

The northern reaches of the region assume the characteristics of the Columbia forests with Douglas Fir still represented with some larch on isolated sites. However, the cooler cedar-hemlock type prevails in the wetter valleys associated with spruce and deciduous species at the lower levels. These types are not as appealing for recreational purposes as they are generally associated with greater rain fall and cooler temperatures.

All Indian Reserves within the region are located within the Montane Forest zone.

CLIMATE

Climatic factors bear an important influence on forest growth, agricultural crop growth and the quality of the recreational environment. A summary of climatic normals, therefore, offers an indication of what land uses are likely to thrive. Unfortunately, Salmon Arm contains the only complete weather recording station within the region and, therefore, the following table offers data for Kamloops and Vernon as well as Salmon Arm. The western end of the region, in the vicinity of Chase is located within a transition belt from a climatic viewpoint. The arid conditions of the Kamloops area change to the more humid conditions of the Shuswap region. It can be expected, therefore, that climatic figures for Chase would range somewhere between the figures for Salmon Arm and Kamloops. The following table also shows the climatic normals for Vernon simply for comparison purposes.

CLIMATIC NORMALS

(from Canada Department of Transport, Meteorological Branch)

	Kamloops 1132' a.s.l.	Vernon 1383' a.s.l.	Salmon Arm 1200' a.s.l.
Hours with bright sunshine	2,046	1,896	1,683
Earliest, last spring frost	April 16	April 8	April 25
Latest, last spring frost	June 3	June 13	May 31
Earliest, first fall frost	Sept. 12	Sept. 6	Sept. 4
Latest, first fall frost	Oct. 14	Nov. 13	Oct. 6
Longest frost free period	168 days	194 days	146 days
Shortest frost free period	114 days	90 days	105 days
Mean Annual Rainfall	6.78"	10.69"	15.86"
Mean Snowfall	28.7"	48.7"	67.8"
Mean total precipitation	9.65	15.56	22.64
Number of days with measurable rain	58	83	82
Number of days with measurable snow	22	34	39
No. of days with meas. precipitation	79	116	148
Maximum Precipitation in 24 hours	2.02"	1.86"	1.55"
Mean Daily Temperature (Annual)	48.30	46.40	44.90
Mean Daily Temperature (July)	70.80	68.40	66.10
Mean Daily Temperature (January)	23.30	23.20	21.60
Maximum Temperature	1030	1040	990
Minimum Temperature	-350	-310	-290

Briefly the above table indicates that the Shuswap region has less sunshine than the Vernon-Kamloops area which gives it a slight disadvantage from a recreational viewpoint. However, the hazards from late spring frosts is less in the Shuswap area. Earlier fall frosts might occur in Salmon Arm but for fruit crops this is considered an advantage. The frost free period is less in the Shuswap area but its total precipitation far exceeds both Vernon and Kamloops areas. From an agricultural viewpoint the above statistics show that with careful attention to the selection of varieties the agricultural potential of Salmon Arm should be at least as good as Vernon or Kamloops. Kamloops has much fewer days with measurable rain than both Vernon and Salmon Arm, however, its maximum precipitation in a 24 hour period is much more. It, therefore, might be concluded that it drizzles more often in Salmon Arm but the chance of a violent down-pour is greater in Kamloops.

The Salmon Arm statistics compare favourably with other recreational regions of the province but they are more fortunate in that the climate offers advantages for agricultural production not commonly enjoyed in some other regions. The climate of the Shuswap region is moderate and favourably meets the requirements of both agriculture and recreation.

After three quarters of a century of testing various agricultural crops in the Salmon Arm region dairying has recently emerged as the most significant income producer. Approximately 10,000 acres are presently producing hay at $2\frac{1}{2}$ to $4\frac{1}{2}$ tons per acre and 1,000 acres producing corn silage at 18 tons per acre. Comparing the number of acres devoted to other crops quickly illustrates the significance of the dairying industry. 220 acres are devoted to apples; 30 acres to cherries; and only 10 acres to sweet corn. Thus, an area which was once considered to be the prime fruit growing area in the province is experiencing drastic changes due to economic conditions and better land use practices resulting from a more complete knowledge of climatic and soil conditions. Encroachment of urban developments into orchard lands also has caused a reduction in fruit production.



A Typical Salmon Arm Dairy Herd.

Fifty million pounds of milk are produced annually. At $5\frac{1}{2}$ ¢ per pound the total gross return to producers is \$2.75 million. Approximately 200 dairy herds of commercial significance exist within the region with the average size herd containing 44 cows. The total farm investment often reaches \$200,000. The sudden shift in the character of agriculture within the Shuswap region is most apparent when one examines the 1965 Census

of Farms. The Census showed that the greatest gross value from agricultural production was from the cattle industry. The total value of cattle sold in that year was \$1,016,080. Dairying was second at \$317,110. The total value of other agricultural products sold was as follows.

Hay and fodder	-	\$148,780
Forest products	-	\$136,920
Potatoes, root crops, tobacco, sugar beets and other field crops	-	\$123,100
Sheep	-	\$ 59,289
Eggs	-	\$ 53,280
Pigs	-	\$ 30,150
Grains other than wheat, including oil seeds	-	\$ 25,820
Horses	-	\$ 18,510
Tree fruits and small fruits	-	\$ 16,710

In view of the above statistics it is not surprising that Salmon Arm farmers turned from fruit farming to mixed farming. The trend now is from mixed farming to economic dairy herds.

The same 1965 Survey pointed out that 5 farms had a gross sale exceeding \$35,000; 6 farms were in the \$25,000-\$34,999 bracket while 25 farms sold a total value of agricultural products of \$10,000-\$14,999. Current statistics compiled by the Provincial Department of Agriculture show that the most successful dairy herds in the region are netting \$20,000-\$25,000 annually after allowing for a reasonable return on the investment.

The most apparent cause of the sudden expansion of the dairy industry is the migration of Fraser Valley farmers to the region. Encroaching urban expansion has displaced these farmers and many have found their way to the Salmon Arm area. The price received for their acreage for residential purposes far exceeds the sale price of farm acreage within the neighbourhood and they are in an enviable position financially to become firmly re-established in the dairy industry at their new location. Indian Reserve lands in the vicinity of Salmon Arm with a good pasture or hay producing potential could contribute significantly to the expansion of the dairy

industry and contribute to Band income.

Favourable climatic and soil conditions along with good management is producing relatively high incomes per acre. A typical mixed farm consists of at least 100 acres, of which 50 or more are cleared and in crop. The large dairy farms currently being developed by the Fraser Valley farmers commonly include two or three of these smaller units.

Processing plants in Salmon Arm, Vernon and Armstrong produce Cheddar or Cottage cheese, butter and ice cream. In the Salmon Arm area two-thirds of the milk production is marketed in the fluid state. Although there appears to be very few marketing problems, new producers would be required to obtain a quota and to meet other requirements of the milk industry.

Other agricultural products are of lesser importance but are worthy of mention because it is predicted that their volume will expand in the future. 1965 Census counted 26,124 hens and chickens and 64 turkeys in the Shuswap area. Commercial poultry production is restricted to only three fulltime producers who supply most of the local market and a number of hatching eggs for the Calgary market. Hay and fodder were the most important field crops grown in 1965 followed closely by potatoes. The hay and fodder industry is closely related to the cattle and dairying industry and, therefore, as one expands the other will follow.

The Provincial Department of Agriculture studied the feasibility of producing feeder stock within the region and concluded that Salmon Arm is ideally located and contains the necessary physical characteristics to succeed in a commercial feed lot venture. The study indicated that 3,000 head would constitute a reasonable number.

Finally, from a land use point of view, social, economic and physical characteristics of the region show that agriculture is a firmly established industry which will continue to grow and compete favourably with other land uses in view of the significant incomes produced. Further, it is unlikely that use conflicts will develop between forestry and agriculture since the optimum use of acres presently supporting forestry or agriculture is well defined. The extensive areas of forest presently being managed represent very little value for agricultural purposes while the acreage being farmed is producing reasonable incomes through intensive management.

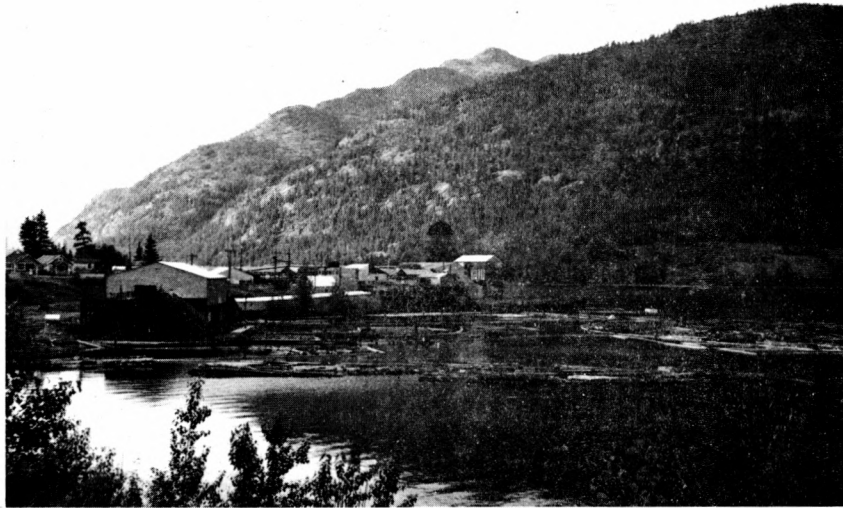
Similarly, there is no reason for recreation and agriculture to conflict. Natural recreational resources are associated with lakeshore values and it is unlikely that agricultural crops could ever produce a return great enough to justify the use of lake frontage for agricultural purposes. However, an exception to this rule might exist in the vicinity of Salmon Arm and adjacent to Indian Reserve No. 3 where the muddy shallow fore-shore extending into the lake limits the recreational potential while the adjacent upland displays very favourable agricultural characteristics.

FORESTRY

A stabilized forest industry not only provides a payroll but creates a marketing outlet for logs produced on private land. The previous section on Agriculture showed that in 1965 the value of forest products produced by farmers was \$136,920. This represented the fourth largest single income producer exceeding the value of such agricultural commodities as grains, vegetables, tree fruits and eggs. It is, therefore, evident that forestry has played an important role in the history of agricultural development in the Shuswap region. Several farming units still exist which are not capable of producing a reasonable family income and the farmer-operator looks to his undeveloped, or non-arable acreage as a means to supplement his income through the sale of logs.

Looking back in history, it is apparent that the forest industry was established on this basis. Land was being cleared for agricultural purposes at the time when the Prairie market for lumber was brisk and several farmers ran their own sawmills to meet the demands of this market. Most farmers abandoned their sawmilling enterprise after sufficient acreage was cleared to support an economic farm unit. However, others directed their efforts in the reverse direction and sold their farm unit in favour of expanding their sawmill. Thus, immediately after the second World War a large number of sawmills were established feeding the planer mills located along Front Street in Salmon Arm.

The sawmilling industry became the economic backbone of other communities such as Chase and Canoe. Today, however, the number of sawmills has been substantially reduced but the total volume and value of wood products has increased.

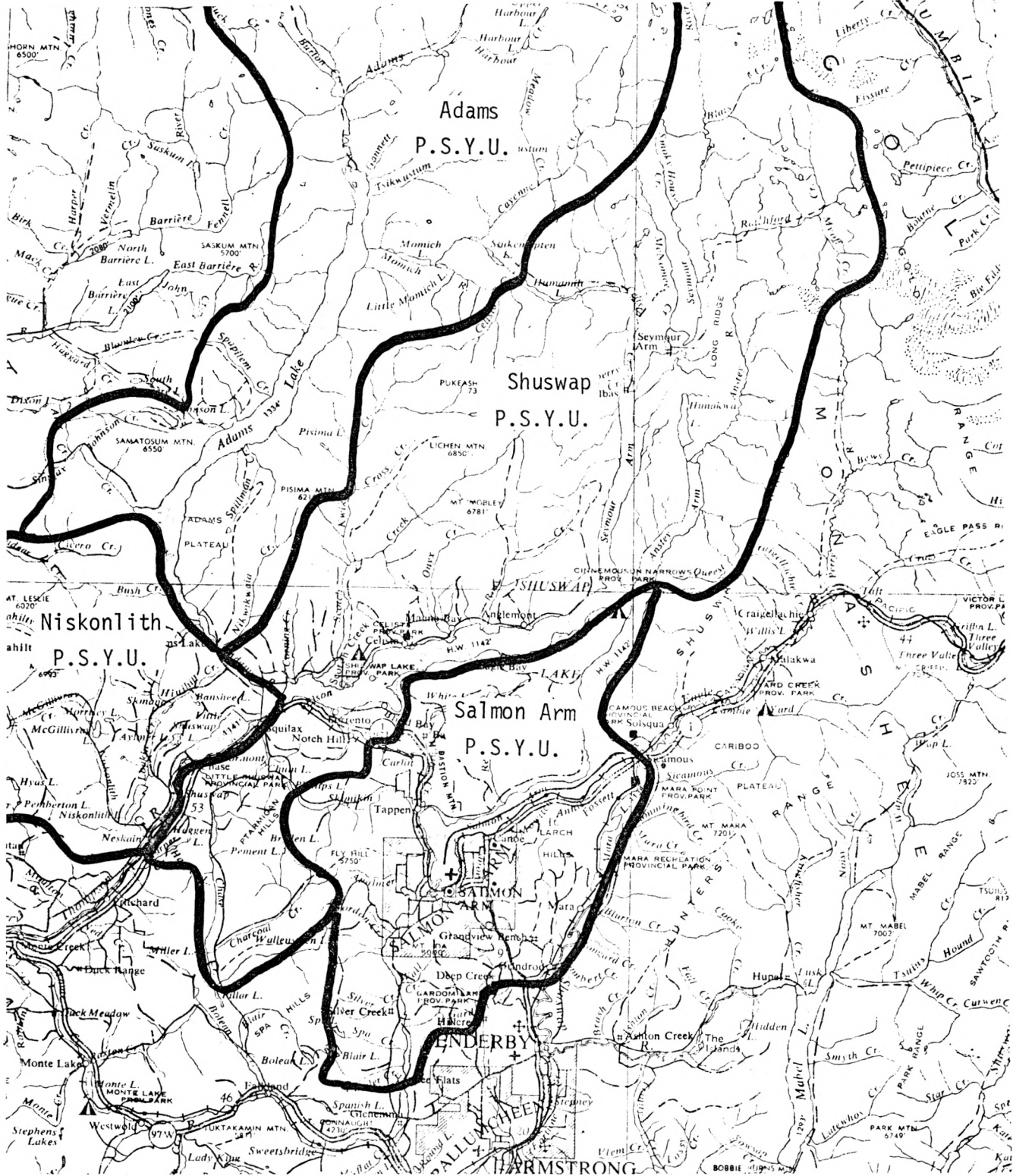


Holding Lumber Co. Ltd., Adams Lake

In the vicinity of Chase, the Holding Lumber Co. Ltd. was established at Adams Lake, deriving their raw material from several large timber births west of the lake. Other sawmills have come and gone closer to the village of Chase but the large mill at Adams Lake still remains. Lignum Limited operated a sawmill-planer mill complex in Salmon Arm until recently when it was moved to Tappen. The Federated Cooperatives Limited sawmill at Canoe is still situated on its original site but has been greatly enlarged and modernized. As utilization standards change new sawmilling equipment is required to increase the recovery from logs.

Crown timber within the study area is harvested according to a management plan designed to allow timber harvesting to continue in perpetuity. This is accomplished by means of controlled annual harvests. The study area contains four such management units commonly termed Public Sustained Yield Units. The Shuswap, Salmon Arm and Adams Sustained Yield Units all lie within the boundaries of the study region while the Niskonlith lies partly within the study area and extends westward beyond the boundary to the North Thompson River. Pulp harvesting area No. 2 includes

Map Showing
PUBLIC SUSTAINED YIELD UNITS
within the
SHUSWAP REGION



the four Sustained Yield Units mentioned above plus other units lying outside the Shuswap region. Sawmills enjoy an annual saw log quota within each Sustained Yield Unit but all waste material suitable for the production of chips is committed to Kamloops Pulp and Paper Ltd. by the terms of the Pulp Harvesting Area Agreement. Sawmills within the region can qualify for an one-third increase to their annual allowable cut if they practice more complete utilization by cutting material which was formerly considered non-merchantable and by producing pulp chips. The major quota holders in the four Public Sustained Yield Units within the region and their allowable annual cut as of July 1, 1971, is listed on the following page.



ESTABLISHED QUOTA HOLDERS AS OF JULY 1, 1971.

Licencee	Annual Cut 1/3 incre.		Total
	M.c.f.	M.c.f.	M.c.f.
<u>SALMON ARM P.S.Y.U.</u>			
Federated Cooperatives Ltd.	1,543	514	2,057
Hoover Sawmill Ltd.	264	88	352
Crown Zellerback Canada Ltd.	138	46	184
J. G. Moore	123	41	164
Others (Less than 100 M.c.f.)	<u>473</u>	<u>49</u>	<u>522</u>
Total	2,541	738	3,229
<u>SHUSWAP P.S.Y.U.</u>			
Federated Cooperatives Ltd.	5,261	1,754	7,015
Trilam Wood Products Ltd.	375	125	500
Crown Zellerback Canada Ltd.	284	95	379
Bell Pole Co. Ltd.	264	--	264
Others (Less than 100 M.c.f.)	<u>611</u>	<u>31</u>	<u>642</u>
Total	6,795	2,005	8,800
<u>ADAMS P.S.Y.U.</u>			
Holding Lumber Co. Ltd.	4,407	1,469	5,876
Birch Island Lumber Co. Ltd.	668	223	891
Kamloops Pulp & Paper Co. Ltd.	150	--	150
Others	<u>261</u>	<u>--</u>	<u>261</u>
Total	5,486	1,692	7,178
<u>NISKONLITH P.S.Y.U.</u>			
Balco Forest Products Ltd.	848	283	1,131
Kamloops Lumber Co. Ltd.	767	--	767
Holding Lumber Co. Ltd.	469	156	625
Federated Cooperatives Ltd.	294	98	392
Others	<u>147</u>	<u>8</u>	<u>155</u>
Total	2,525	545	3,070
<u>GRAND TOTAL</u>	17,347	4,980	22,327

The annual allowable cut of the four Public Sustained Yield Units within the region is fully committed. In other words, it would be safe to say that if the production of forest products is to expand in the future it must be as the result of better utilization of the raw material by existing operators. It is conceivable, however, that the Forest Service would entertain a proposal for a new industry which would utilize material which is not already included within their committed inventory. For example, Trilam Wood Products Ltd. were issued a timber sale harvesting licence for deciduous species only. Other minor products such as fence posts, Christmas trees, shingles and shakes, fence pickets and fence rails might conceivably be harvested from Crown lands.

The above information is interesting from a land use point of view but the most important factor relevant to this report is that most mills are sawing more than their log quota. In some cases this additional supply is derived from tree farm licences and salvage sales. However, a certain percentage is derived from private lands.

Another significant effect of the modern trends in the lumber industry is that millions of dollars are being spent in the construction of integrated wood processing plants. Formerly, a few thousand dollars would build a sawmill. Now, with such large investments at stake, operators can not afford to shut down or reduce production during adverse marketing periods or simply as a lever in labour disputes. They must continue to operate and their long term wood requirements are based on firm wood supply sources. They are committed, therefore, to continue their dependence upon "private wood" for a portion of their wood supply.

Once again, from a land use point of view, the private tree farmer or woodlot holder can plan the harvest of his forest inventory in perpetuity because his market is assured. An acre of forest land will never compete successfully with an acre of farm land near Salmon Arm as an income producer. However, as new products are being extracted from the forest, the value of land suitable only for growing trees becomes more and more significant. Further, economists and marketing specialists have predicted that a wood shortage will develop in British Columbia in future years. Forest land should not hastily be developed for other uses without carefully considering its ultimate productive capacity and

the anticipated incomes which might be derived from these other uses.



"Money in the Bank"

Indian Bands should be more aware of the potentials of their forest land in order that their land management schemes will not result in use conflicts. The significance of incomes that might be derived from forests is illustrated in the following analysis.

Conceiveably, some forest lands within Indian Reserves are regenerating with a mean annual increment of 40 cubic feet per acre. Assuming an average stumpage value of \$5 per cunit, this means that the value of the annual wood growth on one acre of forest land is \$2.00. This figure in itself is not very exciting but when we consider that the total acreage of all Indian Reserves within the region is over 21,000 acres and further, if we assume that perhaps half of this acreage or 10,000 acres is productive forest land the value of the total mean annual increment on 10,000 acres is \$20,000. In other words, if the above assumptions are nearly true and the Indian Reserve forests were managed in perpetuity they could produce an annual income of \$20,000 or a periodic income, once every five years, of \$100,000.

The above analysis is offered with no intimate knowledge of the

physical characteristics of each reserve. However, it is presented only to illustrate that forest lands are not necessarily waste lands. They can become significant income producers if adequate acreages are involved on reasonable growing sites and further if the economy of the region will support a tree farming operation. This report has shown that economic conditions are favourable for private tree farming but the tree growing potentials of each reserve is unknown.

RECREATION

Because of the superior recreational characteristics of Shuswap Lake and its adjacent lands, most recreational developments are water oriented. Other recreational activities such as hunting, hiking, rock hounding, winter skiing and several other organized sporting activities are well represented within the region but camping by the lake, swimming, fishing and general beach pleasures are the main features that attract tourists to the region. The following discussion will, therefore, concentrate on the potentials of this type of recreation.

The section of this report entitled DEVELOPMENT HISTORY pointed out that commercial recreation was an extremely marginal industry within the region until the Provincial Parks Branch constructed their grounds at Scotch Creek; the Rogers Pass Highway was opened providing a more direct route to the region from the Prairies and lakeshore property values began to rise. These three factors have influenced the recreational development growth within the region significantly and particularly so during the past five years. For the purpose of this report the development of lands for recreational purposes shall be presented under two categories; firstly, tourist facilities and secondly, residential subdivisions.

1. Tourist Facilities

Tourist facilities shall include campsites, cabins and motels. For several years resorts frequently changed hands in the Shuswap region and it has often been stated that the real estate agent was the only person making money from recreation. In recent years, sales of resorts and motels have not been quite so brisk and existing developments are

enlarging their facilities.

Prior to the construction of the Provincial Parks Branch camp grounds at Scotch Creek, commercial camp grounds represented only an insignificant sideline of the resort business. When the Scotch Creek camp ground was filling to capacity and tourists were being turned away, private campsites first developed close to the Provincial Government campsite to capture the overflow. Soon these camps were filling to capacity and resorts anywhere on the lake developed campsite areas. In the mid-60's private operators were complaining that the Provincial Parks Branch presented unfair competition by offering free camping space. Subsequently, in recent years the Scotch Creek camp grounds have been charging \$2.00 per night. It is still filling to capacity and it has been judged by Park officials that 200-400 campers are turned away each day when no further space is available.

Because the facilities at Scotch Creek are superior to most private campsites tourists are attracted to this area first before searching for accommodation within private developments. The following chart lists resort facilities available within the region.

SHUSWAP REGION
RESORT FACILITIES

Name of Resort	Location	No. of	
		On Lake	No. of Sleep. Camp. Units
Old Orchard Trailer Camp	Chase		48
Overlander Motel	Chase	8	
Chase Motel	Chase	7	
Underwood Hotel	Chase	15	
Sims Lakeside Resort	Chase	x	85
Jade Mt. Tent & Trailer Park	Chase	x	33
Silvery Beach Resort	Little Shuswap	x	18
Adams Lake Resort	Adams Lake	x	8
Adams River Tent & Trailer Park	Adams River		30
Anchor Bay Resort	Scotch Creek	x	6
Pine Gove Resort & Campsite	Scotch Creek	x	4
Frank's Campsite	Scotch Creek		1
Cedar Springs Resort	Celista	x	50
Alpine Trails Ranch	Magna Bay		1
Twin Cedars Lodge	Magna Bay	x	10
Poplar Roost Resort	Magna Bay	x	10
Anglemont Resort	Anglemont	x	27
Little River Lodge	Squilax	x	8
Sorrento Lakeside Resort	Sorrento	x	40
Caravan Camping & Tenting Grounds	Sorrento	x	60
Shuswap Lake Motel & Resort	Sorrento	x	10
Rob Mar-Haven	Sorrento		2
Sorrento Motel	Sorrento		22
White Sands Resort	Sorrento	x	14
Maples Resort Motel	Sorrento	x	10
Grants Motel & Resort	Sorrento	x	6
Long Beach Resort	Sorrento	x	7
Copper Is. Tent & Trailer Resort	Sorrento	x	12
K. Mar Resort	Blind Bay	x	4
Blind Bay Resort & Fishing Camp	Blind Bay	x	9
Harbour Motel Resort	Blind Bay	x	19
Blind Bay Park	Blind Bay		1
The Sportsmen's Resort	Blind Bay	x	11
Eagle View Resort	Eagle Bay	x	9
Crescent Resort	Eagle Bay	x	16
Shuswap Narrows Lodge	Eagle Bay	x	9
Wild Rose Bay Resort	Eagle Bay	x	8
Sky Blue Waters Tent & Trailer Park	Tappen	x	50
Nightingale Resort	Tappen	x	6
Sandy Point Resort	Tappen	x	10
Total			282
Salmon Arm Motels			217
Sicamous			235
Mara Lake			73
GRAND TOTAL			807
			1180
			139
			162
			668
			2149

Salmon Arm motels are grouped as one entry on the chart as are Sicamous motels and resorts on Mara Lake. Resorts on Shuswap Lake would compete more directly with similar developments that might be proposed on Indian Reserves within the region. Salmon Arm and Sicamous motels and Mara Lake resorts are also listed because they are within the same economic region and the total of all facilities available within the region is of interest. Although the total campsites on Shuswap Lake, 1,180, appears large, it is not so startling when we compare the figure with the total number of campsites on Mara Lake, 668. Shuswap Lake possesses nearly 800 miles of shoreline while Mara Lake is only 10 miles long. One might conclude, therefore, that either Mara Lake is over populated with campsites or Shuswap Lake has a capacity for many more. To judge the future potential of Mara Lake is not relative to the purpose of this report but the comparison is interesting and it might be concluded that physically, Shuswap Lake could accommodate many more camping units.

Economically, in view of the difficulties sometimes encountered in finding an empty camping space during the summer months it might also be concluded that the potential for the successful operation of more camping sites is good. On examining the figures relative to sleeping units the same conclusion is evident. However, sleeping units require a greater investment and, therefore, the net return is not as attractive. Further, in view of the optimistic predictions regarding the increase in the use of tents and campers, the number of facilities available will have to increase significantly to meet the future demands. A new campsite development comprising 118 units on Shuswap Lake would increase the existing number of units by only 10%.

The figures above do not include the 268 unit Government Campsite at Scotch Creek. This development will continue to fill to capacity regardless of the number of private campsites developed and, therefore, it represents a constant factor which bears very little adverse effects on the private campsites. The following tables show the total number of overnight and day visitors at the Scotch Creek Campsite for each year from 1961 to 1970.

Year	No. of Visitors
1961	123,124
1962	139,896
1963	175,948
1964	157,385
1965	185,600
1966	202,980
1967	225,334
1968	309,631
1969	370,514
1970	333,838

The numbers of camping tourists on the highway increases each summer. The Provincial Parks Branch has compiled more detailed records regarding the characteristics of campers since 1958, as shown in the following table.

PARK ATTENDANCE

Provincial Parks Branch Campsite at Scotch Creek

Year	Number of Visitors			Camper Origin Percentage			Camper Accommodation Percentage			
	Day Use	Camper Nights	Total	B.C.	Can.	U.S.	Camp.	Tylrs.	Tylr.	Tents
1968	227,980	81,651	309,631	59.0	31.2	9.8	--	--	--	--
1969	285,496	85,018	370,514	60.0	29.8	10.2	13.3	19.2	23.5	44.0
1970	239,818	94,020	333,838	61.9	27.4	10.7	18.3	19.4	22.6	39.7

The table shows that although total attendance dropped off in 1970 this was primarily due to a decrease in day users. The number of overnight campers continued to increase. The number of campers from British Columbia increases slightly each year as does the number from the United States. Campers from other parts of Canada have decreased slightly in number. The type of accommodation is interesting from a campsite development point of view as it influences campsite design. It is interesting that the number of tents is decreasing while the number of campers is

increasing.

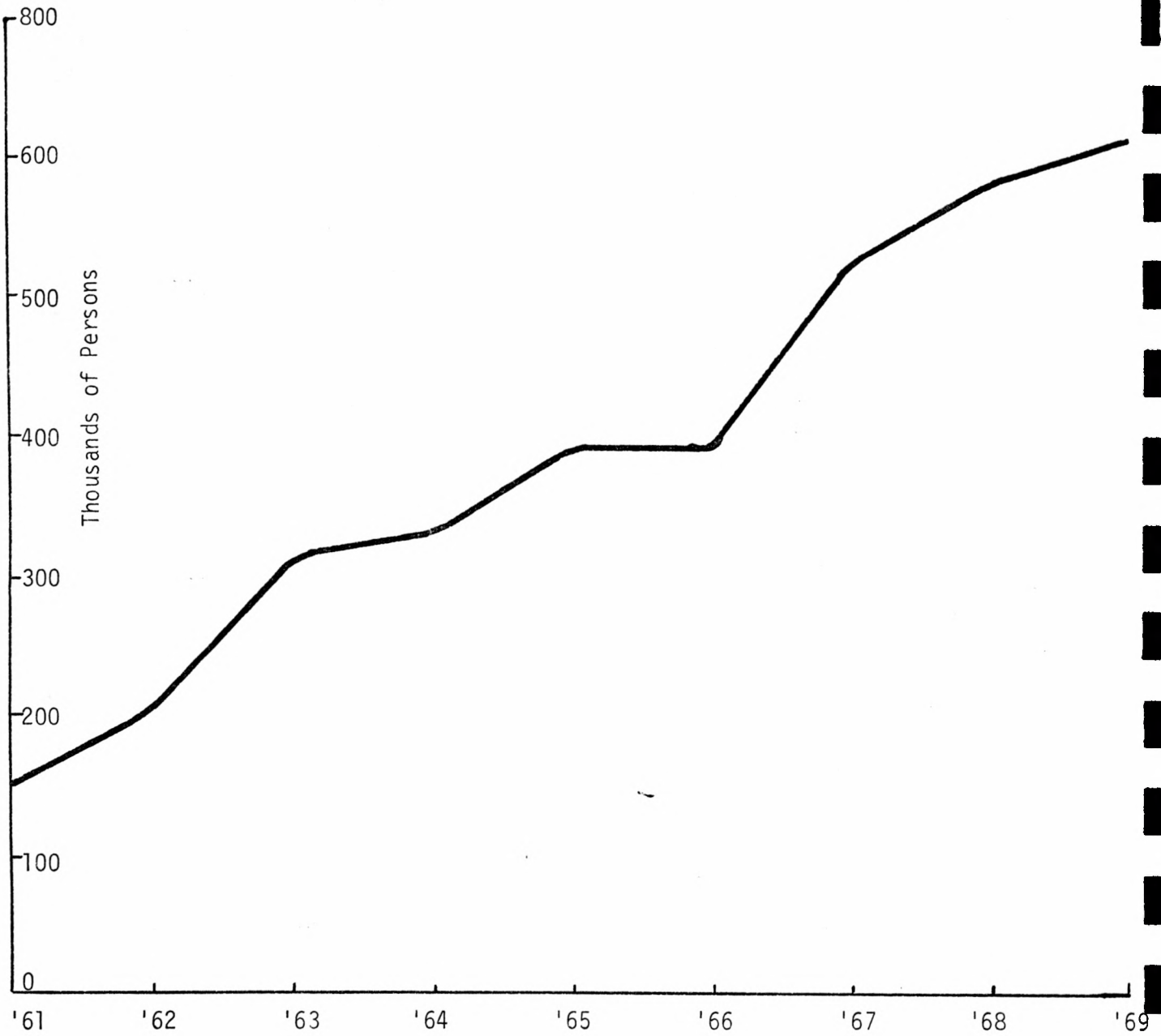
Finally, from a land use point of view it is evident that there is a strong demand for tourist accommodation within the Shuswap region. Further, this demand is likely to increase in the future. At the present time a shortage exists and whether or not future development will remedy the shortage and keep up with future demands remains to be seen. Campsites can be profitable. However, as with any business catering to the tourist industry, good management and careful planning of the original design are the main factors controlling success. In spite of the exciting market for campsite facilities a poorly designed development operated carelessly could easily fail. A second factor which limits the appeal of a campsite development from a business point of view is the expense involved in satisfying the Provincial Department of Health regulations. Sewage disposal can be expensive if the campsite is not blessed with suitable soils. In fact, some development proposals have been rejected by the Health Department because of the inability of the soil to absorb sewage effluent. Sewage disposal systems other than by septic tank are expensive and seriously jeopardize the economics of the venture.

According to the Health Act the minimum size campsite is 900 square feet. A camp ground planned to meet the minimum requirements is crowded and offers no privacy whatsoever. When the business becomes more competitive, campsites designed to meet these minimum requirements will suffer. The Provincial Government campsite at Scotch Creek enjoys a density of only one campsite per acre. Economics would not allow a private development to enjoy such a luxury but a compromise of approximately 4 to 8 campsites per acre might be reasonable. At 900 square feet per campsite it is possible to develop 25 campsites per acre. At 8 campsites per acre gross income from a 60-day operating season and at \$2.50 per site would be \$1,225. The return expected from land and investment capital varies with the size of the development and operating costs vary with the quality of management. The possibility of receiving a net annual return of \$500 per acre is good but in view of the many variables it is difficult to generalize.

REGIONAL PROVINCIAL CAMPGROUND ATTENDANCE

1961 - 1969

Columbia - Shuswap Regional District



CAMPSITE DEVELOPMENT

Switzemalph Indian Reserve No. 6

Sandy Point



2. Residential Subdivisions

Thirty years ago it was a struggle to market a lakeshore subdivision and recover the cost of survey and registration. Ten years later lakeshore values increased and it became feasible to bear the cost of an access road as well as survey and legal costs and realize a modest profit. Ten years ago lakeshore subdivisions were extremely profitable because lakeshore values increased even further and it was not necessary to install either a water or sewer system. The lake provided a reliable source of pure domestic water and for the most part septic tanks were reasonably effective. During this era thousands of feet of lake frontage were sold for permanent retirement homes. Previously, most of the sales were for summer homesite purposes. Today, the demand for retirement property within the region is extremely strong but there is little or no lake frontage acreage available and individual lots appear on the market only rarely. It is unfortunate that the original lakeshore subdivision planners could not foresee future potentials and design their subdivisions with adequate allowance for access to the lakeshore from areas beyond the first tier of lots. The Department of Highways provided and enforced a form of protection by insisting that each lakeshore subdivision dedicated 10% of their frontage to public access. However, the selection of public access strips was a mechanical procedure with no overall development plan to follow. Therefore, it is often difficult to plan a residential subdivision away from the lakeshore which fits the access corridors which have been established.

The subdividers of Indian Reserve lands in the past considered themselves fortunate because the Department of Highways regulations regarding water access could not be enforced within the Reserves. Consequently, subdivisions were created within Indian Reserves allowing no public access to the water. A prime example of this folly is displayed on Quaaout Indian Reserve No. 1 fronting on Little Shuswap Lake. The land behind the existing subdivision possesses extremely favourable characteristics for residential development but without access to the lake its value is nominal.

The value of property with no lakeshore frontage but lying close to the lake and with a view of the lake became apparent with the development of Anglemont Estates on the north side of the lake. Nearly 500 lots

serviced by road and water have been sold in the last four years. Although sceptics believe that the high sales rate is due only to the enthusiastic promotional efforts, the development has shown that retirement properties removed from the lakeshore have value. In the past two years two similar developments are forging ahead at Blind Bay. Shuswap Estates and Cedar Heights are following the same pattern as Anglemont Estates, providing retirement lots up to a half acre in size serviced by road and water. To date, over 60 lots have sold at prices ranging between \$4,500 and \$7,500.

Indian Reserves within the region enjoy locations equally as attractive as the development areas referred to above. The key to success for such developments is easy access to the main highway, a view of the lake and adequate access points to the lake.

Only four lots of the lakeshore subdivision at Indian Point at Adams Lake remain unsold. Already the developer is considering the development of property back from the lakeshore. If adequate public access corridors were provided in the original lakeshore subdivision his plans may be successful. However, without this access the values of lands beyond the lakeshore tier is nominal and development success is unlikely.

Finally, from a land use point of view expensive errors have been made in the past in the subdivision of lakeshore properties. These mistakes are not restricted to Indian Reserves; they are evident on private development over the entire lake. Indian Reserve lands, however, do possess a distinct advantage in that their lake frontage was alienated by leasehold only. It is fortunate that several leases are expiring in the Gleneden and Little Shuswap area and the Bands will have the opportunity to reassess their leasing policies and devise a new plan which is more compatible with socio-economic conditions of the region. If land beyond existing subdivisions possesses a potential for recreational development the Bands should be preparing their development plans now in order that leases over lakeshore lands which are required for public access will not be renewed. Conceivably, it might be profitable to purchase the leasehold estate from lessees who are occupying lands in strategic locations.

WATER

Adams River

Shuswap and Adams Lakes have often been described as two of the few remaining crystal clear unexploited lakes in the country. People have drunk its waters, swam in it, fished in it, irrigated their fields with it and even dumped their sewage in it. It is there, by an act of God, to be used and no one ever suspected that the day might arrive when it would require protection. This magnificent water resource has stood up well to the abuse of recent years and tourists from all over America as well as local inhabitants are enjoying its outstanding recreational advantages.

Other neighbourhoods near by have not been as fortunate. The Okanagan Valley might suffer from a water shortage if their requirements continue to increase as they have in the past. Further, the quality of their lake water has degenerated. It is natural that they should cast an envious glance at the Shuswap watershed basin.

Certain localities in the United States are suffering from severe water shortages. People in these regions are also looking northward at

British Columbia's water resources. Canada is committed to allowing a specific volume of water to enter the United States by way of existing river channels and these commitments are firmly established by International Water Treaty Agreements. Water from the Shuswap basin does not enter the United States and, therefore, it is uncommitted. We hope, therefore, that our politicians will take care when they speak of water diversions which direct water into a stream which is encumbered by an International Water Treaty.

These things are mentioned only to emphasize that those people who enjoy the recreational amenities of the Shuswap Lake region should do so with respect. Their enjoyment stems from a resource which is destructible. If the natives of the basin object to surrendering a portion of this resource they should protect it from all hazards that might destroy it.

The lake with its superior recreational qualities is the most valuable natural resource within the region. Without it the value of all other resources would decline. It is, therefore, appropriate that all land use planning and land development schemes should not oppose regulations which have been established to protect the quantity and quality of the lake. For example, properties with a sewage disposal problem should remain undeveloped until new disposal methods, presently being researched, are developed.

Although the lake provides an abundant source of domestic water, such areas as Notch Hill, Tappen and Salmon Arm derive most of their domestic water from wells. Other communities are able to depend on streams and springs. Approximately 4,500 acres or 1/4 quarter of all the crop land is presently irrigated by waters from creeks, springs or by water pumped from Shuswap Lake. There appears to be no shortage of water but as requirements increase in the future certain localities may suffer. Indian Bands or any water users who divert water from a creek for irrigation or domestic purposes without a licence are certainly not providing insurance for the future. Water licences are inexpensive and the benefits of water are generally not appreciated until it is necessary to go without. Further, in view of water and environmental studies presently being conducted within the Shuswap region and the Okanagan watershed and also in

view of the water shortages in the United States, even those who are pumping water from the lake should protect themselves with a water licence.

In a region such as the Shuswap basin where the majority of the economy is dependent upon the lake, good land use is good water use and vice versa. We can not afford to ignore our responsibilities any longer.

TRANSPORTATION

Main transportation routes through the region have been established for several years and except for minor relocation projects from time to time there has been very little change. Land use patterns are heavily influenced by the location of main highways and secondary roads but the reverse is also true. The Trans Canada Highway No. 1 traverses the region through the main valley corridor, following up the Thompson River from Kamloops to Shuswap Lake and southward to Salmon Arm on to Sicamous and Revelstoke. Secondary roads have been constructed from the main highway to serve agricultural communities. The most significant relocation project occurred approximately 20 years ago when Highway No. 1 was diverted north of Notch Hill but closer to the lake. This diversion is partially responsible for the present brisk demand for retirement properties close to the highway but within view of the lake. Thus, the highway's relocation has influenced land use but it is unlikely that this potential was appreciated 20 years ago.

All Indian Reserves within the region are traversed by Highway No. 1 or a paved secondary road with the exception of the Adams Lake Reserve and two reserves in the vicinity of Niskonlith Lake. A network of good gravel roads traverses these latter two mentioned reserves. The Adams Lake Reserve is isolated from the highway to Adams Lake with the only access provided by a bridge crossing the river. This bridge was built several years ago for logging purposes and its maintenance has never been assumed by the Department of Highways. The reserve, therefore, has an access problem.

In view of the generous network of roads throughout most reserves, it is unlikely that any public road construction programs in the future would affect the use of these reserves.

A complex network of logging roads has been developed north of Shuswap Lake and adjacent to Adams Lake which might someday open up new recreational areas. It is now possible to drive the full length of Adams Lake along its west shore. Further, it is possible to travel by car along the north shore of Shuswap Lake and up Seymour Arm to its head. Another road system travels west from Seymour Arm along Humamilt Lake to

Stukematten Lake. An undeveloped gap of only eight miles lies between the end of this road and the road network on Adams Lake. Road access also exists to Albas and onto Seymour Arm from a network of roads which commences within Scotch Creek Reserve No. 4 and follows the creek to its head waters then down Blueberry Creek to Albas.

No Indian Reserves are affected by this network of roads and, therefore, further descriptions are unwarranted. However, it is interesting to observe how the logging industry plays the part of the pioneer road builder in providing access to new country. Other resource users generally follow the loggers.

Buslines, highway freight lines, and the Canadian Pacific Railway follow the main valley corridor. An airline terminal in Kamloops provides daily flights to Vancouver and Prince George. B.C. Hydro serves all communities with power but Salmon Arm is the only community presently served by Natural Gas.

In the summer tourists can enjoy a water excursion trip from Sicamous to Seymour Arm. Other resorts on the lake offer water excursions to points of interest.

Historically, the advent of a new railway is applauded as the prime factor bringing the markets of the world to communities which are blessed with resources ready for development. Such was the case within the Shuswap region, however, the early railway builders had very little regard for the value of lakeshore property. The C.P.R. travels the shoreline of Shuswap Lake for several miles in the vicinity of Salmon Arm and once again along Shuswap River and Little Shuswap Lake. All Indian Reserves fronting on water are affected by this railway location. This becomes a serious land use factor affecting recreational potentials when one considers that approximately 20 trains travel this track in a 24 hour period. It would be advisable to give this influence careful consideration when planning recreational or residential developments on lands adjacent to the railway.

MANUFACTURING

The forest industry accounted for 95% of the value of all manufacturing within the entire Columbia-Shuswap region in the period 1968-1969. This represented a total payroll of approximately \$8.5 million. Within the Shuswap region the largest plants utilizing products from the forest are located at Adams Lake (Holding Lumber Co. Ltd.), Tappen (Lignum Ltd.), and Canoe (Federated Cooperatives Ltd.).

During the period 1965-1969 the Salmon Arm area qualified for Federal Assistance under the Regional Development Incentive Program. Two major manufacturing plants were constructed during this period. Canadian Industries Ltd. built a fuse plant at Tappen, B.C., and Trileam Wood Products constructed a particle board plant in Salmon Arm. The particle board plant was to be operating in early 1971. At the present time the superstructure is completed and machinery has been delivered, however, temporary difficulties have caused the postponement of their completion date.

Other smaller industries active in Salmon Arm are a millwork shop producing custom windows, a cement plant producing concrete blocks and ready-mix cement, the creamery producing more than 2 million pounds of cheese and butter per year, and a machine shop fabricating sawmill equipment.

These industries contribute significantly to the total payroll of the community but the people of Salmon Arm, through their elected representatives, have mixed feelings regarding the establishment of additional industries within the area. They are very much aware of the natural recreational advantages of the region and they are hesitant to encourage industries that might adversely influence the quality of the environment. However, during the period when the area was covered under the Area Development Incentives Act, 640 acres of district owned land was set aside for industrial uses. A 168 acre portion is presently being developed providing natural gas, road access, electricity, water and telephone. The area is located approximately five miles from the railway.

As a result of the industrial inactivity within the area there has been very few land transactions involving the sale of industrial land. Without such a market, it has been difficult to establish the value of

industrial land in the Salmon Arm area.

The region is very advantageously situated from the viewpoint of accessibility to markets for manufactured products. Further, it is a desirable place to live and, therefore, there would be no difficulty in attracting an experienced labour force to the region. The present lack of people in the employable age bracket results from the lack of industry in the area.

Finally, from a land use point of view it is unlikely that industrial activity in the future will conflict with other uses. Further, it is likely that the population growth in the future will be due to other influences rather than manufacturing. It is interesting, however, to observe that 7 of the 15 Indian Reserves within the region are traversed by the Canadian Pacific Railway mainline and the Trans Canada No. 1 Highway. Each of these reserves lies within a reasonable distance from a population center offering a potential labour force. It is not suggested that the Bands should reserve large acreages within their reserves for industrial purposes but they should be aware of the potential and anxious to entertain any proposals for industrial use when they are presented. They should be wary of industrial uses that might conflict with other potentials on their land or which might adversely affect the environment of the entire community. Specific rules should be established regarding uses which might develop obnoxious influences on adjacent lands. Advice in this field can be obtained from the Pollution Control Engineer who holds an office in Kamloops.

An economic study of the Columbia-Shuswap region completed by the Provincial Department of Industrial Development, Trade and Commerce, in October 1970, has suggested that the potential might exist within the region for the following industries.

Custom siding and molding - the industry could serve the growing camper-trailer and mobile home industry of the Okanagan Valley and Alberta.

Furniture Components - Western Red Cedar, White Birch and cottonwood are species common to the region and are used extensively for the manufacture of furniture components. The main markets for the products would be in California. Existing forest industries are presently having difficulty in economically making use of decadent cedar, white birch and cottonwood. The B.C. Forest Service would welcome the opportunity to increase the annual allowable cut of these species from their forests.

Pressed sawdust logs - a good market for this product exists within the Prairie Provinces where natural fuel wood is not so easily obtainable. However, pulping techniques have been improved to the extent where they are able to use a certain percentage of sawdust in the manufacture of pulp and, further, particle board plants are able to use sawdust in the construction of their products. It is difficult, therefore, at this time to determine whether or not the supply of raw material would be adequate to support a pressed sawdust log industry.

Prefabricated homes - This potential is particularly interesting because of the activity in the construction of recreational homes along the lake. The average summer homesite owner enjoys building his own cabin but he resents the time that is often involved. Local manufactured prefabricated components would be attractive to him.

Mobile homes - In 1969 mobile homes accounted for 7% of total housing starts in Canada. In spite of the number of plants constructed recently in the Okanagan Valley, the market is still good. The Shuswap region possesses all the advantages of the Okanagan Valley for such an industry in addition to being located on the mainline of the Canadian Pacific Railway.

Winter sports equipment - Approximately one million snowmobiles have been sold in North America to date while the total potential market has been estimated at four million units. Of particular interest is the recent innovation to the machine which enables it to be used on water. The opportunity to use a relatively expensive machine winter and summer would increase its marketability even more so. The region possesses ideal conditions for both summer and winter use of such a machine and the advantages of the region as a location for a manufacturing plant were discussed previously.

In view of the significant acreage of Indian Reserve lands suitable for industrial use, the above discussions have attempted to establish whether or not it is likely that a market for such land will every be activated. It does not appear that the market will become brisk in the immediate future. However, the long term chance is relatively good and in the mean time, agricultural use could represent a profitable interim use.

Land which enjoys the characteristics demanded by manufacturing industries, will have significant value and their potentials should be widely advertised in order that they will be exposed to the market when industrialists are searching the region for such sites. It would, therefore, benefit individual Bands to be aware of these potentials. Therefore, the following characteristics of a good manufacturing site are suggested.

1. Flat, firm well drained soil removed from all dangers of flooding.
2. If the proposed industry produces obnoxious odors, the direction of the prevailing winds bears an important influence.
3. If the industry produces wastes which are obnoxious to the environment, a site should contain the physical characteristics necessary to disperse the wastes in accordance with the anti-pollution regulations.
4. If the value of adjacent lands is likely to decrease by loud, unpleasant noises resulting from the manufacturing plan, the potential of adjacent lands should be considered.
5. The construction of a railway spur should be feasible.
6. The construction of road access should not be encumbered either legally or physically.
7. High voltage power should be available.
8. For some industries the availability of natural gas is important.
9. Some manufacturing industries prefer to be located close to their source of raw material.
10. Some industries, i.e. pulp mills and smelters, require large volumes of water. An adequate water source is, therefore, important.
11. Most industries prefer to be close to a labour source in order to avoid the expense of maintaining a camp.
12. The proximity of all amenities is an important factor for the purposes of servicing the manufacturing plant itself and providing recreational outlets and services for the employees.

REGIONAL DISTRICT ADMINISTRATION
REGULATIONS AND ZONING

The area under study, the Shuswap region, is encompassed by the Columbia-Shuswap Regional District. The administration boundaries are shown on the attached map. From an economic and social viewpoint the only factor that the Shuswap Lake area has in common with the eastern portion of the Regional District is its transportation link. The Trans Canada Highway traverses the entire Regional District from east to west.

The Columbia-Shuswap Regional District was incorporated November 30, 1965, with a voting population of 2,500 people. In terms of voting strength, Salmon Arm District and Salmon Arm Village held three votes. Electorial areas C and D of the entire Regional District, for the most part, represents the Shuswap Lake area and contributed an additional 3 votes. The Salmon Arm-Shuswap Lake area, therefore, held 6 votes of the total of 14.

An office was established in Salmon Arm with a Secretary-Manager, Planner and Building Inspector. The Planner was to prepare a zoning by-law in accordance with the long term land use plan of the region. Building regulations were quickly established but the enforcement of these regulations prompted strong opposition from the people. One year later the Planning Department and a Building Inspection Department was abolished and today, the District is administered only by a Secretary-Manager and a Board of Directors. A Consultant Planner has recently been retained to establish land use priorities within the region and prepare a zoning bylaw.

As a result of this early unsuccessful attempt to initiate some land use planning within the region the population has been slow in appreciating the beneficial effects of organized representation. Very few districts in the province are as far behind in the development of their Regional District as the Columbia-Shuswap region. Consequently, with the exception of the area administered by the Salmon Arm District Municipality and the Sicamous Community Planning area the rest of the community might be described as an unorganized area. Land development is proceeding without an overall land use plan; without the benefits of zoning bylaws and without building regula-

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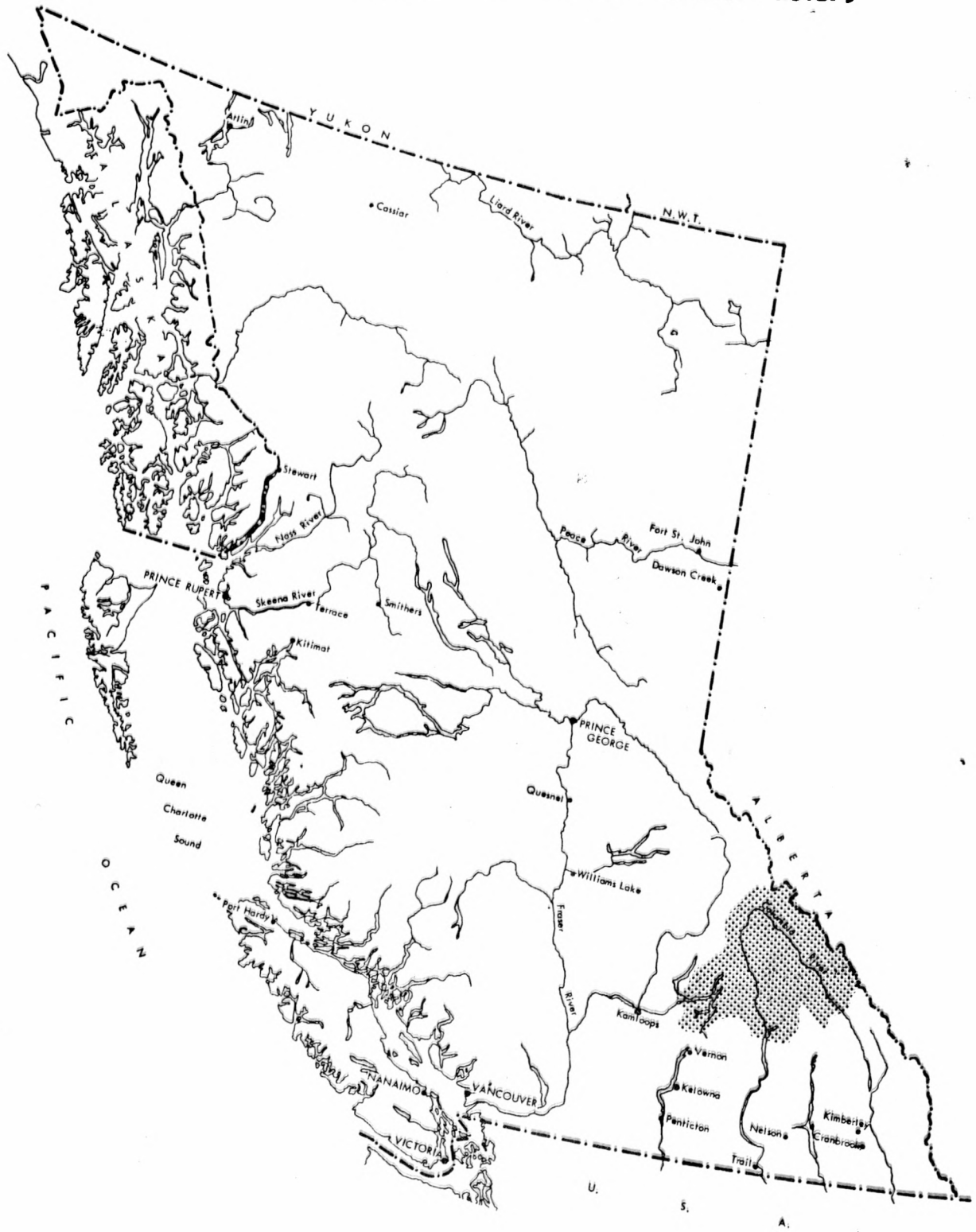
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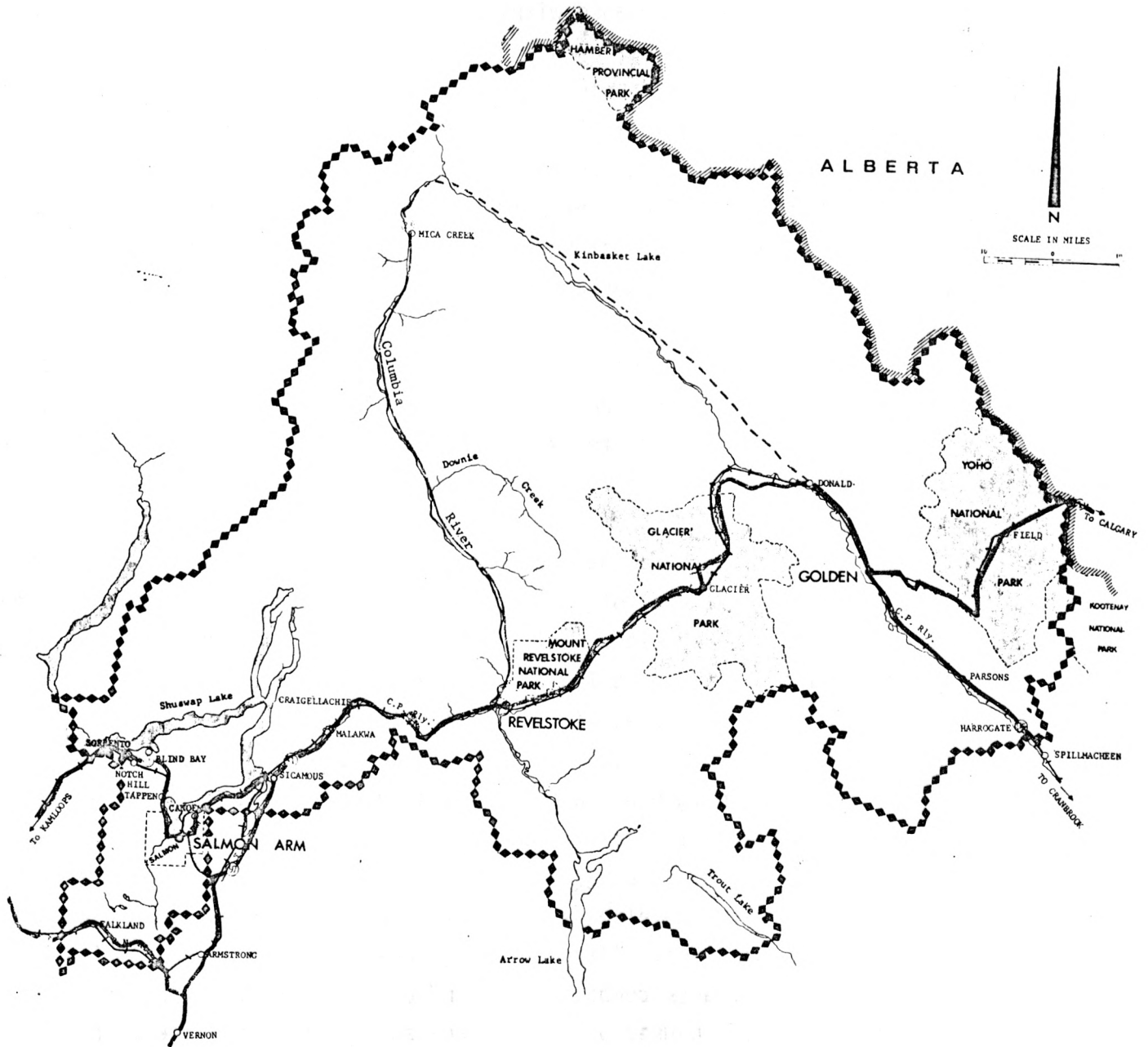




THE COLUMBIA - SHUSWAP REGION (In Relation to British Columbia)



THE COLUMBIA - SHUSWAP REGION



tions except those enforced by the province. The Department of Highways and the Department of Health can approve or disapprove a subdivision proposal if they have just cause within their respective acts. There is no authority to judge whether or not a development proposal would be beneficial or harmful to the development of the entire region. New settlers to the region are surprised to learn that the site they have selected for their new retirement home has no protection against obnoxious land uses being practiced on adjacent properties. They are also surprised to learn that there is no administrative machinery available to provide basic public services such as garbage dump, fire protection or a regional hospital.

Such is the status of the Regional District Administration in the Columbia-Shuswap region. Undoubtedly, some form of planning will be introduced when the people are ready to accept all aspects of the Regional District concept and they will eventually be able to enjoy the protections they deserve.

Until a zoning bylaw has been established Indian Reserves within the region will have no control on the character of land uses established adjacent to their boundaries. An obnoxious land use will destroy land values within the adjacent Indian Reserve and likewise land uses practiced within the Indian Reserves will influence the value of adjacent lands outside the reserve. Indian Bands should be concerned with land use practices within the neighbourhood and also should strive to encourage high quality land uses with their reserves. A prime example of how poor land use practices destroys land values within Indian Reserves is the stigma that potential land developers attach to submarginal housing developments within Indian Reserves. Often, an imaginary buffer zone is established around Indian villages comprised of hundreds of acres of prime development land which is left unused or wasted because the developer feels that the appearance of the village would jeopardize the success of his venture. Until this stigma can be removed it might be presumptuous to suggest that obnoxious land uses adjacent to Indian Reserves adversely affects the value of land within the Indian Reserves. A good land use plan within a reserve would contribute significantly to the removal of this damaging attitude. A socio-economic task force working under the auspices of the

Canada-British Columbia Okanagan Basin has recently released some of its findings. It is interesting to quote from a local newspaper's report on the findings of this committee.

"The study notes the recreational environment of the Okanagan-Shuswap is one of the finest in Canada and, provided it is maintained, should contribute substantially to the satisfaction of future leisure demands."

"It attributes much of the unspoiled environment of the area to the establishment of Indian Reserves whose Bands hold large acreages of prime industrial, agricultural, recreational and residential land."

"The report lauds this land bank as having restricted the amount of real estate being subdivided, and urges local government authorities to take into account the role played by Indian Reserves in maintaining open spaces when developing land management proposals."

Indian Reserves were originally established to satisfy the pleasures of the native people. They were not established to control land development in order that large undeveloped areas will remain undeveloped to satisfy the conditions of a regional land use plan which suggests that significant acreages should be preserved in their natural state. If, on the other hand, the general population feels that such a land use plan would add value to the environment of the entire region then Indian Bands should be awarded for discouraging development on their reserves.

LAND VALUES

Land values are influenced by use pressures, scarcity, available amenities and zoning bylaws. Lake frontage values did not climb significantly on Shuswap Lake until the scarcity factor was becoming apparent. Values on Adams Lake are not as high as those on Shuswap Lake because it is a little further removed from good road access and other amenities. Values within a residential development will climb higher if a zoning by-law prohibits any obnoxious uses from becoming established in the neighbourhood. So, it is apparent that physical characteristics of land does not affect its value as much as external factors. For example, steep rocky slopes into Howe Sound were once considered valueless till population pressures forced housing developments into the area and now the same slopes support prime residential view lots. Further, the swampy shorelines of Lakelse Lake near Terrace, B.C., would be valueless if the lake were located in the southern interior. However, it is the only fresh water lake within the region. Consequently, sales of water front lots indicate a market value in excess of \$125 per front foot.

Contrary to the advice offered by some planners, land values do influence the establishment of land use priorities. This is particularly true within an area where no zoning bylaw exists. Land will be developed to its highest value and in the process esthetic values are often lost. The encroachment of residential development onto the productive agricultural fields of the Fraser Valley is one example and commercial and residential development within the orchards of the Okanagan Valley is another. Several other examples could be presented but the theme is always the same. The market value for agricultural land sometimes can not be justified from an income approach because external factors are more prominent than the characteristics of the land itself. Thus, orchard and pasture land often sells for \$4,000 or \$5,000 per acre in the Okanagan and some prices paid currently for agricultural land surrounding Salmon Arm appear excessive.

To suggest a value schedule for land within various neighbourhoods and for different uses would involve considerable research and is beyond the scope of this report. The following value ranges are suggested for

various land uses and can be used as a guide for estimating approximate values of specific parcels. However, because of the many factors that affect value, these figures should not be interpreted as representative of true market value for any specific parcel.

- Undeveloped acreage with no agricultural potential and beyond the influence of population centres - \$15-\$40 per acre plus timber values.
- Undeveloped acreage suitable for agricultural development but beyond the influence of population centres - \$20-\$50 per acre.
- Undeveloped farm land in the vicinity of Salmon Arm capable of complimenting an existing agricultural unit - \$50-\$500 per acre.
- Cleared agricultural land suitable for pasture or annual cropping.
 - a. beyond the influence of urban centres and not necessarily part of an economic farm unit - \$80-\$100 per acre.
 - b. same as above but irrigable - \$100-\$200 per acre.
 - c. in the vicinity of Salmon Arm and representing an economic farm unit - \$800-\$1,200 per acre.
- Average sale price of a 100-150 head cattle ranch supported by 1,500 acres plus grazing permits = \$90,000
- 160 acre mixed farm with at least 80 acres arable = \$45,000-\$55,000
- 160 acre dairy farm with at least 80 acres arable supporting 40 head of cows with quota - \$140,000-\$160,000.
- 10 acre poultry farm supporting 3,000 birds - \$50,000
- Rural homesite with no services other than road access and containing one to five acres - approximately \$1,000 per acre or \$1,500 per site.
- Rural retirement property, 12,000 square feet to 21,000 square feet within a half mile of the lake and with a view of the lake, served by road, power and community water system - \$4,500-\$7,500
- Acreage with a potential for immediate residential subdivision \$2,000 per acre to \$2,500 per acre.
- Within Salmon Arm
 - Residential lots served by water, sewer, natural gas, power and road; within village - \$3,000-\$3,500; outside village - \$2,500-\$3,500.
 - Downtown commercial - \$400 to \$800 per front foot.

Industrial - because of lack of sales no firm value has been established. Industrial lots have been sold within the Municipality Industrial subdivision at \$500 per acre serviced by water, power and gas.

SUMMARY AND FUTURE OUTLOOK

This regional analysis touches on socio-economic highlights as they relate to the use and development of land. It has been composed with only a general knowledge of the physical characteristics of Indian Reserves within the region because external regional factors will likely have a greater influence on future land use potentials than the physical characteristics of the parcels themselves. The composition of a land use plan which considers physical characteristics of individual parcels and does not conflict with regional socio-economic conditions could be the subject of further study.

This report has examined all external factors, social and economic, which could affect the use and development of Indian Reserves within the region. Historically, interest in the forestry and agricultural resources has been responsible for the development of the region. Mineral and water resources have not contributed significantly.

Recreation has emerged as the most prominent resource in the last ten years and will likely continue to increase in significance in the future. Tourist catering and recreational services are attractive sources of income. The Shuswap region enjoys exceptionally attractive recreational characteristics. It is likely, therefore, that land use planning in the future will recognize recreation as the optimum land use and all other land uses will continue to exist and thrive as long as they do not detract from the value of the optimum land use. The preservation of recreational values involves a rigid control of the quality of the environment and, therefore, pollution control will be the main criteria for establishing land use priorities in the future. Therefore, Indian Reserves within the region possessing attractive recreational features should use caution when entertaining other land uses. The effect that these other uses will have on recreational values should be carefully considered.

Recreational developments proposed for Indian Reserves should be according to a plan which encourages a high standard of development. The demands of tourists are becoming more sophisticated each year. Even now it is evident that only those recreational developments constructed to high quality standards are enjoying 100% occupancy. The marginal develop-

ment captures the overflow and as more high quality developments are created in the future the success of the marginal developments will decrease.

The agricultural potential of the region has attracted pioneers to the area since before the turn of the century. Farmers have nearly seventy years of experience in the area and through trial and error agricultural land uses have become firmly established. Recently, dairying has emerged as the most successful type of agriculture. However, beef production, vegetable growing and tree fruits still continue to contribute significantly to the total agricultural output. The availability of land for further agricultural development is restricted and new settlers, breaking new land, are not a common occurrence. Existing farms are changing ownerships and the amalgamation of small units to larger more economic units is evident. An expansion of the dairying industry is dependent upon better utilization of existing farms. Indian Reserves near Salmon Arm with an agricultural potential could profitably compliment the expansion of the dairy industry in that area.

The dairy industry is not as prominent in the Chase area where beef production and vegetable growing is most common.

The forest industry also has completed its pioneering era. Amalgamation has reduced the number of sawmills to a few integrated wood processing plants and the productive capacity of the Crown forests is fully committed. The region is entering an era where the forest products industry, like the agricultural industry, can only increase production through better utilization of existing available raw material. Continuing advances are being made in this field. However, most wood processing plants will be eager to secure a log supply from private lands or Indian Reserves particularly when the lumber market is good. The economics of tree farming on private land is becoming more feasible and those land owners, including Indian Bands should look at their inventory of immature forests as money in the bank. An inventory of forest resources should emphasize the significance of the mean annual increment rather than the value of presently merchantable trees. From an overall land use point of view land owners should not be too anxious to deplete their forest reserves in favour of other land uses. It is conceivable that annual incomes derived from the

harvest of a forest crop could exceed incomes received from other uses by the time the forests are mature.

The quantity and quality of water within the region could become a critical factor affecting land use if land owners within the neighbourhood do not give adequate attention to preserving this resource. The value of the optimum use, recreation, is dependent upon the quantity and quality of water and, therefore, land used for any purpose should give due consideration to the protection of the water resource.

Manufacturing has not played a significant role in the economy of the region in the past but potentials do exist. New industries distribute larger payrolls and more dollars are circulated throughout the region and everyone benefits. Industries should be invited to the region but certain qualifications should be established in order that the quality of the environment will be preserved.

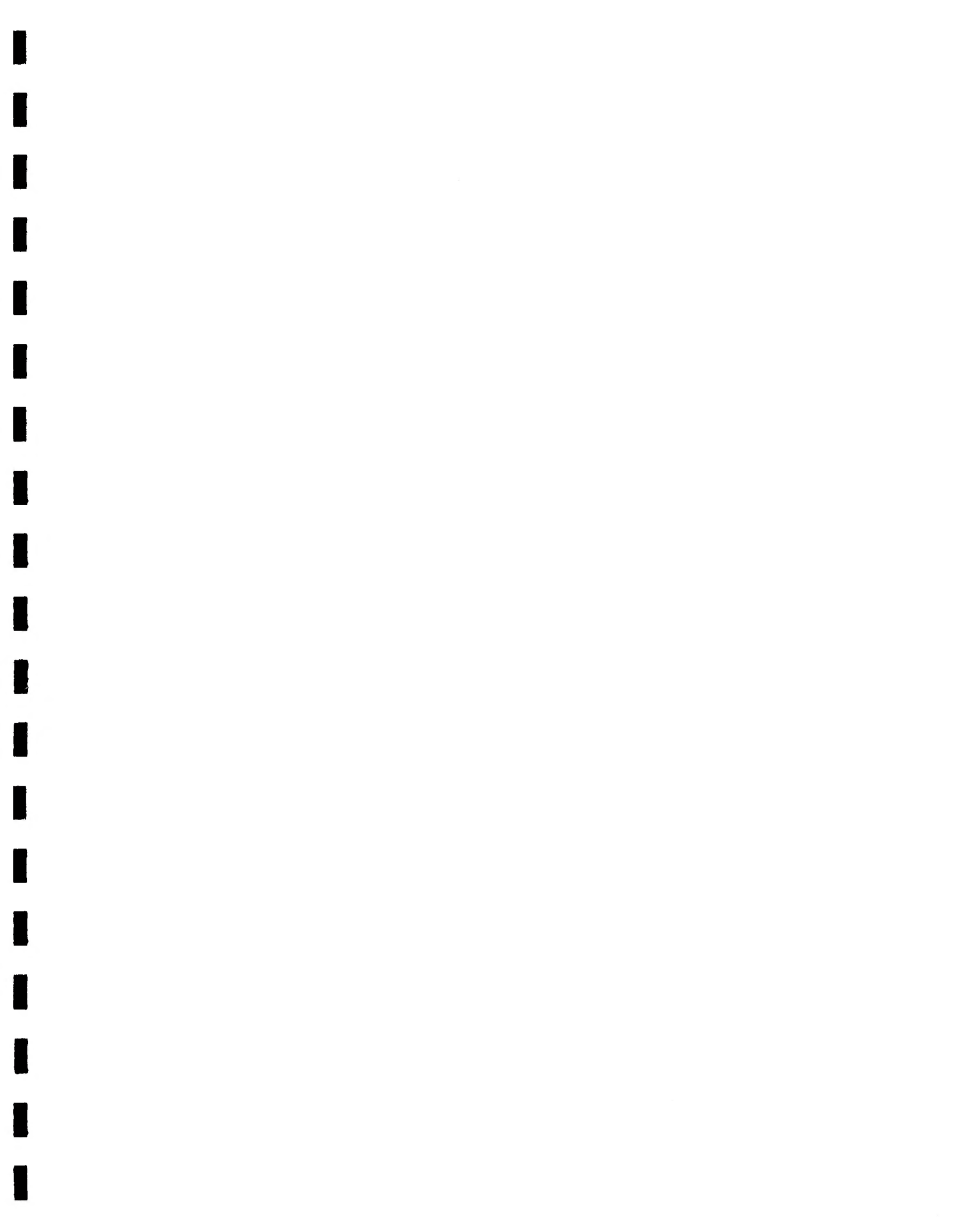
Land development within the region could proceed in a hodgepodge fashion at the present time without a zoning bylaw. Individual property owners, including Indian Reserves have no protection from damages that might result from obnoxious land uses on neighbouring lands. Inhabitants of the region have been slow to appreciate the value of the Regional District concept because it has been misinterpreted as a Government police force. The acreage of Indian Reserves within the region is far greater than the acreage held by any single land owner. The Bands should, therefore, have a voice in Regional District administration in order to protect their own interests and to contribute to the preservation and protection of the environment.

PART II

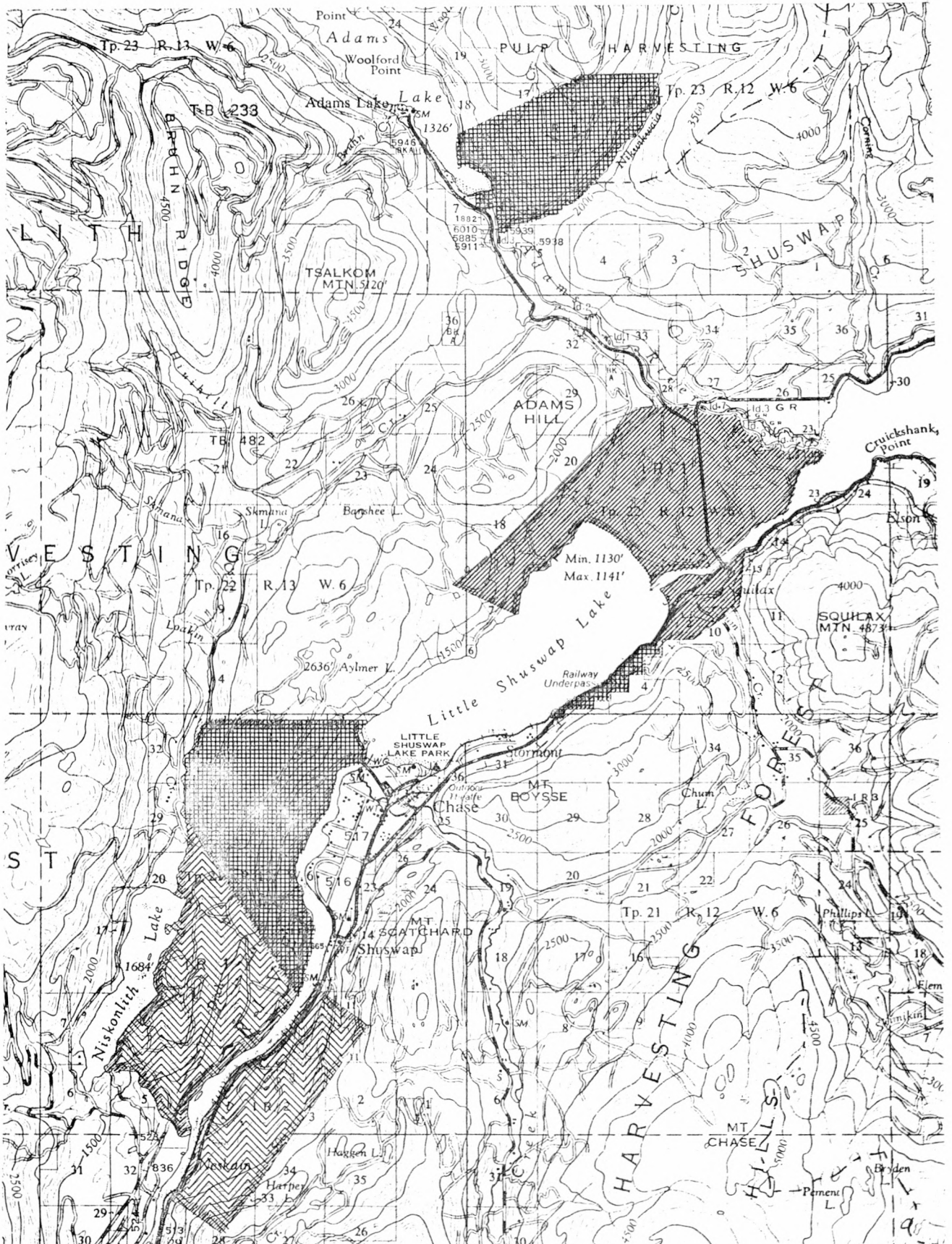
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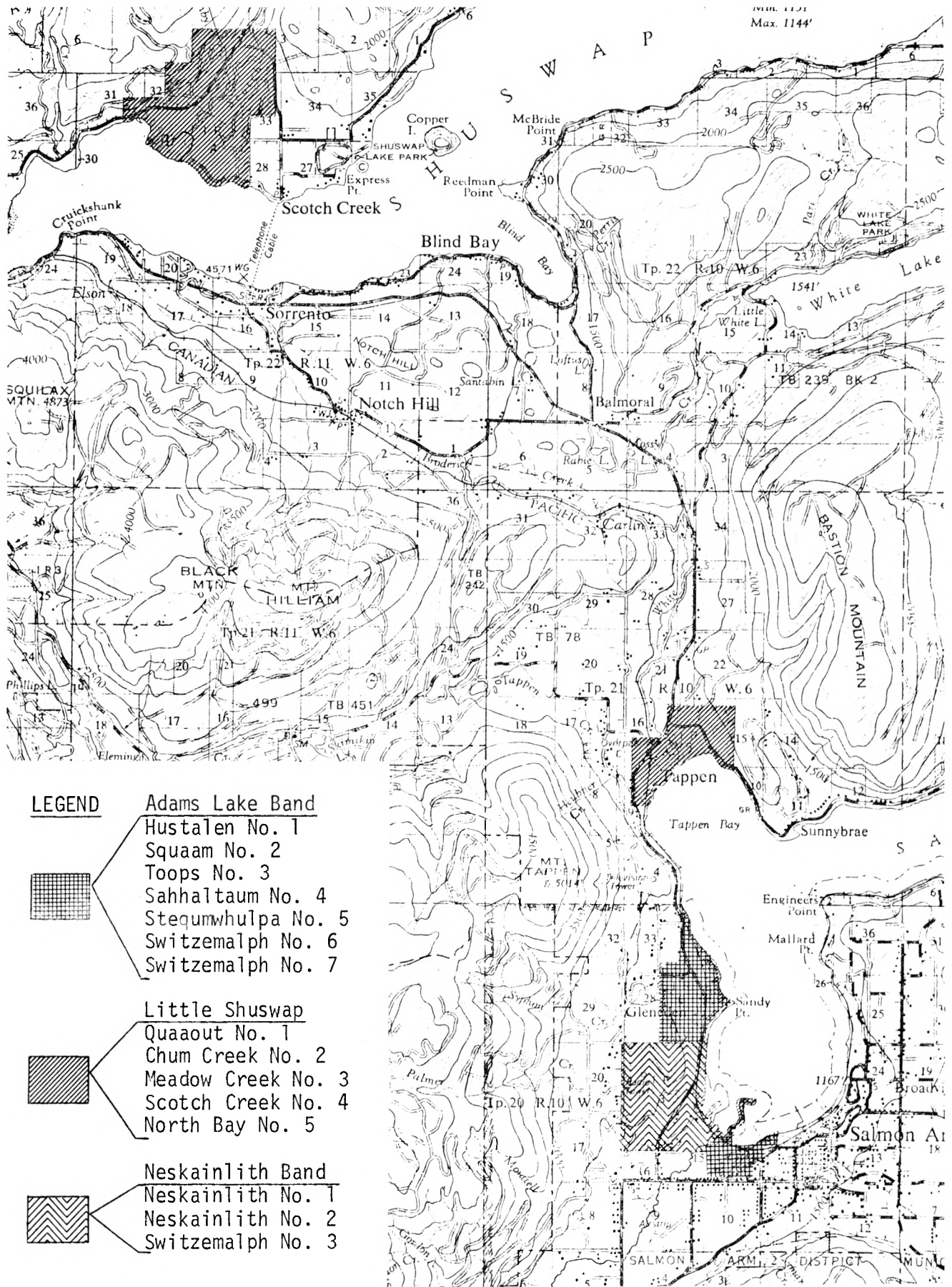
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SPECIFIC RESERVES

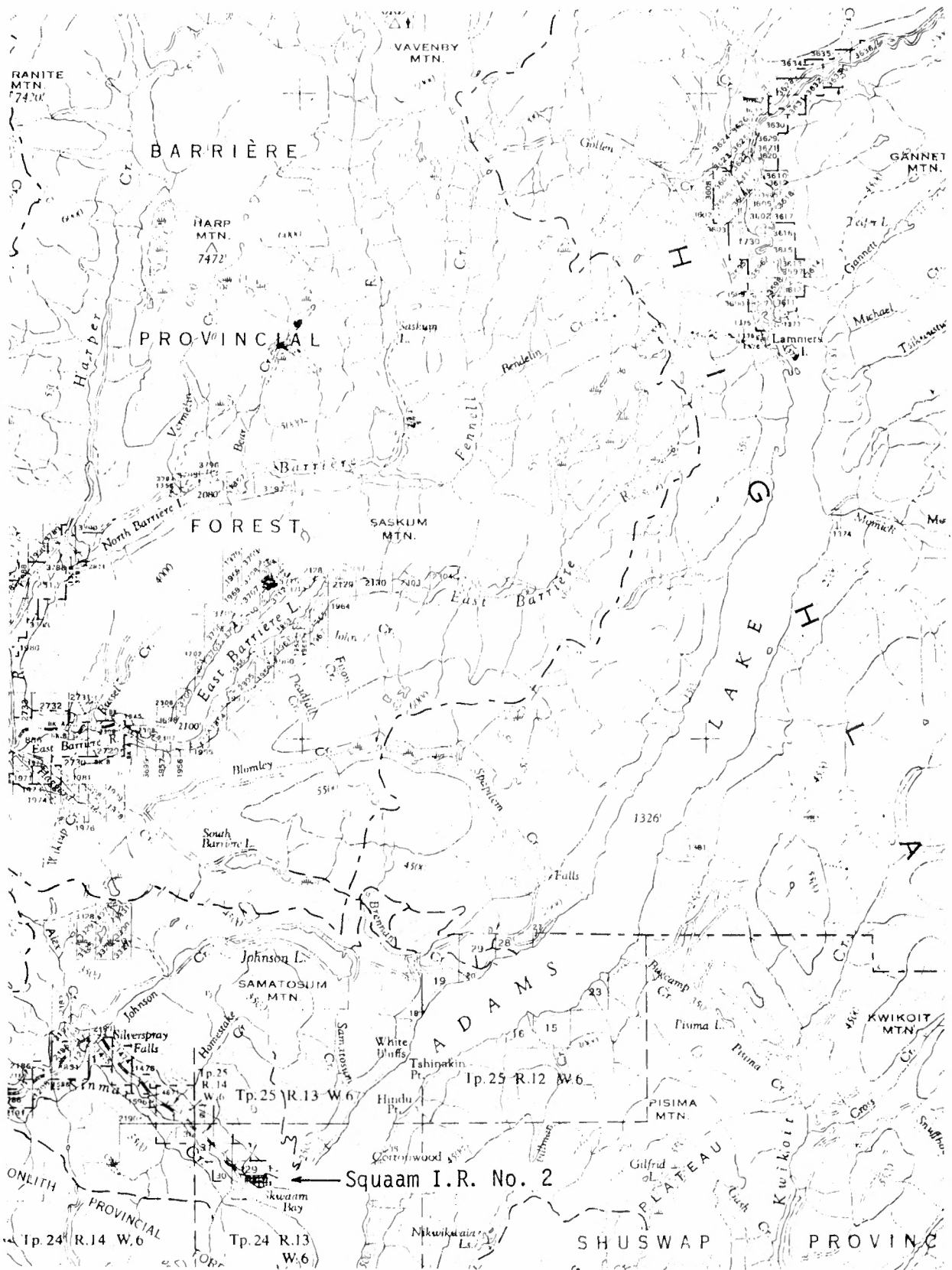


INDIAN RESERVES
in the
SHUSWAP REGION





67.
INDIAN RESERVES
 in the
SHUSWAP REGION



PART IIREFERENCE TO SPECIFIC RESERVESRESERVE AND BAND DATA

	Adams Lake	Little Shuswap	Neskainlith
Residents on Reserve	253	125	198
Residents off Reserve	100	54	92
Total Population	353	179	290
Number of Reserves	7	5	3
Total Area (M acres)	7	8	7
Number of leases	123	267	22
Annual rental (\$M)	33	66	7
Chief	H. Jules	J. Anderson	J. Manuel
Pupil Enrollment	106	35	40
Welfare (Annual) (\$M)	38	12	23
Employment-permanent	35	12	12
Number of Cattle	200	--	40
Average Income (\$M)	3.5	3.0	3.5
Kinds of Employment	Farming Ranching Logging	Logging Farming	Logging Ranching

ADAMS LAKE BAND

Hustalen No. 1	2,178	Acres	
Squaam No. 2	80	acres	
Toops No. 3	25	acres	
Sahhaltaum No. 4	3,477.6	acres	
Stequmwhulpa No. 5	218.99	acres	
Switzemalph No. 6	750.15	acres	
Switzemalph No. 7	<u>306.602</u>	acres	
Total			7,036.342

LITTLE SHUSWAP

Quaaout No. 1	4,252.48	Acres	
Chum Creek No. 2	550.21	acres	
Meadow Creek No. 3	56.00	acres	
Scotch Creek No. 4	2,081.00	acres	
North Bay No. 5	<u>763.63</u>	acres	
Total			7,703.82

NESKAINLITH BAND

Neskainlith No. 1	3,140.00	Acres	
Neskainlith No. 2	2,406.79	acres	
Switzemalph No. 3	<u>1,262.77</u>	acres	
Total			<u>6,809.56</u>
Total			21,549.722

EMPLOYMENT OPPORTUNITIES

This section is not concerned with employment involving development of Indian Reserve lands. It is concerned with off-reserve employment or potentials for employment that have been uncovered during the research program of this study.

It is a matter of record that many young people leave the region

in search of employment when they finish school. The region lacks industry and unless the new generation can carry on with the business established by the previous generation it is a struggle for them to earn a living. The population statistics presented earlier in the report show that the number of people in the employable age bracket is much less than the comparable number in other regions.

However, existing industries do experience some labour turn over because people leave their place of employment from time to time for several reasons. This, of course, leaves a vacancy and creates an opportunity for employment. Band members are aware of existing industries within the region and it is suffice to state that the opportunity is there for he who persists. Steady employment is enjoyed by those who perform their duties diligently.

It is worth mentioning that although the main function of Canada Manpower is to place workers they are also very active in improving the qualifications of the labour force. If Canada Manpower is having difficulty in placing an applicant who is sincere in his desire to work they will assess his qualifications and offer assistance and guidance in placing him in a vocational school where he can learn a trade and be more successful in the labour market. Many Indian people have benefited from this training. Machine operators, sawmill workers, welders and forestry workers all can improve their capabilities by taking advantage of this opportunity.

There is often a problem within the region coping with seasonal employment requirements. In the forest industry cone collections, tree planting and Christmas tree harvesting are worth mentioning. F. Barnard Seeds is a new industry recently established at Blind Bay which only employs 2 or 3 workers throughout the year. However, the manager reports that during the cone collection season and the tree planting season he can not find sufficient reliable workers.

Berry picking and fruit picking is another seasonal opportunity that undoubtedly Band members are familiar with. The beef and dairying industry report that it is difficult to find reliable farm labour. With the trend towards consolidation and the gradual disappearance of the family farm unit this labour need will increase. Many farmers have been known

to hire transients because a reliable local farm labour force does not exist.

Finally, it might be concluded that the chance for steady employment is not particularly good but a demand for labour in specific fields exists and opportunities appear from time to time to those who persist in their search.

DEVELOPMENT POTENTIALS.

This section is concerned with the development of Indian Reserve properties. Most reserves were observed casually and based on apparent characteristics coupled with information collected in the socio-economic research program, some potentials are worth noting. Reference will be made to individual reserves.

Adams Lake Band

Hustalen Reserve No. 1 - This reserve contains 2,178 acres at the south end of Adams Lake. Its lake frontage has been leased to a developer who has constructed an access road and surveyed 40 lakeshore lots. Only 4 lots remain unsold. The developer has requested a longer term lease and he is considering further developments on lands not fronting on the lake. Evidently, the Band feels that the terms of the present lease are too generous and that any negotiations involving a new lease should concentrate on receiving higher rentals. An assessment of the viability of the current development and the feasibility of the developers proposed expansion would determine whether or not a higher rental would be fair and just.

Most of the reserve lies on relatively steep mountain side and is presently leased for grazing purposes. A casual observation indicated that the mountainside supported a reasonably well stocked immature forest. It would be beneficial for the Band to know what the capacity of the reserve is for producing a forest crop in perpetuity in order that it might contribute to a forest management plan including all reserves.

Squaam Reserve No. 2 - Squaam Reserve containing 80 acres is located in Skwaam Bay approximately 10 miles up Adams Lake. Its main access is from the west towards Barrier on the North Thompson River and,

therefore, its use is influenced by socio-economic conditions of a different region. However, access is possible from the south by logging road which will probably improve in the future. It is reported that the use of this reserve is fully committed to summer homesite lots. The reserve was not inspected during the research program.

Toops Reserve No. 3 - Toops Reserve contains only 25 acres located at the south end of Adams Lake fronting partly on the lake and partly on Adams River. With lake and river frontage it possesses recreational value. Tourists are often seen fishing from its banks. A Band member is in residence on the reserve and has indicated a desire to develop a modest campsite. The reserve has this potential but in order to enjoy the full benefits of a development program consideration should be given to relocating the existing road to the reserve. The road parallels the lakeshore leaving very little room for development on the lake side of the road. Further, the appeal of the lakeshore could be enhanced considerably by employing a bulldozer to clear the dense brush adjacent to the beach and to remove the debris from the beach. Another factor which limits the development potential of the area is the log storage activity displayed on the foreshore fronting the reserve. Industrial uses of this nature detract from the recreational appeal of the upland.

The present plan to develop the river frontage for a campsite has merit but it would have a greater chance for success if the development could include a portion of lake frontage as well. The road in its present location would make this difficult.

Sahheltaum Reserve No. 4 - Most of the 1,253 acres of this reserve comprises semi-open hillsides with a good grazing potential. It is located on the north side of the Thompson River at the mouth of Little Shuswap Lake across from the Village of Chase. The Indian village is located on this reserve. With a considerable acreage of good hay land adjacent to its east boundary and along the banks of the Thompson River, the agricultural potential of the area is obvious. Successful development will involve good management technique probably including application of fertilizers, crop rotations and irrigation. The establishment of a good economic farm unit is a fairly complicated exercise and

evidently the Band is presently receiving assistance from the Indian Affairs Department and engineers in developing a plan to more fully utilize this agricultural potential. Soil tests of the arable portion may show that vegetable crops will produce a more attractive return than hay crops. Further, in view of the relatively small acreage required for an economic dairy unit consideration might be given to this aspect of agriculture.

Stequmwhulpa Reserve No. 5 - The effects of the Trans Canada Highway and the Canadian Pacific Railway traversing the full length of this 219 acre reserve make it difficult to suggest a use potential. Even without the encumbrances caused by the railway and highway, the steep precipitous topography to the lakeshore would limit the development potential. Usable areas are not extensive enough to support a significant commercial development but isolated protrudances of usable land were noticed on the lakeside of the highway which could support a cabin site, a picnic site or a boat launching pad. A careful examination of each isolated usable area would be necessary before suggesting a reasonable potential.

Switzemalph Reserve No. 6 - Attractive sandy beaches on Salmon Arm on Shuswap Lake are the most attractive features of this reserve. It contains 750 acres and is traversed by the Trans Canada Highway and the Canadian Pacific Railway. Unfortunately, most of the lake frontage of this reserve has been leased for several years and, therefore, the scope for development is restricted. A brief description of existing developments may be of interest.

The campsite development at Sandy Point contains 360 campsites; the largest campsite on Shuswap Lake. Good planning and creative imagination are lacking in the campsite design. Campsites have been layed out along the beach directly on the sand nearly below high water level. During periods of heavy use it is difficult for a camper not located directly on the beach to gain access to the beach without walking through a campsite. The pleasures of beach activity are full enjoyed only by those privileged few who gain a campsite on the beach. The congested busy atmosphere along the lakeshore would discourage some campers who are located back from the beach, from trying to enjoy any beach activities.



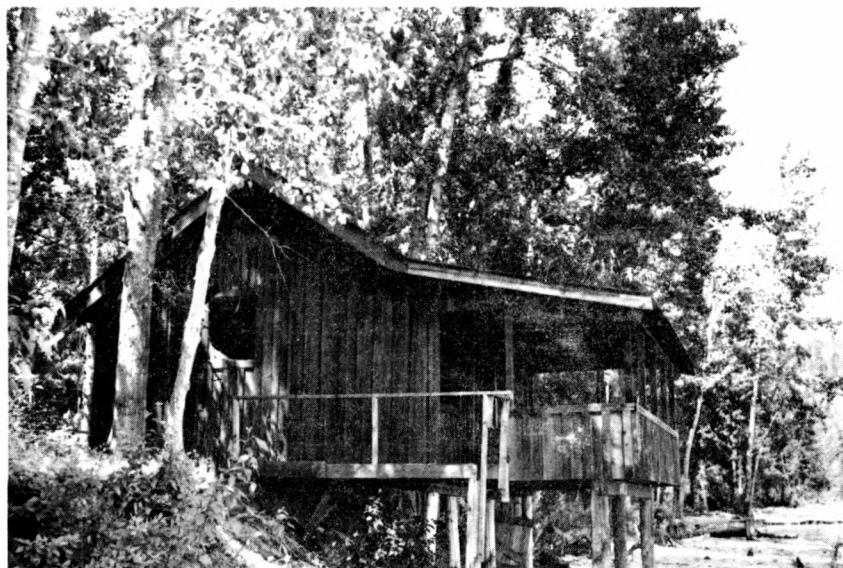
Campsites along the Lakeshore, Sandy Point.

Campsites back from the beach are regimentally located in rows fronting on the straight access road which runs perpendicular to the beach. The density is high and privacy is non-existent. No site improvement was evident other than the placement of stakes by the roadside indicating the location of each individual camping pad. The lack of gravel fill on each camping pad causes a drainage problem during rainy spells. The design for the most northerly section of the camp ground displays some imagination in that the road meanders through the trees. The general impression is pleasing. There appears to be no effort toward designing the camp ground to allow each and every camper the same opportunity to use the beach.



Campsites Removed from the Beach, Sandy Point.

The summer homesite subdivision lying north of the campsite has existed for 20 years or more. It fronts on prime beach property but some of the cabins certainly do not do justice to the natural environment of the area. Any lease renewals should be issued on condition that a cabin to a certain minimum value should be constructed within a stated period of time in order to upgrade the appeal of the entire neighbourhood.



Summer Home, Sandy Point.

The present condition of the summer homesite subdivision and the campsite shows the need for more rigid leasing conditions. A lease for a commercial development such as a campsite should be awarded only on condition that the development plan be approved by the Band. The plan should be in accordance with good planning practices and should be designed to take full advantage of all natural characteristics without jeopardizing the value of adjacent lands.

The portion of the reserve lying north of the main access road to the summer homesite subdivision contains a few summer-homesite leases and attempts have been made in the past to resurvey the leases according to a plan which would allow better use of the land. It is difficult to judge the advantages or disadvantages of the current survey proposal without a more detailed examination on the ground.

An area near the northern extremity of the reserve is unencumbered by leases and possesses an extremely attractive sandy beach. Its use potential, however, is limited because the railway lies so close to the lakeshore. Further, the upland between the beach and the railway is only barely above the water table and displays poor drainage characteristics. It was in flood at the time of inspection. To improve the utility of the area would involve a costly fill project.



"An Extremely Attractive Sandy Beach"



Sewage disposal would always be a problem and, therefore, it is suggested that the area can not be developed intensively. Its obvious potential lies in the development of beach facilities to compliment a campsite, motel or other tourist trade development on the parcel lying between the railway and the highway. It is reported that on the average, 20 trains travel the track over a 24 hour period. This, of course, would limit the appeal of the area but in view of the attractive natural beach it is likely that the effect of the railway would not be too damaging. A development feasibility study would first be concerned with testing the percolation qualities of the soil in order to determine the most efficient method for disposing of sewage and secondly to estimate the cost of depositing fill on the area between the track and the beach to create a common recreational area. The usable acreage between the highway and the track is relatively restricted and, therefore, the use density may have to be high to support the cost of developing the beach area.

Switzemaloh Reserve No. 7 - A portion of this 307 acre reserve formerly supported the Lignum Limited sawmill. The sawmill has recently vacated the site and the lease will expire in a few months. Before a significant quantity of fill was deposited on the site by the former lessee the usability of the area was questionable because of the poor drainage characteristics. Now we have a usable parcel of vacant industrial land with both trackage and highway frontage.

A mobile home park is being considered for that portion of the reserve lying on the other side of the highway. Therefore, future uses of the old sawmill site should not be obnoxious to mobile home park dwellers. A clean industry such as warehouses would be most appropriate. A lease arrangement involving the construction of a building by the Lessor but to the Lessee's specifications is sometimes most profitable. Research would be required in order to more precisely define the highest and best use of this portion of the parcel.

The remaining acreage is floodable but contains highway frontage. Agriculture would be an appropriate interim use until higher uses become more evident.

Little Shuswap Band

Quaaout Reserve No. 1 - This 4,253 acre reserve has been a good income producer to the Band for several years. It contains approximately 3 miles of attractive frontage on Little Shuswap Lake, 3 miles of frontage on Little Shuswap River and nearly 3 miles of frontage on the Adams River. The Little Shuswap Band receives an annual rental of \$66,000 per year from lake frontage lessees. The entire area has good public exposure from the Trans Canada Highway No. 1 on the opposite shore of Little Shuswap Lake and Little Shuswap River. Further, the paved road providing access to Adams Lake and the recreational area on the north shore of Shuswap Lake traverses the centre of the reserve. Its potential from a recreational viewpoint can not be equalled by any other reserve within the region. Unfortunately, scope for further development is seriously restricted by the pattern of the existing survey on Little Shuswap Lake. No public access corridors have been retained to provide access to the lake for developments that might be proposed for property lying back from the lake. However, several possibilities are possible to increase the earning power of this property.

The acreage adjacent to the lakeshore subdivision has a good potential for campsite development. The forests comprised of fir, lodgepole pine, yellow pine, and aspen have been logged repeatedly in the past several years. Approximately 200 feet of lake frontage should be made available for the use of campers. The most appropriate location should be selected and the Lessees advised that their lease will not be renewed when it expires. Care should be taken to design a campsite that will not interfere with the use and enjoyment of adjacent lands by existing Lessees.

A side channel of the Little Shuswap River cuts through the reserve on its way to Little Shuswap Lake. A breakwater has been constructed at the head of this channel to direct water to the main channel of the river. However, the mouth of the channel has also been closed and, therefore, it fills with seepage water and stagnates. It breeds mosquitoes, and presents a hazard to campers. It detracts from the value of the property. The feasibility of opening this channel at both ends and sloping its banks so as to create more usable water frontage property should be explored. It may be necessary to construct a bridge or install

two large culverts at the mouth of the channel in order to minimize the disturbance to existing Lessees.

With so many exciting recreational potentials, it is not wise to consider the development of any isolated portion of the parcel without examining the entire parcel in detail. In fact, further development should be discouraged until an overall development plan has been prepared. The Adams River has been described by naturalists as the most valuable piece of real estate in British Columbia. The salmon run in the fall attracts thousands of tourists and this feature could extend the tourist season into October which of course gives it a much greater chance of economic success.

Finally it is presumptuous at this time to offer development proposals for such a high value parcel of land. Detailed planning should precede development recommendations and it is strongly urged that the first step of such a plan should include a detailed topographic survey of the entire parcel showing two foot contour intervals. The second step would involve the design of a recreational complex which considers the total potential of the complete acreage. It is conceivable that with subtle advertising land developers could be enticed onto the property on a lease basis and the present income of the Band from rentals could be doubled.

Chum Creek Reserve No. 2 - Silvery Beach Resort is firmly established on this reserve and improvements in the form of cabins and other recreational facilities represent significant values. There is no point in exploring other potentials in view of existing encumbrances.

Meadow Creek Reserve No. 3 - This parcel, containing only 56 acres, was not inspected because its use does not appear to present a problem to the Band.

Scotch Creek Reserve No. 4 - This reserve, containing 2,081 acres fronting Shuswap Lake at the mouth of Scotch Creek, was not examined thoroughly because the lake frontage is fully committed to summer home-site leases. No specific problem was presented. It is apparent, however, that this property too would possess a good potential for a summer camp-site development particularly since it is located only one mile from the existing Provincial Government Campsite. The Government Campsite

often fills up in the summer time and the overflow searches for a campsite within private developments close by. The potential of utilizing the frontage on Scotch Creek as a focal point for a campsite development could be explored. Some private campsites in the vicinity of the Government Campsite have no focal point other than their proximity to the high quality Parks Branch camp grounds.

North Bay Reserve No. 5 - This reserve was casually viewed from the highway and the somewhat swampy characteristics of the lake frontage were observed. It is not possible to offer a good land use recommendation based on such a casual inspection. A detailed land use report would be required to uncover the use potentials.

Neskainlith Band

Neskainlith Reserve No. 1 - This reserve is similar to the Adams Lake Band's Reserve No. 4 lying immediately to the north in that it possesses a good agricultural potential because of the large acreage supporting arable bottom land and good hillside grazing. It has an added feature in that it fronts on the east shore of Niskonlith Lake. The value of the lake frontage for recreational purposes is somewhat limited because of adverse topographic conditions. However, a summer homesite subdivision has been laid out and it is apparent that any future developments of this nature should be dependent upon the success of the existing subdivision.

Neskainlith Reserve No. 2 - Because of its relatively large acreage (2,407 acres) and its four miles of highway frontage this parcel possesses a variety of potentials. It presently supports a few scattered homesites for Band members and some hay fields. Its highway exposure and its railway trackage would suggest that it has industrial potential. Further, it is easy to envision a game farm on the site similar to the development on Indian Reserve No. 1 at Penticton. Other potentials might be a loose density campsite development on the higher benches which would give tourists an opportunity to explore the acreage on hiking trails or perhaps by horseback. Small acreage portions fronting on the highway could support a motel development but from a recreational viewpoint the main asset of the parcel is its relatively large acreage of unencumbered park-like land.

Switzemalph Reserve No. 3 - Located only 3 miles from Salmon Arm and at the mouth of the Salmon River, a portion of this reserve lying east of the main highway possesses an attractive agricultural potential. This is particularly true in view of the recent expansion of the dairying industry. The potential of the lake frontage was not examined on the ground. However, it is reported by Band members that it may be marginal in view of the shallowness of the foreshore caused by "silting up" at the mouth of Salmon River and, of course, the close proximity of both the railway and the highway to the lakeshore at the northern extremity of the reserve. Further, it is evident that the low ground, although possessing attractive agricultural features, may not be suitable for any sort of residential development in view of the high water table.

A casual examination of the higher ground west of the highway showed a forest of immature second growth which may have a good growth potential.



"An Attractive Agricultural Potential"

Switzemalph Reserve No. 3

General Development Potentials

1. A potential exists for a modest manufacturing plant fronting on the lake constructing beach facilities such as wharves, diving towers,

paddles boards, ramps, anchors and a variety of homemade beach toys. Lakeshore property with easy access from the highway would provide the ideal site. Band members who possess a talent in carpentry work would be given employment on an hourly basis and the Band could supply the higher priced power tools. It is likely that the shop could be constructed and equipped for less than \$15,000 and further expansion would be dependent on the success of the business. Lake frontage would be required for the purpose of transporting larger items such as wharves and diving towers by water to the customers homesite. Highway frontage is necessary to provide adequate exposure to prospective customers.

2. In view of the relative shortage of good pasture land and also in view of the recent expansion of the dairy industry a respectable income could be realized through leasing arable land to dairy farmers.

3. The British Columbia Economics and Statistics Branch of the Department of Industrial Development completed a survey of the beef cattle industry in British Columbia for the Department of Agriculture in 1969. This study pointed out that a good potential for feed lots exists within the Shuswap region. The report also stressed that a high level of managerial ability, knowledge and experience were essential. Evidently there is sufficient grain grown in the Arsmtrong-Enderby area to support 10,000 head of cattle over and above that required for the dairy industry and this grain could feasibly be trucked to the Salmon Arm area. The study indicated that 3,000 head would constitute an economic feed lot operation.

4. The forests on all reserves should be examined to determine whether or not good seed trees are present. The F. Barnard Seed Co. at Blind Bay provides a continuing market for cones. Cone collecting can be a pleasant past time for lady Band members and might in fact be more profitable than berry picking.

5. The Christmas tree potential of Indian Reserves could be examined. This too could provide an attractive seasonal income.

6. If Band members possess the necessary talent, a plant manufacturing recreational facilities for summer homesites could be expanded to include the construction of prefabricated summer homes. There are several designs on the market, the A-frame structure being the most common.

Finally, it is a relatively easy exercise to list development potentials. The mechanics of implementing each recommendation is more difficult. Detailed recommendations would have to consider the ownership status of each reserve and how individual locatees can be accommodated in a development proposal involving a cooperative effort by the Band. Further, it is not uncommon for a development proposal involving Band labour to become uneconomic when it is necessary to pay the Band members a labour rate of \$3.00 an hour. It also jeopardizes the economics of some ventures if a manager is to receive a salary. This is not an uncommon situation when one closely examines the development and management practices of similar private developments. The owner-developer contributes his own free labour and generally works well beyond the normal eight hour working day. When his development is complete, he manages it himself and once again does not charge for his time. He enjoys an income which is attributeable either to his labours or to a return on his investment. Seldom is the venture capable of producing a return from both labour and capital investment. Thus, a cooperative Band project which involves a large labour expense during development and another expense for management will very unlikely enjoy a surplus which could be considered as Band income. If the venture is to be a true cooperative effort with benefits to be enjoyed by the entire Band membership it would be necessary for Band members to provide free labour and distribute the income on a share basis. In other words, the mechanics of such a cooperative venture would be as follows.

1. The bare land should be appraised and each Band member will receive an equal share in the venture. The value of the share will be equal to the total appraised value divided by the number of Band members.

2. Band members would provide labour during development periods but would receive no payment other than an increase in the number of shares in the venture which would be proportional to the value of their labour. Those who contribute labour would accumulate a greater equity in the venture.

3. The manager or operator would receive no salary but he too would enjoy a greater equity in the venture in proportion to the value of his time spent as manager.

4. At the end of the operating season Band council would decide whether or not profits should be distributed amongst the shareholders or whether they should be spent on further expansion.

Before Bands get too interested in a cooperative land development scheme they should consider this aspect of cooperative development. It is conceivable that a less cumbersome method might be to simply lease the bare land to an individual Band member or any other private developer and enjoy the security of receiving an annual lease rental.

Private individuals who dedicate their free time to their development do so because they are creating an estate which will increase in value in proportion to the labours which they contribute and they personally will benefit from this increase in value. Further, the estate can be passed from generation to generation and this provides the incentive for a man to work for nothing. A Band member does not have this same opportunity to enjoy the benefits of creating a personal estate unless of course he has title to the land. The system proposed above might be the next best alternative. The Band member would be creating a share of an estate which would grow in accordance with the amount of labour he contributes and also in accordance with the success of the venture.

