

SOCIO-ECONOMIC FACTORS  
AFFECTING LAND USE

RESTRICTED

CENTRAL OKANAGAN REGION

CENTRAL OKANAGAN REGION

OCTOBER  
1971

TO BE RETURNED TO ROOM

203

~~RESOURCES DEVELOPMENT SECTION,  
DEVELOPMENT SERVICES DIVISION,  
INDIAN-ESKIMO ECONOMIC DEVELOPMENT BRANCH,  
DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN  
DEVELOPMENT, CENTENNIAL TOWER.~~

WHY NOT RETURN IT, YOU WILL THEN  
KNOW WHERE TO BORROW IT AGAIN.

DEPARTMENT OF INDIAN AFFAIRS  
and NORTHERN DEVELOPMENT

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BRITISH COLUMBIA

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LAND USE SERVICES

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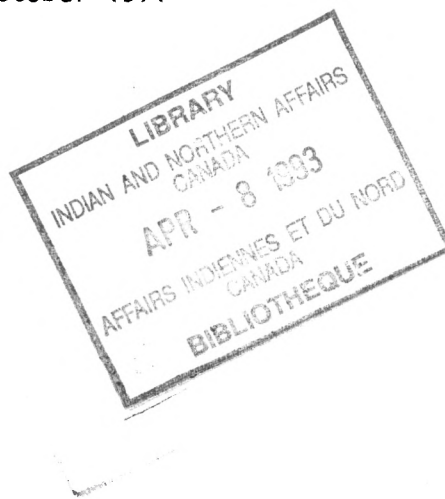
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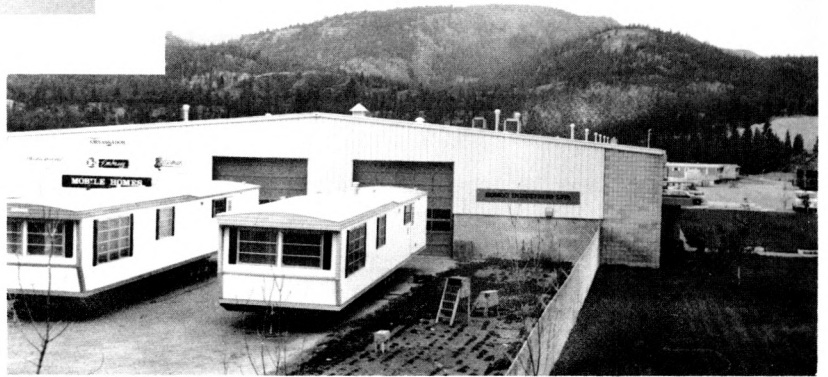


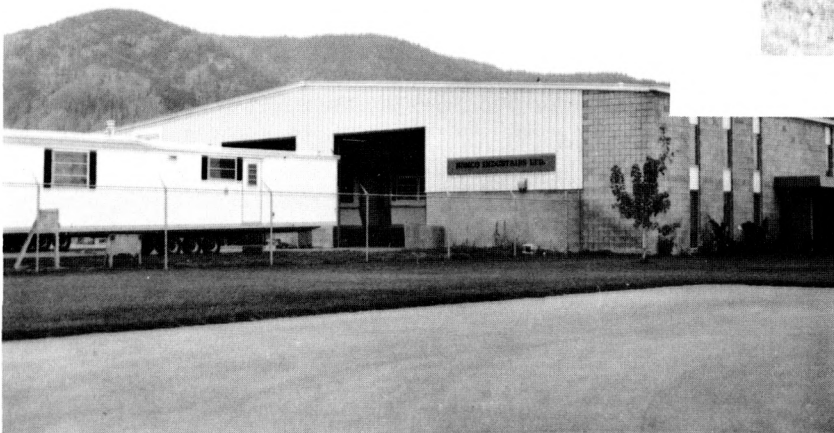
DEPARTMENT OF INDIAN AFFAIRS  
AND NORTHERN DEVELOPMENT  
VANCOUVER, B. C.

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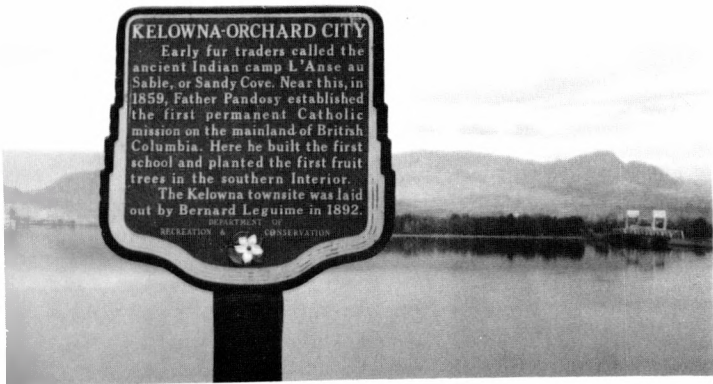


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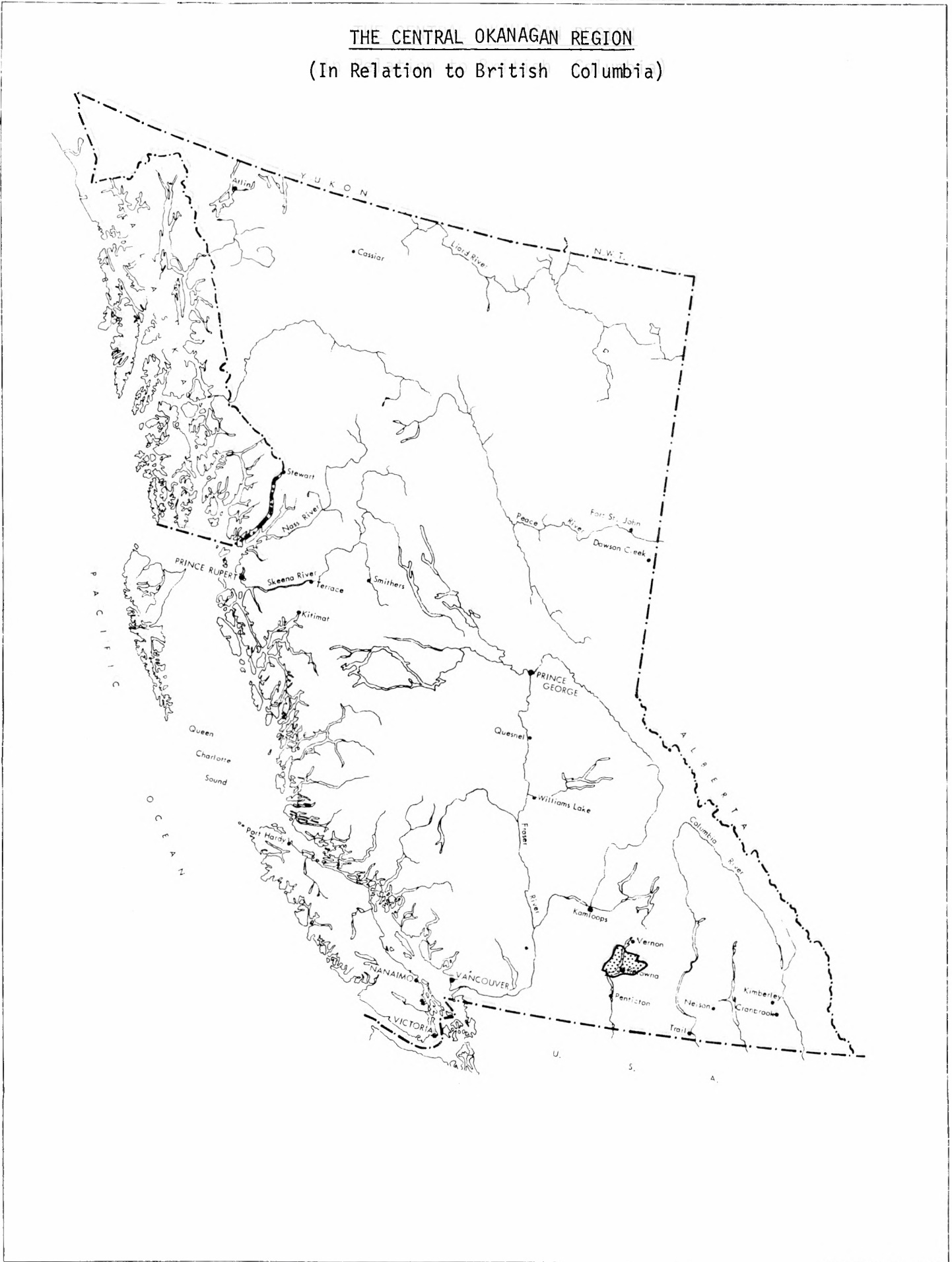
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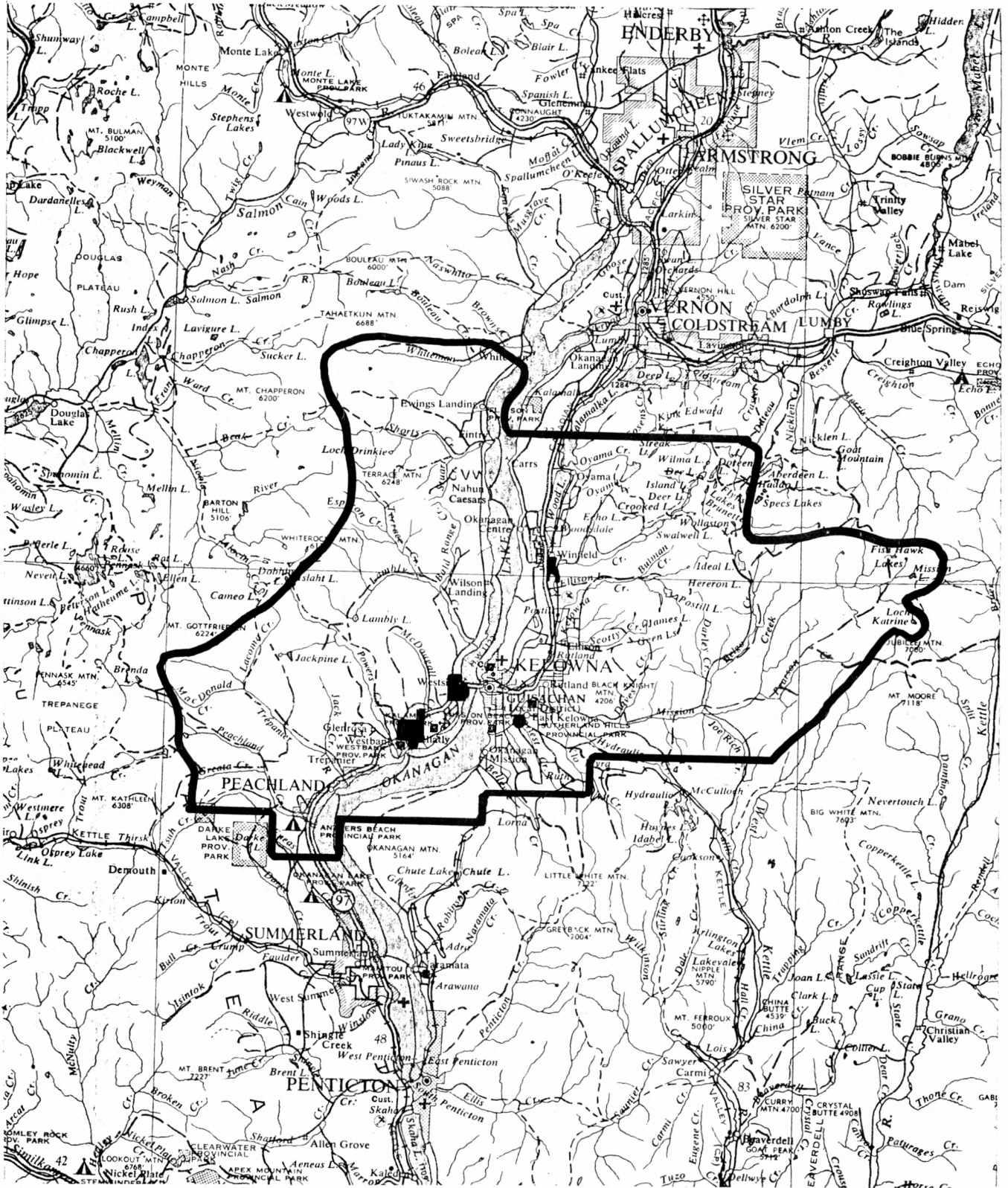
THE CENTRAL OKANAGAN REGION  
(In Relation to British Columbia)





Map Showing  
LOCATION OF INDIAN RESERVES  
in Relation to  
BOUNDARY OF CENTRAL OKANAGAN REGION

Scale: 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 Central Okanagan region is entering a period where land use conflicts are most conspicuous and are becoming a prime concern of Government authorities and private individuals alike. Environmental protection is becoming an issue of the day with urban developments encroaching on agricultural areas, prime recreational areas being abused by over use, water requirements increasing at an alarming rate, and marketing problems hindering the economics of the fruit industry. These events are having an important effect on land use planning within the region and, therefore, a report of this nature is timely in that it might serve its greatest utility during the next five year period.

This report does not attempt to analyze 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 early fur trade and subsequent gold rushes throughout the province all played an important role in the development of the Okanagan Valley. It is difficult to relate the history of the Central Okanagan region without reference to the development of the entire valley. Further, the development of the valley ties in with historical events throughout the province.

During the first decade of the 19th century the Okanagan Valley was relatively untouched by explorers and fur traders. The Northwest Company was most active in the north central interior while an American company, the Pacific Fur Company, was trading near the mouth of the Columbia River at Fort Astoria. It is reported that a trader working for the Pacific Fur Company, David Stewart, entered the Okanagan Valley by way of the Okanagan River in 1811. He was the first white man known to enter the Okanagan Valley.

The Pacific Fur Company collapsed in 1813 and Fort Astoria was occupied by the Northwest Company and its name changed to Fort George. The Northwest Company generally shipped furs overland from the west coastal region, across the Prairies to Montreal and supplies were returned westward by the same route. It often took over a year to move goods across the continent.

In 1821 the Hudson's Bay Company and Northwest Company amalgamated and a new transportation route was established. Furs were transported from the northern regions to Fort Kamloops and southward on the Fur Brigade Trail along the west side of Okanagan Lake to Fort Okanagan at the junction of the Okanagan and Columbia Rivers. From this point they were transported by canoes to Fort Astoria or Fort Vancouver at the mouth of the Columbia. Fort Vancouver became an important port receiving ships from England loaded with supplies and goods which were transported inland by the same route. The Okanagan Valley became known as a transportation route rather than an area for settlement. However, it is reported that a large campsite was consistently used near Westbank. Other campsites were established on route and early travellers explored the regions adjacent to these campsites in search of favourable areas for settlement.

In 1846 the International Treaty was signed and this marked the end of the Fur Brigade route. Fur traders could no longer roam freely to and fro across the 49th parallel. The Hudson's Bay Company established a new overland brigade trail from Kamloops to Langley and the first brigade trail in the Okanagan was used very little till 1857 when gold was discovered in the lower Fraser River, the Cariboo and the Similkameen Valley. This was the first genuine stimulant to settlement in the Okanagan. Use of the old fur brigade route was revitalized by thousands of gold seekers entering Canada by way of the Okanagan River on route to Yale, Boston Bar, and Lillooet and later to the Cariboo and the Similkameen Valley. With such a significant movement of people through the area, the valley became an important food basket with its attractive range land for grazing animals.

It is reported that 14,000 head of cattle, horses and sheep were imported from Oregon between 1861 and 1864. The permanent white population in the valley rose to a level where large scale farming became profitable and wheat and other grains were produced for feed or flour. Horses were also bred and used for transportation to the gold fields.

This era from 1864 to the early 1880's is probably the most significant period in the history of the development of the Okanagan Valley. In 1858 Father Pandosy of the Oblate Fathers established a mission near the present city of Kelowna. He planted an apple tree and the success of the experiment was widely circulated.



Vast tracks of land were alienated to encourage cattle ranching with single holdings covering several thousand acres. Cattle drives from the Okanagan over the Dewdney Trail to Hope were a common occurrence. Father Pandosy's mission at Kelowna was the only centre that developed as a community during this period. Several settlers took up 160 acre portions of land in the vicinity of the mission and by the 1870's a permanent community was established around the mission and on the present site of the city of Kelowna. In 1876 a road was completed between Kamloops and the mission which encouraged further settlement. The first land claim in the vicinity of the mission was recorded on June 13, 1861 in the name of William Pion. Several other claims followed in the same year. In 1862 the Benvoulin area was claimed by an August Gillard. Mr. Gillard also recorded a claim in that same year of over 360 acres of what is now the site of the city of Kelowna. Mr. Gillard with his big brown beard resembled a grizzly bear and he was commonly called Ke-Low-Nah, the Indian name for grizzly bear. Hence, the new town was given the name of Kelowna.

By the 1880's the gold rush was waning but prospectors uncovered attractive deposits of lode minerals. From 1860 to 1920 the development of these deposits placed even greater pressures on the Okanagan Valley to supply agricultural produce for the settlements that developed to serve the mining communities. Copper and gold mines developed at Phoenix, Deadwood and Boundary. Several other smaller mines grew up in the same region and copper smelters were constructed at Greenwood, Grand Forks and Boundary Falls. By 1920 economic conditions caused the mining boom to fade but by this time the Okanagan Valley was well established as an agricultural community and new transportation facilities allowed its produce to be widely marketed.

Until 1885 cattle ranching was the main agricultural industry while fruit growing was nothing more than a hobby or practiced only to serve the local market. The completion of the Canadian Pacific Railway in that year, the establishment of steamer service on the Okanagan Lake in 1886, and the construction of a railroad spur from Sicamous to Okanagan Landing in 1892 opened new markets for agricultural produce from the valley. Significant events have been recorded since that date.

Lord Aberdeen began growing apples as a commercial crop on his Cold-



stream Ranch near Vernon and his Guisachan Ranch at Kelowna. He could not begin to supply the market and the following years were ones of rapid development to meet the strong demand for Okanagan fruit. The large land holdings were subdivided and irrigation companies formed. Packing plants were constructed and such centres as Penticton, Kelowna and Vernon became firmly established. It is reported that in 1906 the Earl of Aberdeen's ranch at Coldstream produced \$500 per acre in fruit production. This news circulated and the pace of land development was accelerated. The Belgo-Canadian Land Company formed in 1909, and financed from Belgium, brought irrigation water from Mission Creek to develop a large tract of land on the north side of Mission Creek eight miles east of Kelowna, currently referred to as the Belgo area.

The Kelowna Land and Orchard Company developed a large holding extending from Mill Creek to the present East Kelowna bench. The access road to the property later became Pandosy Street and KLO Road.

The Central Okanagan Land Company purchased 1,655 acres on Ellison Flats in 1906 for \$100,000 and later that same year this company purchased 6,000 acres in Dry Valley plus part of the Dillworth Range. Postill Lake was developed as a reservoir to supply water to the properties. In 1909 the irrigation system was completed and most of the 10 and 20 acre lots developed, in what is now Rutland, were sold. The Dry Valley development was completed in the following year with 10 to 16 acre lots selling for \$250 to \$450 per acre. The name of the community resulting from the development was later changed to Glenmore. The Glenmore portion of the irrigation development later became known as the Glenmore Irrigation District while the Rutland portion was absorbed into the Black Mountain Irrigation District.

Much of the early advancement in fruit growing techniques can be attributed to the efforts of John M. Rutland who purchased 960 acres on the present Rutland town site in 1902. He was a knowledgeable horticulturist and continually experimented with various varieties, working in close contact with the famous Hybridist, Luther Burbank.

These early years of the fruit growing industry in the Okanagan were the glory years because it appeared to be impossible to supply the market. However, by 1914 the area was over producing and markets collapsed. It

became evident that refrigeration would be necessary in order to prolong the marketing period. Further, the cut-throat competition that developed between independent growers was slashing prices to a point where it was not feasible to grow fruit profitably. In B.C. Fruit Growers Association exercised its influence and in the early 1920's the Kelowna Growers Exchange and the Okanagan Union of Growers were established with the Associated Growers acting as selling agent. Fruit was packed from 17 locations from Westbank and Winfield. In 1923, 948,161 boxes of fruit and vegetables were handled and in 1925, cold storage facilities were constructed. The industry was becoming stabilized but the large independent growers who refused to join the Co-op forever posed a threat to the success of cooperative marketing. Several packing and marketing agencies have come and gone since that time and the success of the industry varies from year to year. Even today the independents and the cooperatives are in debate and the effect on the average grower is extremely adverse.

Population growth was moderate during the early part of the century until 1930 when a significant influx of people entered the valley retreating from drought and depressed conditions on the Prairies. It was not until 1935 that a reasonable road was constructed from Penticton to Vernon and steamer traffic on the lake ceased. This was the end of an era which many pioneers recall with fond memories.

The forest industry was born in 1900 in the valley when Bernard Lequine constructed the first sawmill on the lakeshore with lumber piles extending up what is now Bernard Avenue. The plant was composed of a sawmill, planer mill and sash and door factory. The lake served as a transportation route for logs and, therefore, logging was restricted to the mountain slopes adjacent to the lake with steamboats hauling the log booms to the mill. Several other sawmills developed throughout the region serving primarily the local markets with shipping containers for fruit and vegetables, railway ties and tree props. The SM Simpson Mill, the largest sawmill in the region at the present time, started as a sash and door factory on a downtown location in 1917. The plant's present location was started in 1928 with a plywood section added in 1956. In 1965 the company was sold to Crown Zellerbach Canada Ltd. who has been responsible for much of the development in the forest industry within the region in later years. After World War II the demand for forest products surged

and nearly every community in the Okanagan contained a sawmill. Recent centralization of the industry has reduced the number of sawmills significantly. In fact, within the region the Crown Zellerbach mill at Kelowna is the only large producer.

Tourist travel through the Okanagan was not a significant factor affecting the economy of the region until 1949 when the Hope-Princeton Highway was completed. Thus, travellers from Vancouver could reach the Valley in a day. However, the effect of this new transportation route was not nearly as significant as the opening of the Rogers Pass in 1962. The influx of travellers from the Prairies accelerated annually. Today this migration of tourists through the valley has caused recreation to become a prime resource. Facilities to serve tourists are expanding each year and the income generated from the industry has had a beneficial effect on the regional economy. Mountain tops have been developed as ski resorts to extend the tourist trade into the winter months. Land development emphasizes retirement lots and realtors and land developers are enjoying a brisk trade in this type of real estate as the migration from the Prairies accelerates each year.

The economy of the region has been balanced recently by the effect of the Area Development Incentives Act. Prior to this legislation the economy of the region was heavily dependent upon the fruit industry which, of course, varied drastically from time to time. The payrolls created by new industries resulting from the financial assistance offered by the Federal Government have contributed substantially to stabilizing the economy.

PHYSICAL DESCRIPTIONSURFACE GEOLOGY

The Eocene Age left the interior region as a plateau with extensive swamps and lake deposits in the low valleys. The Miocene Age which followed was characterized by violent upheavals and volcanic activity which obliterated the Eocene drainage system in many places. During this period of upheaval extensive faulting and folding appeared along the present course of the Okanagan Valley causing a weakness in the surface layer. A double depression formed in the valley north of Kelowna separated by a rocky ridge which now forms a height of land between Okanagan Lake and Ellison, Wood and Kalamalka Lakes.

This new depression formed the main drainage system for the Shuswap Basin which was being formed to the north. However, the Pleistocene Age which followed covered the entire interior plateau with the Cordilleran Ice Sheet which grounded off the rocky upheavals. The decline of the glacial age produced mountain glaciers and valleys which were partially blocked by loose material deposited by the ice sheet. The water flow resulting from melting glaciers redeposited debris and till throughout the valley bottom. A restriction developed in the vicinity of Westbank causing ponding to the north while slow moving rivers developed at the valley sides to the south.

A heavy clay was laid down in the valley bottom north of Westbank. South of Westbank the slow moving rivers deposited silts and fine sands on the ice sheet in the bottom of the valley. As the sheet melted silt banks were left standing as presently illustrated in the vicinity of Summerland and Naramata. In some areas tributary streams carried till material to the valley bottom which mixed with the ice sheet. As the ice melted a Knob and Kettle topography resulted as the surface collapsed.

The erosion cycle which followed the glacial age carved streams through the upper glacial lakes and terraces developing fans in the valley bottoms. One such fan built up by Ellis and Shingle Creeks, on opposite sides of the valley near Penticton, built up a post glacial dam isolating the south end of Okanagan Lake and forming Skaha Lake. Similarly, Woods Lake formerly included Duck Lake. The present restrictions in the lake near Kelowna developed primarily from the restrictions formed with the melting of the

Cordilleran Ice Sheet but was further built up during the later erosion period as a fan developing from Mission Creek.

### TOPOGRAPHY

This report is confined to the central portion of the Okanagan Valley extending from Fintry and the south end of Kalamalka Lake in the north to Peachland in the south. Its east-west extension includes the entire drainage basin extending from the height of land to the west and including the drainage basin of Mission Creek to the east. The source of Mission Creek at Fishhawk Lake and Mission Lake lies some 40 miles to the east and forms the boundary of the district. The region covers approximately 1,000 square miles.

Okanagan Lake lies at elevation 1,120 feet a.s.l. while the surrounding plateaus lie at 5,000 feet a.s.l., with the occasional peak and ridge extending above 6,000 feet a.s.l. The upland consists mainly of rounded and wooded hills interspersed by small lakes and bogs. Most of the upland lakes have been dammed to form water reservoirs for the irrigation districts. Terraced bench lands extend east and west from the lake to a point where the slopes to the upper plateaus limit development potentials. In some cases these slopes extend to the shores of the lake rendering the adjacent upland virtually useless for development purposes. However, terraces and fans have developed where main creeks enter the lake creating a significant acreage of usable land. Communities such as Cars Landing, Okanagan Centre, Kelowna, Peachland, Wilson Landing and Fintry have developed on these fans. Other communities, such as Westbank, East Kelowna, Ellison, Winfield and Oyama, have developed on bench lands further removed from the lake.

The main valley bottom is characterized by a double trough north of Kelowna accommodating Okanagan Lake in the western depression and Ellison Lake, Woods Lake and Kalamalka Lake in the eastern depression. South of Kelowna the valley is characterized by a single trough. Because of the greater acreage of usable arable land in the western trough most of the urban and agricultural development within the valley lies within this topographic neighbourhood.

From a recreational viewpoint, the Central Okanagan region is generally thought of as an area generously endowed with sandy beaches. In actual fact the proportion of lakeshore exhibiting this feature is relatively

small with beach development being restricted to the Kelowna area, the north and south shores of Woods Lake and isolated bays and fans on Okanagan Lake north of Kelowna. The remaining shoreline is primarily comprised of steep rocky faces extending to the lakeshore.

### SOILS

The 1949 Soil Survey Report classifies the soil of the Okanagan Valley into four zonal groups. The brown soils in the southern portion of the valley graduate into dark brown soils in the vicinity of Kelowna. Proceeding north to Vernon and Lumby the black soils are encountered while the Podsol soils are represented in the Enderby to Salmon Arm area. Variations of these zonal soil groups occur depending upon elevation, aspect, tree cover and the availability of water. The ground water soils, generally associated with valley bottoms and certain areas adjacent to the lake, might occur anywhere throughout the valley.

The dark brown soils which are most common within the study region are all glacial in origin. The Kelowna series is represented by a glacial till; the Rutland series by gravelly terraces and lateral moraines; the Oyama series by sandy terraces and lateral moraines; and the Glenmore series by silts and clays. Colluvial fans which have resulted from post glacial materials are commonly represented near the lake and are classified as a ground water soil, represented by Nisconlith loam and clays. A more detailed description of the most common soil types found within the region are as follows.

Rutland Gravelly Sandy Loam - This is probably the most common soil type within the region. Its most extensive areas occur on upper benches paralleling the lake from Rutland, through East Kelowna and southwestward past Okanagan Mission. It is also well represented at Peachland, Trepanier Creek and Westbank. It is generally composed of coarse stratified sands and gravels of considerable thickness underlying a thin layer of finer sandy loam. It has been fairly extensively developed for agricultural purposes, reacting favorably to irrigation. It is more suitable for orchards than for tilled crops because of cultural difficulties.

Oyama Sandy Loam - A height of land between Woods Lake and Okanagan Lake displays a low pass in the vicinity of Winfield. This pass is commonly referred to as the Winfield Bench and is comprised mainly of Oyama Sandy Loams. The east side of Woods Lake is well represented by this soil type as well as isolated patches in the vicinity of Ellison Lake. The Lakeview Bench, extending into Indian Reserve No. 10, on the west side of the Lake supports the Oyama series. The sandy loams occurring near Kelowna are dark brown with a fine granular structure within the top layer. Fine gravels tend to appear beyond two feet below the surface. This type is well drained and reacts favourably to irrigation. The orchards in East and South Kelowna occupy this soil type.

The Glenmore Series - This soil series is more commonly found in the Glenmore Valley reaching northward to Dry Valley and in the vicinity of Westbank, extending over most of Indian Reserve No. 9. Indian Reserve No. 10, across the lake from Kelowna, is well represented by the Glenmore series. Clays and clay loams are the main textures with restricted drainage. The series is derived from Lacustrine sediment deposits in temporary glacial lakes. The clay content tends to become more dense as the profile extends deeper. It is best suited for dry farming because it does not react favourably to irrigation. Hay production and pasture is another common use.

Nisconlith Series - Nisconlith loams, silt loams, clay loams and clay are the most common soil types in the vicinity of the city of Kelowna. These types generally develop in the lower part of Colluvial fans and on river flood plains where drainage is restricted or poor. The loamy top layer generally overlays a structureless subsoil saturated by ground water. Orchards are generally not recommended unless extensive draining is practiced. Soils are best suited for pasture and hay production or for the culture of tomatoes, squash, pumpkins and root crops. Corn, onions and peppers are often grown successfully. Although the type exhibits poor characteristics for urban development purposes the entire city of Kelowna lies on Nisconlith clay or Nisconlith sandy loam.

FOREST COVER

The dry forest zone characterizes the entire region to nearly 4,000 feet a.s.l. Douglas Fir and Ponderosa Pine are the prevailing species with deciduous species such as birch and aspen frequenting the moister areas. Open range land is common on south slopes with some of the steeper shady north facing slopes displaying nearly Columbia forest characteristics with cedar and spruce becoming evident. Above 4,000 feet a.s.l. the sub-alpine forest is encountered characterized by Engleman Spruce and balsam. However, much of the upper plateaus in the region have been burned and are supporting extensive stands of sub-dominant lodgepole pine.

For the most part, the ground cover under the Dry Forest type is grass. The semi open grasslands under a sparse cover of Ponderosa Pine and Douglas Fir create an ideal recreational environment.

The region has been logged intensively since the turn of the century. Most logging was to a diameter limit, leaving a good seed source. Therefore, logged areas have regenerated satisfactorily except where other uses such as heavy grazing or urban development has encroached into the forests. Mixed aged stands have resulted ranging from seedlings to forests 130 years old. Very few stands remain exceeding 130 years with the exception of some decadent spruce, lodgepole pine stands occurring on the plateaus. The trees generally are adding favourable increment and not considered to be mature. The lodgepole pine stands on the plateaus generally range between 90 to 110 years old and in some cases are stagnated. These stands are mature and are presently being logged in clear cut blocks ranging in size from 40 to 75 acres. With the wood harvesters practicing close utilization very few trees remain after logging and slash accumulation is not near the problem that it used to be.



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. To the layman, these figures are of interest only when compared with other well known regions of the province. Therefore, comparable figures for Vancouver and Prince George are presented in the following chart.

CLIMATIC NORMALS

(from Canada Department of Transport, Meteorological Branch)

	Kelowna 1160 asl	Vancouver 161 asl	Prince George 2218 asl
Hours with bright sunshine	*1,972	1,925	1,816
Earliest, last spring frost	April 15	Mar. 5	May 17
Latest, last spring frost	July 1	April 30	July 7
Earliest, first fall frost	Aug. 10	Oct. 2	July 31
Latest, first fall frost	Nov. 13	Nov. 12	Sept. 26
Longest frost free period	187 days	242 days	112 days
Shortest frost free period	83 days	161 days	38 days
Mean Annual Rainfall	9.2"	39.34"	16.17"
Mean Snowfall	32.8"	17.8"	79.6"
Mean total precipitation	12.48"	41.12"	24.67"
Number of days with measurable rain	60	154	97
Number of days with measurable snow	24	10	73
No. of days with meas. precipitation	106	159	162
Maximum Precipitation in 24 hours	1.85"	2.4"	2.08"
Mean Daily Temperature (Annual)	47.2 <sup>o</sup>	50.4 <sup>o</sup>	38.0 <sup>o</sup>
Mean Daily Temperature (July)	68.2 <sup>o</sup>	63.8 <sup>o</sup>	58.9 <sup>o</sup>
Mean Daily Temperature (January)	26.3 <sup>o</sup>	37.2 <sup>o</sup>	11.6 <sup>o</sup>
Maximum Temperature	102 <sup>o</sup>	92 <sup>o</sup>	94 <sup>o</sup>
Minimum Temperature	-24 <sup>o</sup>	0 <sup>o</sup>	-58 <sup>o</sup>

\* Summerland

Some figures require clarification. There has been no record of the number of hours with bright sunshine recorded in the region. However, these figures have been recorded for Summerland and Vernon. The figure for Summerland is presented in the Table. It is interesting to observe that Vancouver International Airport enjoys as much annual sunshine as Kelowna. Even for the month of July, Summerland station records 313 hours

while Vancouver International Airport records 311 hours. However, during August, Summerland exceeds Vancouver with 282 hours compared to Vancouver's 250. Prince George lags behind Summerland in the number of hours with bright sunshine but records show that during the month of January, February and May, Prince George experiences more hours of bright sunshine than Summerland. During July and August, however, 595 hours are recorded at Summerland, 561 hours at Vancouver International Airport and only 510 hours at Prince George. To enjoy maximum annual sunshine one would be better off to look at Fort St. John, Kamloops or Victoria where the number of hours exceeds 2,000. Victoria, with 2,216 hours with bright sunshine, is the highest in the province. However, for the months of July and August, Summerland registers slightly above all other stations with the exception of Victoria. It is, therefore, concluded that the subject region is an exceptionally sunny area during the summer months but extended periods of cloudiness occur in the winter.

The data on frost occurrence illustrated why the central Okanagan is more suited for agriculture than Prince George. However, Vancouver displays more moderate figures and, of course, their total rainfall exceeds that of Kelowna by 30 inches. The combination of various frost occurrence factors and rainfall factors cause each region to be best suited for different agricultural crops.

Although the Okanagan is advertised as "the Sunny Okanagan", emphasis should be placed on temperature rather than sunshine. The analysis above shows that the region really does not deserve its reputation but the figures do show that it excels in summer heat. The mean daily temperature during the month of July exceeds both that of Vancouver and Prince George. However, several other areas within the province can match Kelowna's mean daily temperature for the month of July. One must examine the total environment before finally judging whether or not the region truly deserves its reputation as being a tourist paradise. Undoubtedly, the appealing agricultural suburbs and the attractive lake contribute largely to the recreational scene.

HUMAN RESOURCESGROWTH

Census statistics collected this year have not yet been compiled and therefore, most information regarding population characteristics is based on either 1966 Census figures or estimated projections. The Regional District of Central Okanagan have produced a population projection schedule which has been used repeatedly by planners.

The table presented on the following page shows some interesting trends. The growth rate within the City of Kelowna from 1966 to 1970 has been moderate primarily because of the lack of acreage suitable for residential development. Most of the population increase is due to the significant increase in the number of apartment buildings being constructed. The projection to 1981 shows a substantial rate of increase because it is anticipated that the water system will be improved in order that acreage lying above the level of the present reservoir can be serviced. It is not the intention of the city to expand its boundaries until such acreage has been developed.

Rutland has experienced the most significant growth during the past five years with its population increasing 100%. Although the rate of growth is expected to decrease in the future the figures still show a 100% increase during the next ten years.

The soil type in the Glenmore area is not ideal for residential development purposes and rapid growth is not anticipated.

Areas such as Oyama, Winfield, East and South Kelowna, Ellison and Belgo are primarily agricultural areas which will experience only moderate intrusion by urban development. Population growth will, therefore, not be too rapid. On the other hand, areas such as Okanagan Mission, Lakeview Heights and Westbank have already lost most of their agricultural acreage to urban development and it is expected that this trend will continue. Okanagan Mission is expected to double its population during the next five years. Urban development within the "Mission" to date has involved the subdivision of both agricultural land and undeveloped land. Many of the farms were subdivided into one and two acre parcels and are still accommodating small farm holdings. The general subdivision pattern includes small farm holdings interspersed by denser subdivisions supporting

POPULATION PROJECTIONS

	1966 Census	1968 Estimate	1970 Estimate	1976 Estimate	1981 Estimate
City of Kelowna	17006	19000	19860	27000	35000
Peachland	709	935	1350	1400	2000
Electoral Area "A" (Oyama-Winfield)	2082	1900	2210	2250	2700
Electoral Area "B" (Glenmore)	1246	1400	1600	1650	2300
Electoral Area "C" (Rutland)	4000	5200	8110	12000	18000
Electoral Area "D" (E & SE Kelowna)	1569	1800	1920	2000	2300
Electoral Area "E" (Benvoulin-S. Pandosy)	2507	2850	3200	5500	9000
Electoral Area "F" (Okanagan Mission)	1774	2050	2590	5000	8000
Electoral Area "G" (Lakeview Heights)	672	1300	1960	2300	3500
Electoral Area "H" (Westbank)	1136	1340	1820	2400	3000
Electoral Area "I" (Ellison-Belgo)	1153	1300	1530	1900	2600
TOTALS	33854	39075	46110	63400	88400

Source: 1970 Annual Report, Regional District of Central Okanagan

two to three lots per acre. The undeveloped bench land surrounding the farm lands in the valleys have been subdivided into lots ranging in size from  $\frac{1}{4}$  of an acre to one acre. Most of the acreage on these upper benches is presently undeveloped and it is anticipated that much of the urban development in the future will take place on this bench. The estimated population projection figure assumes that a water system and perhaps a sewer system will serve the area in the future. Preliminary engineering studies have been completed and a regional referendum has been presented twice to the voters.



It is anticipated that the rate of growth in the Benvoulin-South Pandosy area will equal that of the Okanagan Mission. The recent development of Orchard Park Shopping Centre at the corner of Highway 97 and Benvoulin Road will undoubtedly influence this rate of development. The present undeveloped acreage in this area is comprised of pasture land and orchards. The most significant encroachment of urban development upon agricultural land will be within the Benvoulin-South Pandosy area.

It should be noted that if a zoning bylaw were approved which discouraged the encroachment of urban development upon agricultural land, the growth pattern would change significantly from that indicated on the table. It is unlikely, however, that the totals would change.

It is interesting to note that the population increase from 1966 to 1970 is 27% while the rate of increase for the entire province during the same period was only 14%. It is evident, therefore, that a large percentage of the migration to British Columbia is directed to the central Okanagan. Changes in public school enrollment also confirms the above growth rate. In Kelowna School District 23, the boundary of which is the same as that of the Regional District, a 36.2% increase was experienced from 1961 to 1966. From 1966 to 1970 the rate of increase was 44.5%. These rates far exceed the rates displayed by other school districts within the Okanagan and Shuswap area. Some economists relate changes in public school enrollment to economic activity. If the comparison is valid it would indicate that the Kelowna area experienced more economic expansion during this period than other areas in the southern interior. However, the popular belief that most of the population influx to the Kelowna area is due to the migration of retired people from the Prairies is not substantiated. The 1966 Census showed that 16% of the Kelowna population was comprised of retired people. It is estimated that this figure has risen to perhaps 20% at the present time. Therefore, it is apparent that most residents of the central Okanagan area remain within the region after retirement and further, that there is a fairly brisk migration of retired people to the area. However, the number of families moving to the area in search of a more comfortable environment and also to provide a labour and management force for the industries which have recently been created is also significant.

The composition of the population varies somewhat from the rest of the province. The percentage of total population lying in the lower age groups is less while the percentage in the retirement age group is more.

#### LABOUR FORCE

There are no statistics specific to the subject region showing labour force distribution. However, the economic study of the Okanagan-Shuswap region shows the following distribution in 1970.

Agriculture	-	12.1%
Forestry	-	3.3%
Mining	-	1.0%
Manufacturing	-	14.4%
Construction	-	7.2%
Services	-	62.0%
Total	-	100 %

This same report suggests that the percentage of the labour force employed in agriculture will decrease from 12.1% in 1970 to 3.1% by the year 2000. It further suggests that the number of people employed in services will increase to 69.5% by the year 2000. Further labour statistics extracted from this report compares average hourly earnings within the Okanagan-Shuswap region with those of British Columbia in July 1970.

#### Manufacturing

Okanagan-Shuswap	-	\$3.17
British Columbia	-	\$3.64

#### Construction

Okanagan-Shuswap	-	\$4.61
British Columbia	-	\$5.50

#### Community, Business and Personnel Services

Okanagan-Shuswap	-	\$1.84
British Columbia	-	\$2.14

These lower hourly earnings are reflected in the following average incomes declared in 1969.

Okanagan-Shuswap	-	\$4,669
British Columbia	-	\$5,561

Many new immigrants to the area from other parts of British Columbia have noted that it is difficult to match their salaries when moving from other parts of the province to the Okanagan in search of a new job. The statistics above verify this and employers have stated that people are willing to work for less for the privilege of being surrounded by fruit

and sunshine.

Finally, from a land use point of view it is evident that the rapid population increase in the future will place a severe strain on the land inventory for specific land uses and indeed land use conflicts will result. The most urgent conflict will exist between land required for residential development but best suited to other uses. The significance of this conflict will be discussed in a later section of this report entitled, "Urban Development". It is suffice to note at this time that any land within the region with favourable characteristics for either residential or recreational development will be in great demand in the near future.



NATURAL RESOURCESMINING

The development history of the region has shown that mining activities played an important role in the early development of the region. However, mining has only indirectly influenced the development of the region because most of the activity occurred outside the region in areas that were unsuitable for agricultural development. The central Okanagan with its moderate climate, favourable soil types and vast areas of open and semi-open range primarily developed as the food basket for the mining industries which grew in adjacent neighbourhoods. Today, with modern transportation facilities, it is not necessary to depend upon adjacent neighbourhoods to supply food for an expanding economy.

A recent economic study of the Okanagan-Shuswap region assesses the mining potential of the entire valley under three separate domains.

1. the Copper-Molybdenum Domain - The east side of the valley is represented as having no potential while an area west of Kelowna is assigned priority No. 3. West of Peachland, in the vicinity of Brenda Mines, displays No. 1 priority while the entire valley north of Kelowna to Vernon is classed as No. 4 priority.

2. Silver-Lead-Zinc Domain - The report attaches no priority to the potential of these minerals within the region.

3. Gold-Silver Domain - The west slopes to the lake, north of Kelowna, possess a No. 4 priority rating. The remainder of the region has no priorities.

From the above assessment it is concluded that the area east of the lake and within the region contains no potential for future mineral development. However, west of the lake there is a reasonable potential for the development of deposits of copper and molybdenum. The Brenda Mines, lying west of Peachland, is situated within an area of high priority. Between Kelowna and Vernon might have a moderate potential. There appears to be no potential for the development of silver-lead and zinc deposits, however, the development of gold and silver deposits possesses a moderate potential on the west side of the lake and south of Kelowna.

In view of the several factors which affect the likelihood of producing mines being developed it is impossible to offer a definite state-

ment regarding whether or not mineral development will contribute to the development of the region in the future. A consideration of the three domains mentioned above would suggest that the region possesses a moderate chance of benefiting from the mining industry in the future but several other areas of the province possess greater potentials.

The one operating mine within the region, the Brenda Mine at Peachland, presently employs 390 workers and has certainly contributed to the economy of that community. It is estimated that the mine will operate for at least 20 years on its reserve of 177 million tons of .18% copper and .049% molybdenum. The mine is presently producing 24,000 tons daily for the Japanese market. Concentrates are shipped by truck to Kelowna and onto Vancouver by C.N.R.

#### FORESTRY

Logging and sawmilling played an important part in the early development of the region when the mountain slopes adjacent to the lake were logged to produce lumber to meet local building requirements and later, in 1892, when the region was served by a railroad, to meet export demands. Prior to the second World War the demand for lumber both locally and abroad diminished and the lumber industry barely slumped along. Several mills have come and gone within the region, most of them established primarily to process logs resulting from agricultural clearings.

After the second World War the industry was stimulated again and the payrolls represented an important part of the economy putting food on the orchardists table when his farms failed to produce.

Today, only two sawmills of significant size remain within the region. The Crown Zellerbach mill, acquired from SM Simpson Co. in 1965, produces 30 million board feet annually and 75 million square feet of plywood on a 3/8 inch basis. It employs approximately 450 workers and supports an annual payroll of approximately \$3,600,000.

Gorman Bros. Lumber and Box Ltd., located at Westbank, produces about 12 million board feet annually along with fruit packing bins. Hardwoods, primarily birch, are cut into furniture stock at this mill but the market is not too firm and their production is variable. The mill employs 50 to 70 workers.

These industries were an important segment of the regional economy but during the past few years their relative importance has decreased with the recent construction of several new manufacturing plants and the expansion of the tourist industry.

The subject region differs from most northern regions in that their economy is not too dependent upon the lumbering industry at the present time. It would indeed be a harsh blow to several individuals if the industry were removed from the region but the expansion of other industries would cause the economy to recover in a relatively short period.

It is important to note that only an insignificant portion of the Crown Zellerbach cut is derived from forests within the region. Some of their 70-80 mile log hauls move logs from the far reaches of adjacent regions to the plant in Kelowna. Gorman Bros. Lumber and Box, on the other hand, derive a larger portion of their cut from within the region but the total volume is not significant. When one examines the characteristics of the forest inventory within the region the reason for the relative inactivity in the woods becomes evident. The forests of the Kelowna region were the most accessible areas during the early years of sawmilling and, therefore, they were logged heavily. The present inventory, although thrifty and fairly well stocked, is not mature. The British Columbia Forest Service has established 160 years as the age of maturity for Douglas Fir. The age of the present inventory ranges between new seedlings to 130 years. It is evident, therefore, that in the near future logging activity within the region will return as the trees become mature or alternatively, when the Forest Service reduces the rotation age.

Silvicultural treatments practiced in local timber stands usually involved selective logging in the fir stands and clear cutting in blocks in the spruce, lodgepole pine stands on the plateaus. Fir stands have been exposed to this type of treatment for several years. Whether it is by design or simply the result of removing only the larger and more attractive trees might be argued. However, the practice has resulted in a large inventory of uneven aged stands with a sparse scattering of mature trees. Occasionally timber sales are awarded within these stands but the total recovery seldom exceeds 15 or 20 cunits per acre because of

the low stocking of mature trees.

The same might be said of the timber stands on privately owned land. These areas have been high graded by frequent harvests since the turn of the century. Residual stands grow and utilization standards change and it is not uncommon for land owners to harvest a tree crop every ten or fifteen years. During the last four or five years the logging on privately owned land was accelerated and several areas were logged to close utilization standards. Trees down to 7.1" d.b.h. were removed and the remaining understory will not likely support another harvest for 30 years or more. At the present time, therefore, there is a shortage of privately owned timber within the region and any land owner with a reasonable inventory of trees would be well advised to culture his crop and wait for peak market periods before considering selling.

Both mills within the region are anxious to purchase privately owned logs and it is anticipated that the market can only get better in the future. It should be noted that Crown Zellerbach Ltd. will pay three times more dollars for suitable peeler logs than for saw logs. Tree farm owners should be familiar with this market and culture their forests to encourage the production of peeler logs.

Minor forest products such as pine fence posts, fence rails, and fuel wood are often removed under a special permit from the Forest Service to satisfy local agricultural requirements. There is no Christmas tree harvest, on a commercial basis, within the region.

Probably the most significant change in the use pattern of Provincial forests within the region is the acceptance of the concept of multiple use of the forest land. The adjacent populations have ready road access in the form of old logging roads and cattle grazing trails and are able to reach the far reaches of the region with four wheel drive vehicles in the summer and snowmobiles in the winter for hunting purposes and simply to satisfy the desire to commune with nature. The Forest Service have recognized this public need and have instructed their officers to report on any areas which exhibit extraordinary recreational characteristics. It is the Departments' intention to eventually encourage the development of such areas for uses other than harvesting trees.

The multiple use concept is again illustrated within the region's forest with regards to the protection of the land for watershed purposes.

The Okanagan Basin Watershed Study will recommend specific logging practices to be followed in order to manage the watersheds for the purpose of protecting the quality and quantity of water.

Finally, from a land use point of view, forestry is decreasing in significance in the total economy of the region. However, the payrolls from existing sawmills are a significant contributor and will always provide a ready market for privately owned logs. It is likely, however, that population pressures will cause uses other than tree harvesting to enjoy a greater priority on the region's Provincially owned forests.

#### RECREATION

It is surprising that there has been no recent economic review of commercial recreation within the region, particularly in view of the exciting recreational characteristics. An economic study of the Okanagan-Shuswap region recently completed by the Department of Industrial Development, Trade and Commerce for the Okanagan Basin Study Committee deals with the subject of recreation for a much broader area but most of the findings of this report are applicable to the central Okanagan area and, therefore, the following quotes are worth repeating.

"Visitors to the region in 1970 spent approximately \$47 million of which accommodations accounted for \$11-\$12 million."

"More out of province travellers have been using the Provincial Parks. Whereas British Columbians accounted for 75.7% of all camper-nights recorded in 1961, by 1970 the proportion had fallen to 61.6%. This is largely a reflection of improved vehicular access as the bulk of the change was attributeable to visitors from other parts of Canada and most of the adjustment took place between 1962 and 1963."

"It is becoming increasingly apparent that today's campers are becoming far more sophisticated. They have many alternatives and are demanding more and better facilities and services but it is questionable whether the public sector can or should attempt to meet these demands."

"The relatively slow growth of Provincial Park facilities in the study region in recent years is consistent with the view that the private sector be enlarged to meet the increasing demand for advanced facilities."

"Units of accommodation in private campground and trailer parks alone increased 53% between 1967 and 1970."

"A study by 3M National Advertising in the United States revealed that campers now rate planned supervised activities higher than individual service outlets at each campsite."

"While 17% of the total Provincial units of private tourist accommodation were located in the study region in 1967, the figure had grown to 22% by 1970. Currently there are approximately 6,912 units of approved accommodation available in the region. Although the total number of establishments within the region has decreased 14% since 1964, the number of units has increased 66% over the same period."

"In 1970 the cities of Vernon, Penticton and Kelowna realized an estimated \$3.1 million from convention business, earning approximately 21% of Provincial convention expenditures. This figure, up 72% from the 1967 total, puts the study region second only to Vancouver among British Columbia's convention centres."

"Recreation and tourism can be expected to contribute heavily to the economic future of the region. The type of growth that is actually realized will depend in large upon whether financial attractions are maintained in a manner that is conducive to expansion of the tourist trade."

"Eight percent of the United States population (some 16 million persons) is available to British Columbia as potential tourist traffic."<sup>1</sup>

"Japanese per capita income will probably exceed the Canadian average by the mid 1980's which augers well for greatly expanded tourist expenditures. Add to this the fact that British Columbia will contain around 7 million people by 2020 and it can be seen that there is an almost unlimited potential for expansion of tourist facilities in the province."

1. "The Economic Significance of Travel in Canada; Kates, Peat, Marwick and Co.; May 1969.

"A recent study<sup>2</sup> notes that British Columbia offers the best potential for tourist plant development of any province in Canada. Of five basic areas considered to offer the best potential in the province only two are in the interior - the Lower Arrow-Kootenay Lake area and the Okanagan Valley."

"If the industry is sufficiently dynamic to keep abreast of changes in recreational demand a long term growth rate of at least 5% annually is probable."

The remaining discussion will examine the central Okanagan region and relate the above quotes to local characteristics.

The following accommodation is offered within the region.

Type of Accommodation	No. of Establishments	Total No. of Units
Hotels	5	297
Cabins or Motels	58	1,043
Trailer or Campsites	<u>23</u>	<u>1,579</u>
Total	86	2,919

The economic report referred to above states that 6,912 units exist in the entire Okanagan-Shuswap region. The subject region contains 42% of this total and, therefore, is well represented as a recreational community within the entire Okanagan-Shuswap region.

2. "An Analysis of Demand for Tourist Accommodation in Canada"; Acres Research and Planning Ltd.; Toronto; August 1969.



Existing facilities within the region still contain a significant number of older establishments. Older units are rapidly being replaced by new modern facilities as land values increase and the incomes generated by older developments suffer. The effect of raising land values is also evident in the design of camp grounds. The Provincial Health Regulations limits the minimum size camping pad to 900 square feet. Campgrounds on high value land close to Kelowna are designed to this minimum. Authorities have stated that campers prefer the loose density type of development offered by the Provincial Government campsites but this opinion might be argued when one observes the No Vacancy signs being repeatedly displayed in front of the high density developments in the vicinity of Kelowna. With land values increasing it is difficult to judge with certainty what the future of campsites close to urban centres will be. Some authorities have suggested that rental rates will increase to meet the demand and the use of land for campsite purposes will compete favourably with other uses. However, if we follow the trend established in the United States, we may find that campsite developers and operators will have to offer organized activities in order to remain competitive. The scope for development in this type of tourist accommodation within the region is unlimited. However, the drop in occupancy rate during the last week in August is most obvious and some campground owners lock the gate after the 1st of



September because of lack of business. On the other hand, additional campsites continue to be developed to meet the rising demand regardless of the hazards caused by the short season.

Another threat to the successful expansion of the tourist industry within the region is the encroachment of urban development upon farm lands and potential commercial recreational lands. The main components of the central Okanagan's favourable recreational environment are

1. A large lake with sandy beaches offering a variety of water sports.
2. An agricultural community composed of orchards, dairy farms and truck gardens which are not only exceptionally pleasing to the eye but offer a variety of fresh produce to the tourist.
3. A comfortable summer climate characterized by warm days, cool nights and a low rainfall.

The loss of the lake or the favourable climate would certainly have a disastrous effect on the tourist trade but the effects of the loss of the agricultural community should not be overlooked. The region has become a target for land developers and prosperous retired folk. The developers are encouraging the exploitation of farm lands to meet the strong demand for residential lots and the retired people have the means to pay the high prices. It is fortunate that the city of Kelowna has developed a generous number of parks fronting on the lake for public use. Otherwise, it would be difficult for the average wage earner to enjoy the recreational facilities of the lake since so much of the frontage is in private ownership.

Provincial Government campsites can be found north and south of the region but none exist within the region. If campsite development is proceeding at a reasonable rate within any particular neighbourhood it is not the policy of the Parks Branch to contribute to the development. It is, therefore, unlikely that a Provincial Government campsite will be developed in the future.

Another factor restricting the development of recreational facilities in the vicinity of the lake is sewage disposal. During the past four years the Department of Health have taken bacteria counts from the lake

which are reaching a dangerously high level. The problem is being studied and effluent from industrial or residential developments are not allowed to enter the lake. A development proposal in the vicinity of the lake is scrutinized by all authorities and it is reported that several development proposals have been rejected because sewage disposal is difficult. The effect of the Department of Health regulations regarding sewage disposal from lakeshore developments has tended to decrease property values slightly. However, technical knowledge is being gained rapidly and it is anticipated that more economic disposal devices will soon be on the market and the development of recreational lands fronting on the lake will accelerate.

Winter sports are becoming a more prominent contributor to the total economy each year. It has been estimated that the number of skiers using existing facilities within the entire Okanagan increases by over 10% each year. The region boasts two ski hills; Big White Mountain offering alpine skiing while Last Mountain behind Westbank provides enjoyable down hill runs for the intermediate skier and night skiing under flood lights. The majority of the users of these facilities are local people but the "weekend package" and "ski weeks" are becoming more popular each winter with skiers from other communities.

The many logging roads and forest access roads within the region are travelled frequently by the snowmobile crowd in search of alpine snow fields. The membership in local clubs increases annually and winter tournaments attract competitors from other parts of the province. As these winter sports expand, year round recreational facilities will be enjoyed and the economics of operating accommodation facilities will become more favourable.

The outlook for recreation and tourism within the region is extremely favourable. National statistics point out that the shorter work week, longer vacations with pay, earlier retirement, longer life expectancy, increasing income and rising population levels will all place a strain on recreational facilities. Those areas of the province who are blessed with natural recreational advantages will have difficulty in developing facilities at a pace which will meet the demand. The central Okanagan region will certainly be one of the first areas within the province to feel the effect.



The Okanagan Valley is well represented by recreation commissions. Forty-two such organizations exist in the Okanagan-Similkameen-Boundary area. Such commissions are primarily people rather than resource oriented but their functions are worth mentioning because they could contribute to the development of recreational facilities for local use.

The recreation commission is governed by a board of directors guided by the Community Recreation Branch of the Department of Travel Industry. A recreation consultant holds an office in Kelowna and provides consultant services to communities who wish to form a commission or to existing commissions who require assistance in the development of their facilities. Although the function of these commissions is primarily to provide such local recreational facilities as children's camps, community centres, senior citizens entertainment, adult education, organized sports for the children and cultural development, they contribute significantly to the regional recreational environment and help to make the area "a better place to live". The existence of such facilities plays a part in encouraging new settlers into the area and also, to some extent, provides recreational activities for tourists.

The extent to which these commissions will cater to the tourist trade generally depends upon the development capital available. It is interesting to note that developments such as parks or arenas, etc.,

can be financed at the regional level through the levee of a mill rate. The cost of acquiring land for regional recreational purposes can be assisted by this form of taxation. The people of the region, therefore, do have an opportunity to increase the acreage of public recreational lands.

#### WATER

For the past decade the population increase and the development of water using industries have caused the people of the valley to become concerned about the quality and quantity of their most important natural resource, water. The valley experiences extreme variations in runoff and rainfall from year to year. During those years when an excessive snow pack has developed and snow melt and runoff is favourable, the subject of water quantity is not foremost in the minds of most residents. However, occasionally (the summer of 1970) the opposite conditions prevail and water reservoirs are depleted, the water table in the valley is lowered and water for irrigation purposes is rationed. The people of the valley are aware of the population projections and, therefore, during these dry years there is a loud public outcry concerning the seriousness of the condition of their water resource. This becomes particularly disturbing when it is announced that the water quality is deteriorating. Conflicts between water users increase each year and the local people fear that the supply in the future will be insufficient to meet the growing urban, industrial and agricultural demands without affecting the tourist and recreation industry.

Without too much technical knowledge at hand, some loud voices advocate the diversion of water from Shuswap Lake or the Columbia River into the Okanagan. The Shuswap diversion was the most popular proposal, but this prompted a violent reaction from the people of the Shuswap Lake Valley. They were not in favour of jeopardizing the quantity and quality of their water resource without first conducting a study in depth exploring the effects of such a proposal.

Hence, the "Canada-British Columbia-Okanagan Basin Agreement" was signed by Federal and Provincial Government authorities on October 29, 1969. The agreement formed the framework to conduct a study designed "to develop a comprehensive plan for the development and management of

water resources for socio betterment and economic growth in the Okanagan Basin". The cost of the four year study to be shared by the two governments is not to exceed \$2 million.

The study commenced immediately and to March 31, 1971, over half a million dollars have been spent on the four main categories of the study; water quantity, water quality, limnology and waste treatment. A socio-economic report was published in March 1971 summarizing preliminary findings and already several interesting statistics are available for public perusal.

The following statistics regarding Okanagan Lake are of interest to land users within the subject region.

Average annual net inflow = 360,000 acre feet  
 = 3¼ inches of depth over the  
 entire basin.

Loss through evaporation = 200,000-300,000 acre feet

Total drainage area - 3,100 square miles

Potentially irrigable land - 180,000 acres

Irrigated lands - 60,000 acres

    Tree fruits - 34,000 acres

    Vegetables - 4,500 acres

    Grapes - 2,500 acres

    Forage Crops - 19,000 acres

Minimum net inflow into Okanagan Lake - 80,000 acre feet

Maximum net inflow - 763,000 acre feet

Okanagan Lake, total volume - 21 million acre feet

Surface area - 84,000 acres

Maximum depth - 800 feet

Surface storage available between  
 elevation 1,118.8-1,123.8 = 421,000 acre feet

In addition to water stored in Okanagan Lake, storage reservoirs have been created through the construction of dams providing a total storage capacity of 100,000 acre feet. A dam controls the level of Okanagan Lake between 1,119.8 and 1,123.8 feet. This four foot range represents a storage capacity of some 340,000 acre feet.

No. of major tributary creeks and rivers - 33  
Nutrient loadings of the total inflow  
    Phosphorous - 37 tons  
    Nitrogen - 173 tons  
Nutrient loadings of outflows  
    Phosphorous - 58 tons  
    Nitrogen - 83 tons

The water quality study has uncovered additional interesting facts but it is dangerous for the layman to interpret this data. The completion of the study will summarize all relevant findings and offer recommendations.

The B.C. Pollution Control Branch have undertaken studies involving research in the waste treatment field. Three pilot waste treatment projects are presently being operated.

- a. Lysimeter study at Penticton
- b. Ground water monitoring for a spray irrigation system at Vernon.
- c. Lime treatment for phosphate removal and full scale incineration facilities for sludge disposal at Kelowna.

Preliminary reports have been submitted showing the present water demands in the Okanagan Basin as opposed to future water demands. Also an agricultural land use study has been presented. Preliminary findings have been presented as part of the socio-economic study. Once again, it is premature to draw important conclusions from the information but the following quotes from the 1971 Annual Report are of interest.

"The total amount of water licenced under the B.C. Water Act to serve agricultural, industrial and municipal requirements is approximately 368,000 acre feet. The estimated diversion of water (as compared to the licenced amount) for irrigation, municipal and industrial use is 225,000 acre feet per year of which approximately 120,000 acre feet appears as return flow to Okanagan Lake and Okanagan River. Therefore, the net consumptive use of water in the basin totals 105,000 acre feet. At present over 90% of this consumptive use is for irrigated agriculture. The above does not include the release of water from Okanagan Lake to maintain desirable minimum flows in Okanagan River."

The above statistics suggest that present water demands are not as critical as some voices have stated. With regard to future demands the socio-economic study has pointed out that because of urban encroachment upon agricultural land the amount of water required for irrigation purposes will decrease very substantially in the future. Although the water requirements for industrial and municipal purposes will increase, this increase will not exceed the decrease for agricultural requirements. Therefore, perhaps the future outlook is not too bleak.

The Okanagan Water Basin Study is timely in view of the severe water shortages south of the 49th parallel and also in view of the public outcry within the region. It is anticipated that the findings of the study will result in action recommendations which will protect the quality of the environment.

AGRICULTURE

Climate is the main factor affecting the natural development of soils. Glacial action within the Okanagan Lake chain produced a variety of soils from alluvial outwash to silt with some deposits of clay. Soil development has been slow due to a combination of low precipitation and high evaporation. Consequently, the soils of the region tend to be light with limited development of the soil horizons although there are pockets of heavier soils. Topographically, the area can be described as undulating to rough in the valley floor with the valley walls rising fairly sharply creating many different micro-climates within the region. This affects soil development causing a large variation over a relatively small area. As a result crops have to be chosen with a great deal of care to insure that the soil suits the crop.

The generally light soils are well drained and as a result react favourably to irrigation. In fact, irrigation is the most significant contribution man has made to agriculture in the area. Without it, only short grass could be produced leaving the valley as a marginal cattle ranching area.

With a hot dry summer climate and an abundance of sunshine coupled with light soil conditions and water available for irrigation, the region has developed as the fruit growing centre of the Okanagan Valley.

Fruit trees were first planted as a commercial venture in the 1890's when ranches were subdivided and irrigation was introduced. The orchard concept developed over a period of 30 years as varieties were tested, areas for fruit production evaluated and markets established. By the 1920's extensive orchard development had taken place and the pace of further development slowed down. Apples and pears are the main crops of this region. Peaches and apricots are grown but they are better suited to the warmer climate in the southern part of the Okanagan. Vegetable and berry crops are grown but are of less importance. Although the following table is not exact as to the area of concern in this report, it does give a fairly accurate assessment of value. The figures show relative value only because prices and yields vary annually.



Fruit production	- \$4.02 million
Livestock and products	- \$ .80 million
Vegetable crops	- \$ .30 million

The fruit industry has seen hard times and is presently suffering from marketing problems caused by international competition. Also, the size of most orchards does not constitute an economic unit. 25 acres is generally considered to be the smallest economic unit. Yields for any given crop will vary to a significant extent depending on the weather and the ability of the operator. For example, MacIntosh apples will yield between 500 and 800 boxes per acre for a well established orchard. The cost of production would vary from \$1.62 per box on a 500 box crop to \$1.09 per box on a 800 box crop and prices paid for the crop would vary depending on the grade and the price established for a given year. The farm gate price as reported by the Department of Agriculture is \$2.50 per box for the top grade and it is unlikely that the total crop from an orchard would fall in this category. As a result a value of \$2.00 is more realistic. The profit on a 20 acre unit would vary between \$3,500 and \$6,080 for a 500 box and a 800 box crop. It is also noted that the smaller the orchard the lower the yield because the orchard lacks attention while the owner devotes time to his other source of income. The pressures on the small orchard owner to yield to the lure of high land prices for subdivision is obvious and is, in part, resulting in the urban sprawl seen in the Kelowna area.

A significant upswing in wine consumption in Canada and the British Columbia government's policy on higher Canadian grape content in local wines has increased the vineyard acreage in the region as well as further south in the Okanagan Valley. The trend in new plantings of grapes has been out of the Concord or North American native varieties into European varieties which tend to produce a better quality of wine. Vineyard acreage is expected to increase at a steady pace although more mechanization is required in the harvesting of the crop to cut down operating costs. The development of this type of equipment is in the trial stages in the U.S.A.

The estimated sales value of the yearly fruit crop in the Kelowna

region is in excess of \$33 million. B.C. Tree Fruits operates cooperative packing houses while its subsidiary, Sun-Rype Products Limited, is one of the major fruit processors in Canada. Sun-Rype produces apple juice and other fruit juices both in whole and concentrated form and fruit purees and pie filling which are marketed throughout Canada and on some foreign markets. Two wineries operate in the region while other wineries have established vineyards and juicing facilities.

Other segments of agriculture are not entirely overlooked. Six dairy farms are in production although a milk processing plant originally in Kelowna was transferred to the more concentrated dairying area at Vernon which is the milk shed for the Kelowna district. Local nurseries provide new plantings for the orchards and ornamentals for landscaping. Beef ranching utilizes the marginal land but cattle are often seen on the valley floor where approximately 2,000 acres have not yet been developed for intensive agricultural purposes. Poultry, swine and sheep play a small role in the economy and Pioneer Meat Limited provide an outlet for animal products. Horses as a recreational facet are of growing importance and are consumers of an ever increasing quantity of local hay and other feeds which are imported into the area.

The future of agriculture in this region is obviously tied to the fruit industry. New methods of growing fruit trees are being investigated by the Canada Department of Agriculture Research Station at Summerland and progress is reported in developing cultural procedures which will increase yields per acre and reduce the height of trees.

The number of people employed in the agricultural sector will decrease as cropping methods are improved. The main demand will be for more highly trained personnel in the culture of fruit, vegetables and other products.

Where irrigation is available, and soils are suitable, high quality hay production and grape culture are considered to be more profitable land uses than apple growing.

TRANSPORTATION

Transportation first influenced economic development of the region when the fur brigade trail was established in 1821 and again by gold miners on their way from the south to the gold fields in the lower Fraser Valley, Cariboo and the Similkameen Valley from 1857 to 1880. The gentle topography and sparse forest cover of the valley caused it to become the main north-south trail during the early history of the province. Steamer traffic on Okanagan Lake commenced in 1886 and goods were exchanged between areas of settlement lying adjacent to the lake. It was not until 1892 when the Canadian Pacific Railway constructed their spur line from Sicamous to Okanagan Landing that a transportation route was provided that allowed goods and produce to be marketed abroad. This railway was probably the most important single factor causing agriculture to develop as a major industry in the valley. The steamboat service carried freight from the railway terminal at Okanagan Landing and all settlements on the lake were able to "export" produce. It was not until 1935 that the road between Penticton and Vernon was improved to a state where it offered competition to the lake boats and the era of the lake steamer ended that year.

The valley is now served by the C.P.R. running from Sicamous to Kelowna and a Canadian National Railway line from Kamloops connecting the C.N. line at Armstrong. A rail-barge service transporting railway cars from Kelowna to Penticton connects with a second C.P.R. line from Penticton to Osoyoos.

The completion of the Hope-Princeton Highway in 1949 and the Rogers Pass in 1962 increased the number of freight trucks and tourists traveling to the valley in both directions to a point where the present main highway standards through the valley are barely adequate to handle the heavy load. This surge of outside traffic has been accompanied by a significant increase in local traffic brought about by population expansion. Although the Department of Highways are very much aware of the increased tourist traffic, the congestion caused by local traffic is a problem which is receiving top priority at the present time. It is impossible to bypass Kelowna City without building a new bridge across the lake and, therefore, the most permanent solution to the problem is to

construct a second valley highway on the west side of the lake between Kelowna and Vernon. This proposal has been studied by the Department of Highways but no definite planning is in progress. The existing highway between Kelowna and Vernon is presently being widened from two lanes to four lanes. This improvement will relieve the problem temporarily but a more permanent solution will involve the construction of the "Westside Road". The construction of a new valley highway on the east side of the lake from Kelowna to Penticton has been talked about but it will be several years before the project is given priority.

Highway use projections indicate that the use of the valley highway will at least triple by the year 2000. It is, therefore, evident that within 30 years the valley will support two main highways on either side of the lake from Penticton to Vernon.

The present traffic congestion on the Trans Canada Highway from Vancouver to Kamloops can be alleviated with the construction of new highways. One proposal involves the improvement of the existing road from Princeton to Peachland. This would reduce the distance from the Okanagan Valley to Vancouver by 40 miles and traffic to the valley from the west would be increased further.

In summary it is evident that there will be significant changes to existing highways in the future and the traffic volumes will increase substantially. Indian Reserve No. 1 at the head of the lake will be affected by the new west side road. If the highway south of Kelowna could be widened to four lanes additional right of way would be required through Indian Reserves. However, such a proposal would cause a congestion at the two lane bridge crossing the lake to Kelowna and, therefore, it is likely that the west side road would be constructed first. Highway 33 entering the valley from the east, through Rutland, has been improved in recent years and its use is increasing substantially each year. Road right of way is presently being acquired which will allow this main highway to bypass downtown Rutland. This bypass will contribute very little to improving the anticipated congestion on Highway 97 but it will avoid congestion which could develop through downtown Rutland in the future.

From a land use point of view new highways significantly affect land development patterns. The new highway will provide access to areas suitable for residential development and planners can envision continuous

settlement from Penticton to Vernon. This could have the favourable effect of diverting the present encroachment of urban development onto agricultural lands. However, these encroachments are proceeding at a pace which will probably accelerate in the future and it is unlikely that the significant road development projects referred to above will be completed in time to save the agricultural acreage.

Air traffic in and out of Kelowna has doubled during the past five years representing an annual increase of approximately 20%. If the present rate of increase continues Kelowna Airport facilities will be inadequate in a very few years. However, the Department of Transport is planning a new airport just north of Vernon. This will allievate these pressures at Kelowna because at the present time the airport serves both cities. Kelowna too is planning enlargements to their aerodrome facilities.

MANUFACTURING

Manufacturing in the area has expanded from the original fruit and forest product processing into a well diversified range of consumer and industrial products including carpeting, forestry and farm equipment, mobile homes, pleasure boats and many more. The Regional Incentive Program which was in effect from 1965 to 1969 attracted more manufacturing firms to Kelowna than to the other parts of the Okanagan Valley. This increase in manufacturing was accompanied by an increase in population requiring all the services normally associated with population expansion. An increase in warehousing facilities has followed the manufacturing expansions.

The rate of expansion has dropped drastically since the Incentive Program was terminated. Four industrial parks are established in the region with many other sites randomly situated throughout the area. With a manufacturing base already established and a growing population, further industrial development would appear feasible if conditions are conducive to luring companies away from the larger centers such as Vancouver where larger markets exist. Further development is likely to require some inducement in the way of reasonably priced sites and possibly leasing arrangements for both land and buildings.

After considerable consolidation of the lumber manufacturing industry, there are now only two plants remaining cutting over 20 M.b.m. per shift and one plywood mill. In addition to lumber; boxes bins and pallets for the fruit industry and laminated beams are produced. A paper box plant also serves the fruit industry. Mobile home and prefabricated home manufacturers use components manufactured in local sawmills. A can manufacturing plant, two wineries, two orchard machinery plants, and one forestry machinery manufacturing plant round out the enterprises which are closely allied to the two basic raw material supplies in the region.

Products manufactured which do not have a local raw produce supply or a large sales base in the community include a distillery, a truck assembly plant, a fiberflass boat manufacturer and a carpet factory. A number of other manufacturing firms of smaller dimension are also active in the area.

The transportation requirements of industry are well served by both

rail and highways. The unemployment rate was relieved slightly by the Incentives Program but sufficient labour is still available to service further industrial expansion. A Vocational School at Kelowna is meeting the needs of industry for skilled labour. Electric power and natural gas are available and communications are excellent. Trust companies, investment houses, finance companies and insurance companies maintain either head offices or regional offices in the city.

Further development of the natural resources in the region other than tourism appears to be limited. Clay products is one resource which has not yet been exploited to any degree except as a hobby and an art form.

The region will continue to attract new industry. In general, industries that cause air or water pollution are not welcome as they could adversely affect the tourist trade which rates very high as an income source. The lack of a large population in which to market products limits the manufacturing potential of the region but its central location with respect to the West Coast and Prairie markets partially negates this draw back.

Further development could be predicated on the cost of establishing the physical plant in the area and, therefore, any efforts by the community to reduce bare land cost would encourage new industry. The approach that a community takes in attracting industry would be one of benevolence. The development of fully serviced manufacturing buildings for lease at an attractive rate is one method of developing the potential.

REGIONAL DISTRICT  
ADMINISTRATION, REGULATIONS AND ZONING

Regional Districts create local governments for the purpose of financing, through taxation, regional projects such as hospitals, fire protection, garbage collection, water and sewer systems, etc. Probably the most important function of the Regional District is to establish zoning bylaws designed to protect the property values of the constituents and to encourage the preservation of a pleasant environment.

The Central Okanagan Regional District has completed four years of operation. Prior to its establishment, development was controlled within the area immediately surrounding Kelowna and Okanagan Mission by zoning bylaws enforced by the Community Planning Area. These bylaws are still in effect but the remaining area within the Regional District is "uncontrolled". A zoning bylaw for the entire Regional District is presently being prepared but there are several obstacles to overcome before it will be approved.

The Regional District office is staffed by an administrator, regional planning director, assistant planner, draftsman, chief building inspector, assistant building inspector and two clerical assistants. The entire district is divided into ten electoral districts with a director elected from each district. The Board of Directors, therefore, is comprised of ten directors plus a representative from the city of Kelowna. The secretary-manager of the Okanagan Basin Water Board also holds an office in the same complex.

During 1970 the Board authorized financing to expand the Kelowna General Hospital; it created a fire protection district within the Okanagan Mission; it approved a bylaw which will allow the residents of Winfield, Okanagan Centre and Oyama to participate in the operation and use of a sanitary land fill located in the Glenmore area; provided a means of financing streets lights in the Casa Loma area; there was action taken under the noxious insect regulations; water study of the Okanagan Mission and Benvoulin was completed; studied the feasibility of providing a sewage collection and disposal system in the Glenmore Valley area and examined the possibility of providing complete sewage facilities for the entire Regional District in the future, and dealt with 58 re-zoning applications.



Other projects are in motion including the preparation of a zoning bylaw. Until the zoning bylaw is completed and approved, development can be controlled only by the Department of Health and the Department of Highways. During the year 317 subdivision plans were processed by the Department involving 1,538 individual lots.

Another function of the Regional District office which is proving to be very useful to the public is the construction of maps showing all current subdivisions within the region. Other maps showing land uses, topography and zoning, etc., are also produced.

The establishment of a zoning bylaw will be of interest to Indian Band members because Indian Reserves within the region are surrounded by lands which possess attractive development potentials. The development of these lands will be in accordance with the zoning bylaw and since the value and use potential of individual Indian Reserves will be largely influenced by existing land uses on adjacent lands, the bylaw will indirectly affect the value of Indian Reserve lands.

LAND VALUES

The element of speculation and the influence of urban developments reaching deep into the unorganized areas have caused land values to inflate to a level which has no relation to agricultural land values. It is possible to quote value ranges for land suitable for specific purposes but several transactions can be quoted which indicate a value outside the average range.

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 affecting value within the region, these figures should not be interpreted as being representative of true market value for a specific parcel.

WITHIN CITY OF KELOWNA

Residential	- \$5,000 to \$7,000 per lot
Older established prime neighbourhoods located close to lakeshore	- \$8,000 to \$12,000 per lot
Lake frontage	- \$300 to \$400 per front foot
Downtown commercial	- \$800 to \$1,200 per front foot
Satellite commercial centres	- \$200 to \$300 per front foot
Industrial (50' x 120' lots)	- \$8,000 to \$12,000

OUTSIDE CITY

Residential	
With water system	- \$3,500 to \$5,500
No water system (larger lots)	- \$3,500 to \$5,500
Small acreage (1-3 acres)	- \$4,000 to \$7,000 per acre
With water and sewer (Rutland)	- \$4,200 to \$4,800
Lake frontage	- \$125 to \$200 per front foot
Acreage with an imminent residential potential	- \$3,500 to \$6,000 per acre
Commercial lots	- \$200 to \$300 per front foot
Highway frontage with commercial or industrial potential and close to town	- \$250 to \$350 per front foot or \$35,000-\$40,000 per acre

Farm land	
Orchard land	- \$2,000 to \$3,000 per acre
Pasture and hay land with irrigation	- \$500 to \$1,000 per acre
Without irrigation	- \$200 to \$500 per acre
Cleared but non-arable and without irrigation	- \$100 to \$200 per acre
Undeveloped land with no imminent residential potential	- \$40 to \$200 per acre
Cattle ranch (1,000 acres including 150 acres cultivated and 150-200 head of cattle)	- \$70,000 to \$90,000
Mixed farms (160 acres with 80 acres cultivated)	- \$50,000 to \$60,000
Dairy farms (160 acres with 80 acres cultivated and 40 head of cattle)	- \$120,000 to \$140,000

Exceptions to the above value ranges often occur. For example, a residential lot either within or outside the city might sell at a figure well above the average if it possesses an extraordinary view. Residential subdivisions outside the city are developed at a density of approximately 3 lots per acre if a community water system is supplied. Without a water system larger lots are offered and, therefore, the price per lot is not influenced by the water system. However, residential lots served by a community water system generally sell quicker than those with no water service.

The value of acreage with a residential potential varies greatly and often includes a productive orchard. When an orchard sells for \$6,000 per acre actual farmland values are not reflected in this price. The value per acre of development acreage depends on how imminent the development potential is and whether or not the parcel will produce view lots.

Lake frontage has been quoted at \$125-\$200 per front foot. Some sales have been transacted at \$300 per front foot close to the city, however, it is still possible to buy lake frontage property further removed

from the city at \$125 per front foot.

The value of orchards probably ranges between \$2,000 and \$3,000 per acre. However, most transactions involve the sale of the orchard for a higher use while very few transactions are completed involving the sale of orchard land with no residential potential. In other words, more orchards are sold at \$5,000 per acre than at \$2,500 per acre. Likewise, several sales of pasture and hay land are transacted at a sale price well above the range quoted. Such parcels generally involve small acreages (5 to 10 acres) and represent an attractive rural homesite, within 10 or 15 miles of city centre. Once again, the price level indicates that the parcel was primarily purchased as a homesite rather than for farming purposes.

Large acreage parcels, generally located at high elevations and beyond the influence of urban development, with poor road access and no electrical power have sold at prices as low as \$40 per acre when no commercial timber values are present. However, if the parcel represents an attractive homesite in spite of the lack of amenities it might sell for \$100 per acre.

Occasionally ranches containing several thousand acres of various land classifications and including cattle sell for less than \$100 per acre. The total price, however, is generally several hundred thousand dollars.

URBAN DEVELOPMENT

The table on the following page is extracted from the 1970 Annual Report of the Regional District. The table shows that residential development is far more brisk within the unincorporated areas than it is within the city of Kelowna. This is due to several factors.

1. There is a shortage of land within the city suitable for residential development. It is estimated that approximately 1,500 acres lies vacant within the city boundaries but most of this acreage is situated above the elevation of the water reservoir and, therefore, a major expense would be involved in enlarging the water system before the land could be used. Developers have negotiated with the city and have found that it would be difficult to absorb this additional expense. As long as acreage exists outside the city, with fewer development expenses, the city land will remain idle.

2. The area surrounding Kelowna and City is generously endowed with mini communities which possess exceptionally attractive features. View properties are common and the price of parcels ranging in size from  $\frac{1}{2}$  acre to one acre are not beyond the means of the average wage earner. It is, therefore, possible to enjoy rural pleasures within a well served community, close to city centre. Most new home builders prefer the type of suburbia living offered outside the city to the more congested community within the city.

1969 was a peak year for subdivision development within the unincorporated areas. Although the number of lots created by subdivisions decreased slightly in 1970, the number of dwelling units started increased. The excess number of new lots created over actual number of lots built upon peaked in 1969 and decreased significantly in 1970. The number of unsold residential lots existing within the region is not known but it has been suggested by subdivision approving officers that the number increases each year. This might indicate that competition is strong and perhaps some developments are not too successful. An examination of various subdivisions and their sales rates shows that properly planned

RESIDENTIAL ACCOMMODATION GROWTH IN THE REGIONAL DISTRICT OF CENTRAL OKANAGAN

1967-1968-1969-1970

	Region Totals				Provincial Government Unincorporated Areas				City of Kelowna				District Municipality of Peachland			
	1967	1968	1969	1970	1967	1968	1969	1970	1967	1968	1969	1970	1967	1968	1969	1970
A. Residential Sub-divisions processed:																
1. Number of applications	434	547	414	342	383	462	373	309	34	43	27	25	17	42	14	8
2. Actual new residential lots registered (LRO)	1266	1658	1894	1624	1020	1420	1728	1538	168	133	51	19	78	105	115	67
B. Actual Dwelling Construction																
3. No. of dwelling units built (started)	846	975	1073	1113	464	652	810	849	362	272	195	210	20	51	68	54
4. No. of Vacant lots built upon	671	825	865	856	425	619	688	733	226	155	111	69	20	51	66	54
5. Number of dwelling units per lot utilized	1.26	1.18	1.24	1.29	1.09	1.05	1.18	1.15	1.6	1.8	1.8	3.0	1.0	1.0	1.03	1.0
C. Excess New Lots Created over Actual lots built on	596	833	1029	768	595	801	1040	805	-58	-22	+2	-50	58	54	49	13
D. Equivalent Population Increase Directly Related to new Dwelling Units Built	2955	2928	3442	3541	1620	2282	2835	2971	1265	468	369	381	70	178	238	189
* Population increase as estimated by City of Kelowna																

Source: Annual Report, 1970, Regional District of Central Okanagan

subdivisions, offering all services and within attractive areas, are successful. Occasionally, the lack of development capital forces a subdivider to supply only partial services and the success of the venture is jeopardized.

The Okanagan Mission, Rutland and Lakeview Heights all have a reputation for successful residential subdivisions. Okanagan Mission offers relative seclusion within walking distance of the lakeshore; Rutland offers low priced lots serviced by a community water and sewer system to qualify for N.H.A. loans; Lakeview offers relative seclusion with a view of the lake and Kelowna City beyond.

One of the most successful residential subdivisions recently created is located adjacent to Indian Reserve No. 10 within Lot 3866. The development offers paved road, underground wiring, a community water system and view lots. Lots were placed on the market in the spring of 1971 and to date over 60 lots have sold. There is a strong demand for residential lots on the west side with a view of the lake and Kelowna City.

Westbank and Glenrosa areas are both enjoying a flurry in residential development. Lots are priced lower than similar developments located closer to Kelowna.

The preceding table also shows that there are twice as many lots created by subdivision as dwelling units constructed. This would indicate that the number of unsold lots increases significantly each year or alternatively a large number of lots are bought on speculation or purchased by people who are not ready to build immediately. It appears that both situations exist. Realtors state that many of their lot sales are to out of province visitors who are acquiring a building site for their future retirement.

Although land developers within the region enjoy several advantages simply because the area is an attractive place to live, development problems are often encountered.

1. The Department of Health are rigidly enforcing their regulations regarding the dispersal of sewage effluent. There is a loud public outcry within the valley regarding the quality of the lake water. Some lakeshore properties possessing extremely attractive physical characteristics are not capable of being developed economically because sewage

effluent can not be dispersed safely from septic tanks. The developer is, therefore, faced with installing a costly sewage treatment plant.

2. Residential developments encroaching into agricultural areas often find that the area is serviced by an irrigation system which was financed as an A.R.D.A. project. Subdivision is allowed only if the developer agrees to pay the Irrigation District a proportion of the cost of the A.R.D.A. development. This charge ranges between \$300 and \$600 per acre.

3. When a developer purchases orchard land for residential development he must destroy the trees immediately or follow the recommended spraying schedule in order to avoid creating an insect or disease epidemic within the neighbourhood. The preservation of fruit trees within an orchard which has been subdivided is discouraged by the Department of Agriculture for this reason.

#### FUTURE TRENDS

It is anticipated that urban development will continue at least at its present rate and in all likelihood will increase in the future. Domestic water in most areas is obtained from individual wells. Engineering studies are well under way examining the feasibility of providing a regional community water system. When the system is completed, the development of new residential areas will be greatly accelerated. The feasibility of providing a community sewer system in several areas has been examined but greater development costs are involved and it is anticipated that the water system will precede the sewer system.

The construction of new main highways as noted in the section entitled "Transportation" will open up new neighbourhoods as the land developers follow the highway construction.

#### BUILDING PERMITS ISSUED

The value of building permits issued peaked at \$23,051,662 during 1970. In 1969 total value of building permits was \$18,585,340 while in 1968 it was \$9,474,728. A breakdown of the 1970 figure is as follows.



BUILDING PERMITS ISSUED 1970

849	New Dwelling Units	@ \$12,344,871
40	New Commercial and Industrial	@ \$ 8,882,297
43	Additions to Commercial	@ \$ 248,148
61	Additions to Dwellings	@ \$ 206,846
115	Accessory to Dwellings	@ \$ 81,542
10	Assembly and Institutional bldgs.	@ \$ 1,287,958

Although commercial and industrial buildings were well represented in 1970, dwelling units consumed over half of the total value.

EMPLOYMENT OPPORTUNITIES

If an author could fill a page on the subject of employment opportunities in the Okanagan, he would have a best seller. People from other parts of the province are often heard to say, "I'd love to live there, but I can't find a job." Further, many young people leave the area for the same reason. Research on the subject has uncovered the following facts.

Canada Manpower report that it is much easier to place a worker in a casual job than in a permanent job. It is not uncommon for industrial plants within the region to require additional men for a short period of time. Occasionally, a permanent job appears and it is immediately filled by one of the casual workers. A person looking for work, therefore, might have to contend with several layoffs before he finally finds steady employment.

In view of the brisk activity in the building industry as evidenced by the statistics presented earlier in the report, one would suspect that a worker trained in the building trades would have steady employment. However, the recent surge in building activity has attracted several tradesmen to the area and Canada Manpower report that union tradesmen are often out of work while non-union workers appear to enjoy more steady employment. A more specific conclusion would be that reliable good workers keep busy while the unreliable careless worker is generally laid off from time to time.

The same analysis would be applicable to the fruit industry. The heavy labour requirements are seasonal and can even absorb outside workers. However, the opportunity for permanent employment is rare.

The tourist industry is also a seasonal employer but most jobs are occupied by students whose term of employment coincides with their summer holidays.

A small percentage of the population of the region is comprised of construction workers who take jobs in other parts of the province lasting for two or three months and then return to the region and register with the Canada Manpower. They will remain in the region as long as their money lasts or as long as the employment service can find them work and then they will travel once again in search of work.

Occasionally a white collar worker working for a large company will be transferred to Kelowna and eventually quit his job rather than be transferred to another town. This person also adds to the list of employment seekers.

7? | In view of the significant number of people moving into the valley and the relatively low rate at which new industries are being developed, it is difficult to be optimistic about the future. Undoubtedly new service industries will develop to serve the growing population but it is unlikely that this alone would solve the employment problem. Several sales and distributing companies hold head offices within the region and a good salesman can generally keep himself gainfully occupied. Real estate sales provide employment for nearly 200 people within the region and unless different techniques are employed in the future to merchandize real estate, the number of people employed in this field will increase. However, this area of employment is often occupied by people who are retired or semi-retired but wish to remain slightly active.

Finally, research into the problem failed to uncover a prospective employment source worthy of special mention, and, therefore, treatment of the subject can only be brief and pessimistic.

SUMMARY AND FUTURE OUTLOOK

It is interesting that a region which was so late in developing as a community of significance should be experiencing such rapid growth at the present time. Although early fur traders travelled through the valley, settlers were not attracted to the region in significant numbers until the 1880's. It was not known as a fur producing area and there were no significant gold discoveries within its boundaries. However, miners and fur traders passing through the area were quick to appreciate the advantages of the moderate climate, the fertile valley bottoms, and the open range lands and the first settlements were based on a cattle ranching economy. Today, the region supports an estimated population of 46,110 people with a projected 1981 population estimated at 88,400 people representing nearly a 100% increase over a ten year period. This projected growth rate is greater than that of any other region within the valley.

Mining played an insignificant role in the early development of the region and its influence on development in the future is difficult to judge but there is no apparent reason at the present time to believe that this natural resource will contribute significantly to the development of the region in the future. Forestry and the processing of forest products have contributed to the development of the region in the past, but only two plants of significant size operate at the present time. The Crown forests within the region provide only a small portion of the total raw material utilized by existing plants with most materials transported to the mills from areas outside the region. Recreation and watershed management is receiving more priority within the forests of the region and it is anticipated that these priorities will increase in the future and the multiple use concept will be exercised.

The water resources of the region have gained prominence in the public eye in recent years. Both agriculture and recreation are heavily dependent upon this resource and, therefore, a study is presently being conducted by Provincial and Federal Governments to examine present and future demands on this resource and to recommend a management policy which will insure the protection of the environment.

Climatic and soil conditions within the region are ideal for fruit

production. This form of agriculture has supported the community since 1911 when commercial fruit production became a significant enterprise. Its future now appears to be sitting in the balance. Urban sprawl is consuming orchard land while markets are being threatened by international competition. The pleasant agricultural environment of the region contributes significantly to its appeal as a tourist mecca and, therefore, the loss of this industry would undoubtedly have an adverse affect on tourism. Government subsidies have been advocated by the growers as a means of protecting the industry but a drastic cut in production costs is necessary in order to place the product in a more competitive position on the international market. Larger, more economic farm units, higher yields per acre through the introduction of new varieties and more streamlined handling techniques have been suggested as a more permanent cure. Other forms of agriculture are practiced within the region but their significance does not compare with that of fruit growing.

Tourism and Recreation have become a significant economic force within the region in recent years. On the national scene, authorities have predicted that the demand on land for recreational purposes in the future will place a severe strain on existing resources. The Okanagan Valley has been mentioned as one of the key areas within British Columbia which will benefit from the surge of tourists into the province in the future. The study region, being centrally located within the valley, is in a preferred position to enjoy these benefits. Although existing facilities are being used to their maximum during the summer months, the profits enjoyed by individual enterprises are not too attractive. The encouragement of commercial winter sports and convention facilities could improve the economics of individual enterprises.

Before settlement, the region was simply a transportation route for fur traders and gold miners. Transportation played an important role in introducing the fruit industry to world markets when the region was first served by a railway in 1892. In recent years improved highways were responsible for bringing tourists to the valley and establishing the region as the prime recreational area. Today, highways with the region are becoming overcrowded and new main routes are being planned. Once again transportation will influence the development of the region when

these new highways are constructed. The travel time to Vancouver will be reduced and new areas will become accessible for urban development. Land use planning within the region will be heavily influenced by the location of new highways and some authorities predict that urban development will eventually extend in an uninterrupted corridor from Penticton to Vernon.

Until the introduction of the Regional Incentives Program in 1965, manufacturing within the region was limited to those industries related to local resources; namely fruit growing and lumbering. The economy of the region now enjoys a fairly broad manufacturing base and although the rate of growth has reduced significantly since the Regional Incentives Program ceased in 1969, it is anticipated that the present base will attract additional manufacturing plants to the area if the taxpayers can support a benevolent approach.

The Regional District concept is receiving its "knocks" within the region but it is making steady progress and its success in establishing zoning bylaws will largely influence the character of growth. Urban sprawl into agricultural areas is a common problem and difficult to deal with. The support of the voters is necessary before the district can act more effectively in this direction.

Urban development has proceeded at an extremely rapid pace in recent years. Over 1,500 residential lots are produced annually by subdivision and the number of houses constructed annually has exceeded 1,000 in recent years. Most of this development lies outside the city boundary within the unorganized areas where development is relatively uncontrolled. The regional district's responsibility in these areas is becoming more critical each year. Regional water systems and sewage systems are being planned but the projects have not yet reached the referendum stage. When these services are provided it is anticipated that development will be restricted to certain growth areas and urban sprawl will be arrested.

Land values have increased sharply in recent years with the expanding urban development. The value of farm land with a subdivision potential has doubled causing agriculture to become uneconomic. Speculative purchases of farm land whose subdivision potential is remote at the present time is also evident and having an adverse affect on agriculture. View properties are a prime commodity on the real estate market and acreage with this potential is fairly common within the region and is being developed

briskly to meet the demand.

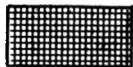
Finally, it is confirmed that the region will experience significant growth in all land use sectors in the future. Urban growth and the expansions of recreational facilities will likely exceed all other growth movements. The demand for land displaying favourable characteristics for residential or recreational development to accommodate this anticipated growth is strong at the present time but will increase in the future. Land owners should be wary of speculative land transactions because the element of risk to land developers will decrease in the future as the growth gains momentum. Land owners will be in a position to enjoy an imminent development potential rather than a speculative development potential.

PART II  
REFERENCE  
to  
SPECIFIC RESERVES



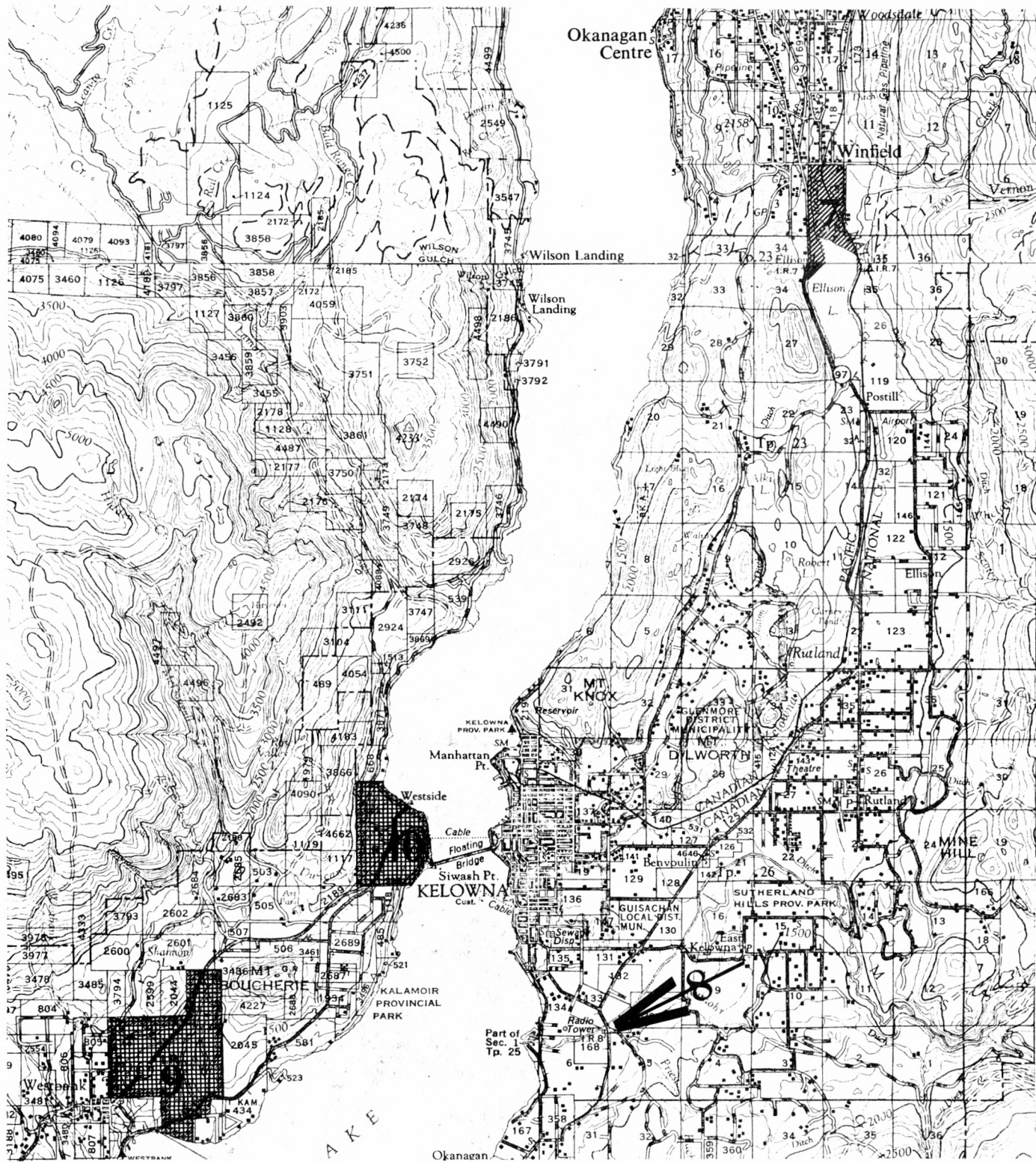
INDIAN RESERVES  
in the  
CENTRAL OKANAGAN REGION

1 inch = 2 miles



Westbank Band  
Mission Creek No. 8  
Tsinstikeptum No. 9  
Tsinstikeptum No. 10

Okanagan Band  
Duck Lake No. 7



PART II  
REFERENCE TO SPECIFIC RESERVES

TABLE I  
BAND DATA SUMMARY  
May 10, 1971

	B A N D	
	Westbank	Okanagan
Residents on Reserve	131	528
Residents off Reserve	36	181
Total Population	167	709
Number of Reserves	3	5
Total Area (Acres)	2,362	26,113
Number of Leases	10	33
Annual Rental (\$M)	21.2	26.6
Chief	N. Derriksan	M. Alexis
Pupil Enrollment	45	176
Welfare (Annual)(\$M)	16	47
Average Income (\$M)	3.0	3.5

TABLE II  
LEASES ON RESERVE LAND  
1969

Band	Type of Lease	No. of Leases	Acreage	Annual Revenue
Westbank	Agricultural	6	223.2	\$3,230
	Commercial	5	67.5	4,250
	Grazing	4	93.7	575
	Residential	1	44.4	1
	Total		16	428.8
Okanagan	Agricultural	30	1,539.5	\$14,614
	Commercial	1	77.5	3,011
	Grazing	1	60.0	175
	Industrial	5	N/A	N/A
	Residential	2	1,340.0	534
	Other	6	2,560.1	4,964
	Total		45	*5,577.1

\* Data Incomplete

TABLE III  
 \*LAND CLASSIFICATION, 1969  
 (Acres)

Band	Reserve		Agriculture	Wood	Wasteland	Total
Westbank	Mission Creek No. 8	8	5			5
	Tsinstikeptum No. 9	9	1,025	545		1,570
	Tsinstikeptum No. 10	10	416	371		787
Total			1,441	921		2,362
Okanagan	Duck Lake No. 7		278	151	11	440

\* Note - No distinction is made for higher uses,  
 i.e. - residential, commercial, recreation,  
 industrial.

The figures from Tables 2 and 3 were extracted from a document entitled, "Statistical Data of the Kootenay-Okanagan District" prepared by the Departmental Statistics Division, Department of Indian Affairs and Northern Development, Ottawa, Ontario. Changes have occurred since the date the data was collected, 1969, and further, some of the data was incomplete. However, Table 2 will show, in a general sense, the extent of lease activity.

Table 3 classifies land with no regard to external factors. It simply relates to the physical characteristics of the reserve itself without considering socio-economic conditions within the neighbourhood that would influence the use of land. It is not to be interpreted as a table showing "Highest and Best Use."

DEVELOPMENT POTENTIALS

This report is primarily concerned with regional socio-economic factors which affect the use of land. Individual reserves were examined only casually in order to gain a general impression of physical characteristics. Those socio-economic factors which were most likely to affect the use and development of Indian Reserves examined were given more attention in the report. It is difficult to uncover all use potentials of a parcel of land without a thorough ground examination. However, after the regional socio-economic factors were assembled and the reserves examined briefly, certain potentials were apparent which are worth mentioning. A land use study of each reserve would be necessary before offering an more accurate assessment of development potentials.

WESTBANK BANDMission Creek No. 8

This small five acre reserve lies only three miles from Kelowna City centre at the junction of Casorso Road and Swamp Road and on the south bank of Mission Creek. It is within a portion of the Okanagan Mission neighbourhood which is presently devoted to dairying. The Nisconlith sandy loam, a ground water soil, displays an extremely high water table and is subject to flooding. Mission Creek, at this point, is diked on both sides to discourage natural flooding. The area is unsuitable for residential development because of the soil characteristics but these same characteristics are very favourable for pasture or hay production. The reserve is bounded to the north by Mission Creek, to the east by Casorso Road and to the south and west by developed hay land which is ditched for drainage purposes. The reserve is undeveloped and supports a stand of poplar trees.

The present highest and best use of the parcel is for agricultural purposes and it is unlikely that it would support any other higher uses for several years.

Tsinstikeptum No. 9

The east boundary of this reserve forms the west boundary of the village of Westbank. It contains 1,570 acres, much of which is leased

for agricultural purposes. A vineyard, a tent and trailer park, a mobile home park, and a stock car race track have been developed within its boundaries. A fully developed residential neighbourhood within Westbank fronts on the public road which forms the boundary between the village of Westbank and the Indian Reserve. Grazing land lies to the north of the reserve while Boucherie Mountain rises to the east, approximately 1,400 feet above the lake. Uncle Ben's Winery sits at the top of Mount Boucherie while the lower slopes of the mountain have been planned for residential development.

A "leg" of the reserve extends to the lakeshore where half a mile of attractive sandy beach is evident. A tent and trailer park fronts on the beach. The area west of the southerly leg of the reserve supports new residential subdivisions which have not yet been occupied and the area to the east contains a mobile home park. Highway 97 is centrally located through the reserve while a secondary paved road traverses the southern extremity, providing access to the tent and trailer park.

The reserve supports very little tree cover with most of the area supporting vineyards, pasture land and hillside grazing. Some portions of the reserve command a view of the lake while others look over the valley between Boucherie Mountain and the mountains beyond.

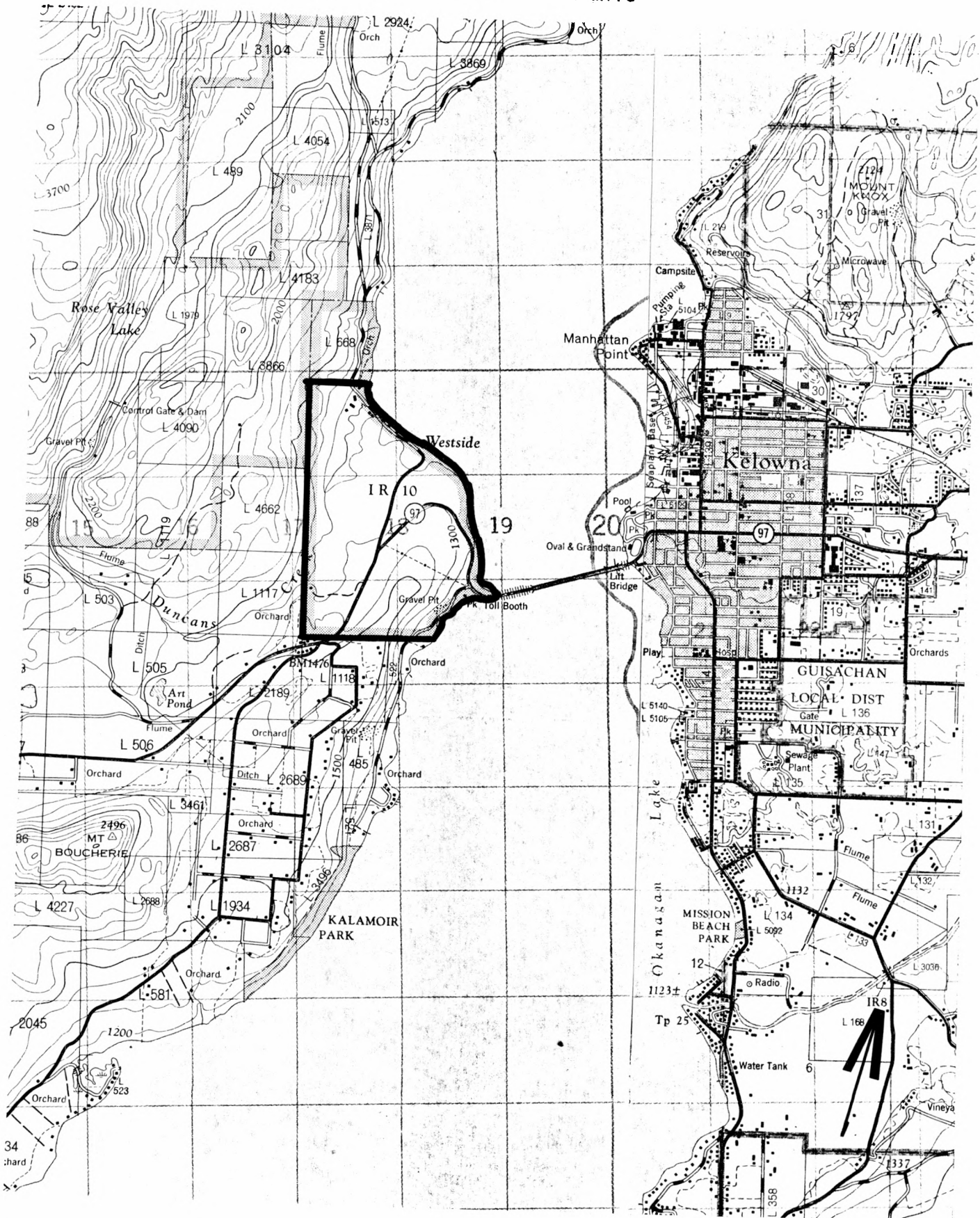
In view of its location, lying adjacent to Westbank, its good access and particularly in view of the development activities within the neighbourhood, a remote residential potential is suggested. However, a closer examination of several factors shows that this potential is so far into the future that the highest and best use of the parcel at the present time is for agricultural purposes.

Urban development in the vicinity of Westbank is extending southward towards the lake and north and northwesterly within the Glenrosa area. There are hundreds of acres of undeveloped land available and, therefore, there will be no reason for this development to proceed in an easterly direction into the reserve. Likewise, there are hundreds of acres of undeveloped land to the east of the Indian Reserve and plans for a residential development of this area have been in motion for a few years. The area to the east commands a view of the lake and could support a fairly attractive residential neighbourhood.

The portion of the reserve fronting on the lake and presently supporting a tent and trailer park could possibly be developed to a higher

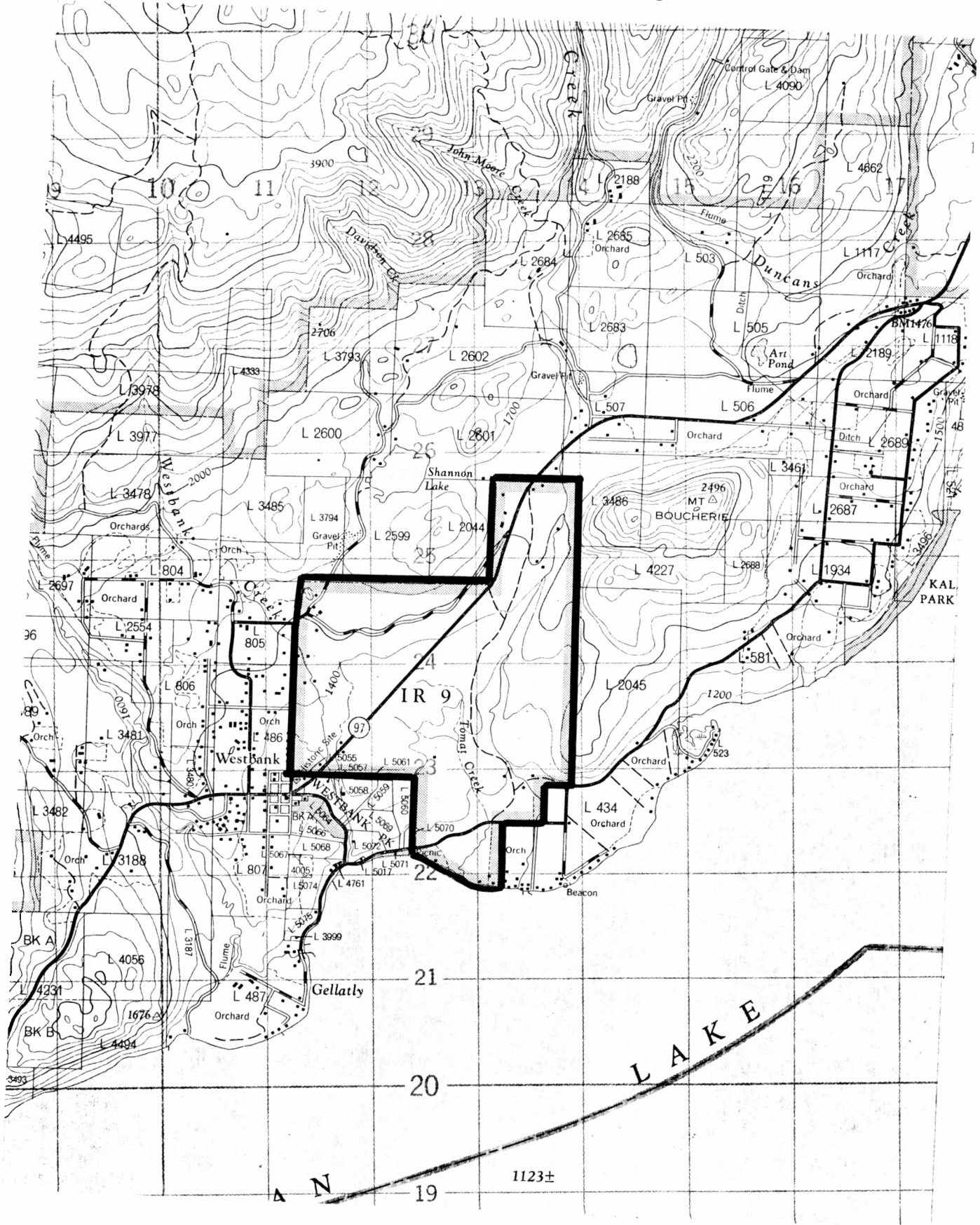
TSINSTIKEPTUM NO. 10  
and MISSION CREEK NO. 8

Scale: 1 1/4 inch = 1 mile



TSINSTIKEPTUM NO. 9

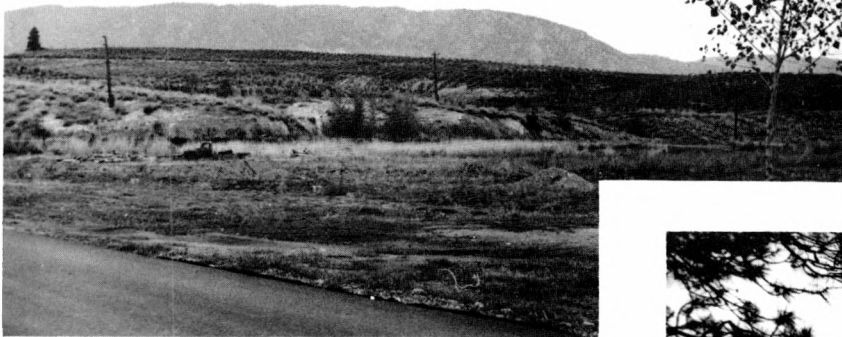
Scale: 1 1/4 inch = 1 mile





Lake Frontage  
Tsinstikeptum No. 9

Mobile Home Park  
Tsinstikeptum No. 9



Vineyard  
Tsinstikeptum No. 9

Tsinstikeptum No. 10





use in view of the desirable characteristics of the beach. Possibly a more refined development, catering to the tourist trade would be appropriate.

Agriculture has been suggested as the highest and best use of the parcel because it is likely that there will be no pressure from higher uses for at least ten years or more. Since the agricultural areas are already cleared it is conceivable that a 10 or 15 year agricultural lease would be adequate to attract investment. The effects of adjacent land uses could be reassessed after that period.

Caution should be exercised not to allow undesirable commercial or industrial uses to develop adjacent to the highway. Such uses could adversely affect the value of adjacent acreages when uses other than agriculture become apparent in the future. Agriculture is a good interim use because it preserves the natural advantages of the parcel until external influences will allow a higher and better use to succeed.

#### Tsinstikeptum No. 10

The Band and the Department have entertained several development proposals for this 787 acres from firms of some repute. The advantages and potentials of the reserve are well known and, therefore, a lengthy dissertation on these factors would be redundant.

Briefly, the reserve lies immediately across Okanagan Lake from the City of Kelowna; the west entrance to the bridge is situated on its banks; Highway 97 loops through the interior along with the Westside Road; residential development is established to the north and south of its boundaries; it contains over two miles of attractive lake frontage and finally it is situated only 5 minutes drive from Kelowna City center.

Residential development had its start on the west side of the lake as a V.L.A. subdivision nearly 20 years ago. Water was supplied by the Westbank Irrigation District and other people in the valley and newcomers to the region were quick to appreciate the residential advantages of the neighbourhood. The view across the lake to the city of Kelowna is most pleasant. The neighbourhood presently supports a population of 2,000 people with the 1981 projection estimated to be 3,500 people. It is emphasized that the main attraction of the west side is the view. Subdivisions in the neighbourhood without a view are not very successful.

With this in mind, it is emphasized that only a small portion, 15% to 20%, of I.R. No. 10 possesses a view. The valley, created by Duncans Creek, forms a isolated depressional area with no view of the City of Kelowna. The importance of a view to the success of subdivisions was indicated when an adjacent lot, Lot 3866, was subdivided this summer. To date over 60 view lots have sold.

There is no shortage of view acreage surrounding Kelowna. Occasionally, view lots become scarce but developers are quick to respond to the demand. Since the Indian Reserve can not produce clear title to a prospective home builder, it is suggested that a residential development within the parcel, in spite of its several advantages, would be risky until a shortage of view lots exists within the region, or, unless the planners can create a neighbourhood that is far superior to all others. In other words, there must be several extremely attractive advantages to the development in order to counteract the disadvantage of not being able to deliver clear title, or, a scarcity of comparable properties must exist. A reserve in Vancouver's West Point Gray was developed successfully for residential purposes but only after a severe shortage of comparable properties existed.

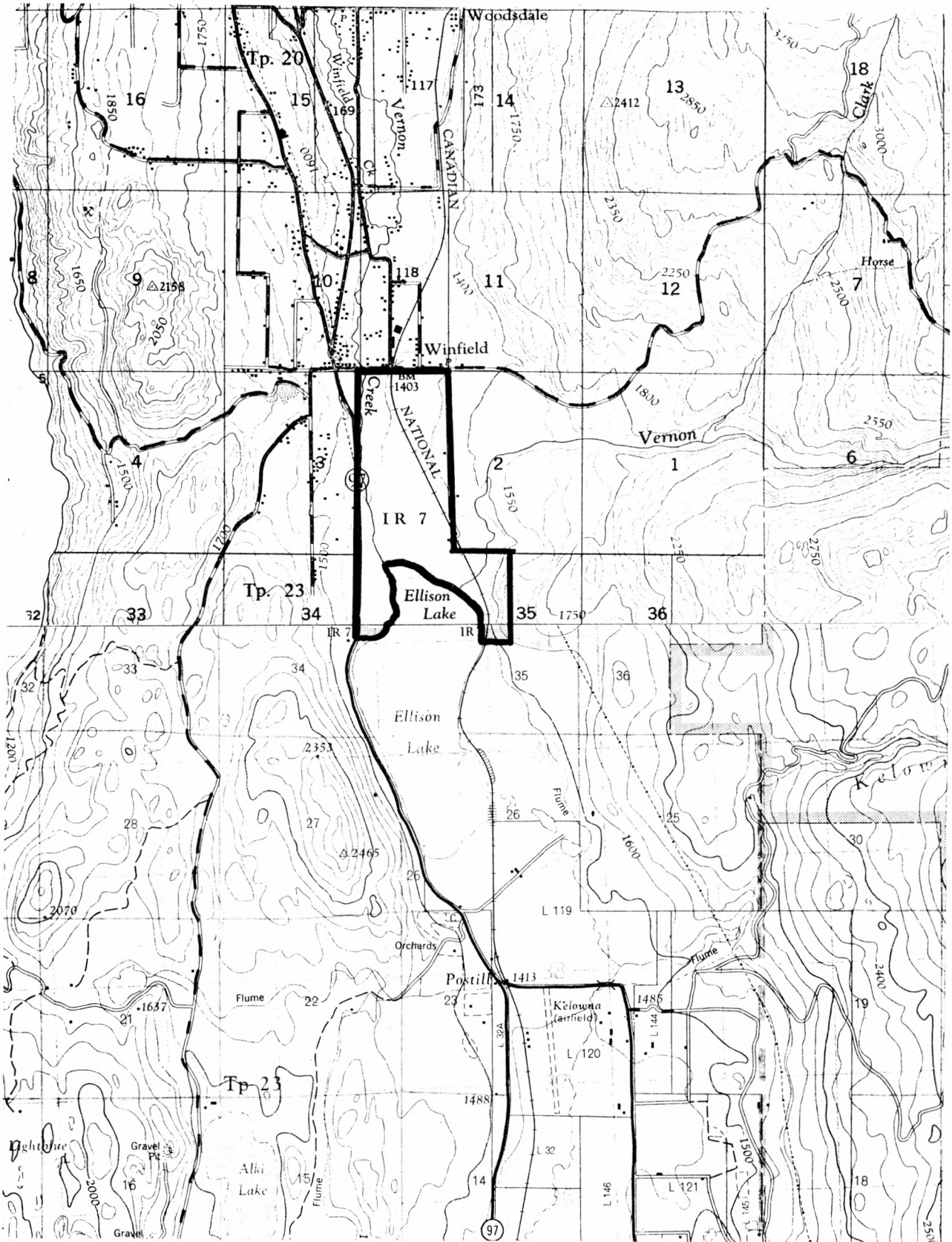
It is interesting to explore the effects of establishing a regional college on the site. Colleges and universities, if their design and construction is to a high standard, tend to form the nucleus for exclusive residential neighbourhoods, (i.e. portion of West Point Gray adjacent to U.B.C. campus). However, the campus should be strategically located within the parcel to encourage maximum benefit to adjacent lands. Transportation patterns are important.

With a view to the future, thought should also be given to the effects of the new Westside Highway which could be constructed within 10 years. An examination of the topographic map would indicate that this highway might depart from the existing highway near the southwest corner of the reserve and parallel the west boundary of the reserve. If the junction of the new highway and the existing highway lies within the reserve, an important, high value commercial site would result and planning should account for this factor.

Finally, it is suggested that developments or any leasing of Indian Reserve No. 10 should be postponed until land use pressures become more critical and use patterns and highway patterns become more firmly estab-

DUCK LAKE NO. 7

Scale: 1 1/4 inch = 1 mile



lished. The potential of the parcel is too great to "play around with" at the present time. Alienation and/or indiscriminate development of critical areas such as lakeshore and view acreage, at the present time could rob remaining acreage of its potential. The acreage should be developed according to a plan which designs and situates all uses so that they compliment each other rather than conflict with each other. It would be difficult to compose such a plan at the present time. The rent that a prospective developer might pay for the property is proportional to the risks that are involved in the project. These risks become less each year and, therefore, the annual return to the Band will be greater the longer the development can be postponed.

#### OKANAGAN BAND

##### Duck Lake No. 7

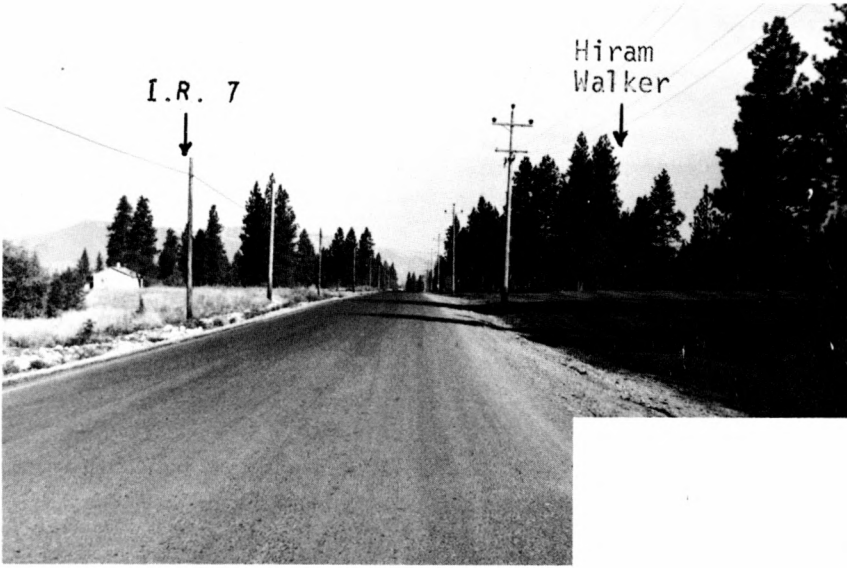
This reserve enjoys several interesting characteristics. It contains 440 acres in the valley bottom between Duck Lake and the village of Winfield. It is bounded on the west by Highway 97 and to the east by the new \$30 million Hiram Walker Distillery. It supports light industrial uses in its northern extremity along with a trailer court. Other areas in the immediate vicinity are presently advertised as being for sale for industrial purposes. The Canadian National Railway runs north and south through the parcel. It contains a variety of soil types which, for the most part, are suitable for agricultural purposes but have limitations for other purposes.

Nisconlith Loam is a ground water soil lying adjacent to the railway, and would require costly footings if developed for industrial purposes.

Nisconlith Clay Loam is also a ground water soil and subject to the same limitations as the sandy loam. These characteristics, however, would not limit light industrial use.

Although Duck Lake and Ellison Lake rates extremely high in bacteria count, the beach frontage is relatively attractive suggesting a recreation potential.

The Hiram Walker Distillery lying adjacent to the east boundary is an extremely "clean" industry and could not have adverse effects on any uses proposed for the reserve. The landscaping resembles a public park and



Duck Lake Reserve

No. 7

Hiram Walker Offices  
Adjacent to Duck Lake No. 7



Frontage on Duck Lake

Trailer Manufacturing Plant



there are no unpleasant odors or noises. That portion of the reserve lying adjacent to the distillery site could conceivably successfully support residential uses. However, the camper manufacturing plant, within the northeast corner of the reserve and also adjacent to the distillery property, is also a clean industry and it is conceivable that these two industries will attract others and an industrial neighbourhood could develop.

Industries of this type do not adversely affect adjacent acreages. It is conceivable that the entire 440 acres could accommodate industry, recreation, residential and agriculture uses without conflict. However, care should be taken to discourage establishment of obnoxious industries.

On considering the findings of this report, it is evident that:

1. The highway frontage and lake frontage adjacent to the highway could support uses catering to the tourist industry.
2. There is no shortage of residential acreage in the neighbourhood and, therefore, it is unlikely that any portion of the reserve could support a residential subdivision.
3. There is no shortage of industrial acreage within the region comparable to that of the subject. Leasing for industrial purposes would, therefore, be slow. The high use potentials of the parcel are not imminent and, therefore, agricultural development could be encouraged as an interim use.

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, Vernon, B.C.

Chamber of Commerce, Kelowna, B.C.

Recreation Consultant, Department of Travel Industry, Kelowna, B.C.

Provincial Department of Agriculture, Kelowna, B.C.

Provincial Department of Highways, Kelowna, B.C.

Central Okanagan Regional District

Planning Department, City of Kelowna

Okanagan Basin Water Board, Kelowna, B.C.

District Forester, British Columbia Forest Service, Kamloops, B.C.

Canada Manpower Centre, Kelowna, B.C.

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